AWARD/CONTRACT

1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)	RATING	PAGE	OF PAGES
	DO-A7	1	47

2. CONTRACT (Proc. Inst. Ident.) NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQUEST/PROJECT NO.
N68936-07-D-0016	20 Sep 2007	0010205405

5. ISSUED BY CODE N68936

CDR NAWCWD CODE 220000D
ATTN: C. KYTE
(760) 939-2634
429 E BOWEN RD, STOP 4015
CHINA LAKE CA 93555-6100

6. ADMINISTERED BY *(If other than Item 5)* CODE S3915A

DCMA PHILADELPHIA
DCM-GDO
700 ROBBINS AVE, BLDG. 4-A
P.O. BOX 11427
PHILADELPHIA PA 19111-0427

7. NAME AND ADDRESS OF CONTRACTOR *(No., street, city, county, state and zip code)*

TRITON SERVICES INC
BARBARA PEREZ
3100 CHARLOTTE AVE
EASTON PA 18044-0100

CODE 20948 FACILITY CODE

8. DELIVERY
[ ] FOB ORIGIN [X] OTHER *(See below)*

9. DISCOUNT FOR PROMPT PAYMENT

10. SUBMIT INVOICES *(4 copies unless otherwise specified)* TO THE ADDRESS SHOWN IN: ITEM

11. SHIP TO/MARK FOR CODE

See Schedule

12. PAYMENT WILL BE MADE BY CODE HQ0337

DFAS - COLUMBUS CENTER
NORTH ENTITLEMENT OPERATIONS
PO BOX 182266
COLUMBUS OH 43218-2266

13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION:
[ ] 10 U.S.C. 2304(c)( ) [ ] 41 U.S.C. 253(c)( )

14. ACCOUNTING AND APPROPRIATION DATA

15A. ITEM NO.	15B. SUPPLIES/ SERVICES	15C. QUANTITY	15D. UNIT	15E. UNIT PRICE	15F. AMOUNT
	SEE SCHEDULE				

15G. TOTAL AMOUNT OF CONTRACT **$6,359,115.14**

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CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE

17. [X] CONTRACTOR'S NEGOTIATED AGREEMENT Contractor is required to sign this document and return 1 copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)

18. [ ] AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number N68936-06-R-0100 including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.

19A. NAME AND TITLE OF SIGNER *(Type or print)*	20A. NAME AND TITLE OF CONTRACTING OFFICER
	MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil

19B. NAME OF CONTRACTOR	19C. DATE SIGNED	20B. UNITED STATES OF AMERICA	20C. DATE SIGNED
BY _____ *(Signature of person authorized to sign)*		BY Mary Jacobs *(Signature of Contracting Officer)*	20-Sep-2007

Section A - Solicitation/Contract Form

CLAUSES INCORPORATED BY FULL TEXT

FOR YOUR INFORMATION:
The following addresses and points of contact are provided:
Name:
Phone: (760) 939-2634
DSN: 437-2634
FAX: (760) 939-8329
Email address: collin.kyte@navy.mil

U.S. Postal Service Mailing Address:
COMMANDER
CODE 220000D(C.Kyte – 760-939-2634)
NAVAIRWARCENWPNDIV
429 E. BOWEN RD. MAIL STOP 4015
CHINA LAKE, CA 93555-6108

Direct Delivery Address (UPS, FedEx, etc):
COMMANDER
CODE 220000D (C.Kyte)
NAVAIRWARCENWPNDIV
BLDG 982, MAIL STOP 4015
CHINA LAKE, CA 93555-6108

CLAUSES INCORPORATED BY FULL TEXT

ATTENTION-IMPORTANT MODIFICATION NUMBERING INFORMATION:
Bilateral Modifications issued by the Department of Defense agencies are no longer assigned an official "P0000" number until the contracting officer has released/signed the modification. This change is a result of the Defense Finance and Accounting Service (DFAS) Business Management Modernization Program (BMMP) requirement that modifications are to be released in numerical order without skipping any "P0000" numbers.

To accommodate this change the Standard Procurement System (SPS) now assigns a unique Modification Control Number (MCN) to each modification when it is created. The MCN was established for contractors to track the approved version of the modification. This number, unique to the modification, is included on both the draft modification and the released/signed modification. The MCN can be found in Block 14 of all modifications. The use of the MCNs ensures DFAS only receives modifications in numerical order

Section B - Supplies or Services and Prices

B-TEXT-01

B-TEXT-01 PRODUCTION UNIT QUANTITIES AND PRICES

Contract Line Item (CLIN) 0004 is the production quantities for the Microwave Power Module Amplifier (MPM) Type I. The CLIN has been broken into Ordering Periods to develop the pricing for the contract. Delivery Orders issued shall incorporate the corresponding unit price based on the step-ladder pricing of the corresponding Ordering Period. Offerors are to propose as follows.

MPM TYPE I PRODUCTION (CLIN 0004):

1. Offerors are to calculate their proposed prices for CLIN 0004 based on the specified unit quantities and the step-ladder pricing for the appropriate Ordering Period. The Offeror will use a price proposal evaluation unit price (as identified herein) to determine the aggregate price for each Ordering Period as follows:

DESCRIPTION	QTY	UNIT PRICE	TOTAL PRICE
Ordering Period I Production Units.	**8**	**$33,230.00**	**$265,840.00**

Amplifier, Microwave Power Module,
AM-7559/ULQ-21 (V), Type I:
In Accordance with the Statement of Work, C-TEXT-01, Specification 13672-ATS637G, Dated 22 March 2006, Attachment (1) and Drawing 1611AS479, Attachment (2).

Ordering Period I Step-Ladder Pricing

QTY	UNIT	PRICE
	EA	
	EA	
	EA	
	EA	
	EA	

b(4)

Ordering Period II Production Units.	**32**	**$33,960.00**	**$1,086,720.00**

Amplifier, Microwave Power Module,
AM-7559/ULQ-21 (V), Type I:
In Accordance with the Statement of Work, C-TEXT-01, Specification 13672-ATS637G, Dated 22 March 2006, Attachment (1) and Drawing 1611AS479, Attachment (2).

Ordering Period II Step-Ladder Pricing

QTY	UNIT	PRICE
	EA	

b(4)

DESCRIPTION	QTY	UNIT PRICE	TOTAL PRICE
EA EA EA EA } b(4)			
Ordering Period III Production Units.	**23**	**$35,145.00**	**$808,335.00**
Amplifier, Microwave Power Module, AM-7559/ULQ-21 (V), Type I: In Accordance with the Statement of Work, C-TEXT-01, Specification 13672-ATS637G, Dated 22 March 2006, Attachment (1) and Drawing 1611AS479, Attachment (2).			
Ordering Period III Step-Ladder Pricing QTY UNIT PRICE EA EA EA EA EA } b(4)			
Ordering Period IV Production Units.	**8**	**$36,230.00**	**$289,840.00**
Amplifier, Microwave Power Module, AM-7559/ULQ-21 (V), Type I: In Accordance with the Statement of Work, C-TEXT-01, Specification 13672-ATS637G, Dated 22 March 2006, Attachment (1) and Drawing 1611AS479, Attachment (2).			
Ordering Period IV Step-Ladder Pricing QTY UNIT PRICE EA EA EA EA } b(4)			

DESCRIPTION	QTY	UNIT PRICE	TOTAL PRICE
EA b(4)			
Ordering Period V Production Units.	**23**	**$37,100.00**	**$853,300.00**

Amplifier, Microwave Power Module,
AM-7559/ULQ-21 (V), Type I:
In Accordance with the Statement of Work, C-TEXT-01, Specification 13672-ATS637G, Dated 22 March 2006, Attachment (1) and Drawing 1611AS479, Attachment (2).

Ordering Period V Step-Ladder Pricing

QTY	UNIT	PRICE
	EA	b(4)
	EA	
	EA	
	EA	
	EA	
TOTAL CLIN 0002	**94**	**$35,149.31**	**$3,304,035.00**

B-TEXT-02

B-TEXT-02 LABOR CATEGORIES, LABOR HOURS AND LABOR RATES

Contract Line Items (CLINs) 0009 through 0011 and 0013 through 0015 are Time and Material CLIN and 0012 is a Fixed Price CLIN. Offerors are to propose as follows.

ENGINEERING AND TECHNICAL SUPPORT SERVICES:

1. Offerors are to calculate their proposed prices for Ordering Periods I through V to determine the total cost for the Engineering and Technical Support Services Hours (CLIN 0009). The offeror is to apply their fully burdened labor rate to the specified labor categories and hours for the appropriate Ordering Period. The labor categories and hours per labor category (same level for each Ordering Period) are as follows:

LABOR CATEGORY	ENGINEERING AND TECHNICAL SUPPORT SERVICES HOURS
Program Manager	120
Senior Engineer	600
Engineer	600
Senior Electronic Technician	600
Electronic Technician	600
Assembler	1,000
Quality Assurance	100

LABOR CATEGORY	ENGINEERING AND TECHNICAL SUPPORT SERVICES HOURS	
CAD/Configuration Management	100	
TOTAL HOURS	3,720	Per Ordering Period

Set forth below are the labor categories and the burdened hourly rates to be used during the performance of this contract. Task Orders issued during the respective ordering periods shall incorporate the corresponding labor rates cited below.

ORDERING PERIOD I:

ENGINEERING & TECHNICAL SUPPORT SERVICES

LABOR CATEGORY	RATE	HOURS	COST
Program Manager		120	
Sr Engineer		600	
Engineer		600	
Sr Electronic Technician		600	
Electronic Technician		600	
Assembler		1,000	
Quality Assurance		100	
CAD/Configuration Management		100	
Total Ordering Period I		3,720	**$357,760.00**

b(4)

ORDERING PERIOD II:

ENGINEERING & TECHNICAL SUPPORT SERVICES

LABOR CATEGORY	RATE	HOURS	COST
Program Manager		120	
Sr Engineer		600	
Engineer		600	
Sr Electronic Technician		600	
Electronic Technician		600	
Assembler		1,000	
Quality Assurance		100	
CAD/Configuration Management		100	
Total Ordering Period II		3,720	**$364,820.00**

b(4)

ORDERING PERIOD III:

ENGINEERING & TECHNICAL SUPPORT SERVICES

LABOR CATEGORY	RATE	HOURS	COST
Program Manager		120	
Sr Engineer		600	
Engineer		600	
Sr Electronic Technician		600	
Electronic Technician		600	
Assembler		1,000	
Quality Assurance		100	
CAD/Configuration Management		100	
Total Ordering Period III		3,720	**$384,020.00**

b(4)

ORDERING PERIOD IV:

ENGINEERING & TECHNICAL SUPPORT SERVICES

LABOR CATEGORY	RATE	HOURS	COST
Program Manager		120	
Sr Engineer		600	
Engineer		600	
Sr Electronic Technician		600	
Electronic Technician		600	
Assembler		1,000	
Quality Assurance		100	
CAD/Configuration Management		100	
Total Ordering Period IV		3,720	**$386,320.00**

b (4)

ORDERING PERIOD V:

ENGINEERING & TECHNICAL SUPPORT SERVICES

LABOR CATEGORY	RATE	HOURS	COST
Program Manager		120	
Sr Engineer		600	
Engineer		600	
Sr Electronic Technician		600	
Electronic Technician		600	
Assembler		1,000	
Quality Assurance		100	
CAD/Configuration Management		100	
Total Ordering Period V		3,720	**$401,620.00**

b (4)

TOTAL CLIN 0009		**18,600**	**$ 1,894,540.00**

2. Offerors are to insert their material burden rate per Ordering Period. Offerors are to calculate the price for each Ordering Period by applying the material burden rate to the material price specified below. The total material burden for all Ordering Periods will determine the cost for CLIN 0011. Task Orders issued during the respective Ordering Period shall incorporate the corresponding material burden rate cited below.

DESCRIPTION	MATERIAL	RATE	AMOUNT
Ordering Period I	$50,000		
Ordering Period II	$50,000		
Ordering Period III	$50,000		
Ordering Period IV	$50,000		
Ordering Period V	$50,000		
Total CLIN 0011			**$18,850.00**

b (4)

REPAIR SERVICES:

1. Offerors are to calculate their proposed prices for the Teardown & Evaluation of estimated units by Ordering Periods as identified in the table below. The total of all the Ordering Periods will be used to determine the total price of CLIN 0012. Task Orders issued shall use the corresponding Ordering Period price as identified below.

TEARDOWN & EVALUATION			
DESCRIPTION	QTY	PRICE	TOTAL
Ordering Period I	15		
Ordering Period II	15		
Ordering Period III	15		
Ordering Period IV	15		
Ordering Period V	15		
Total CLIN 0012	**75**		**$165,000.00**

b(4)

2. Offerors are to calculate their proposed prices for Ordering Periods I through V to determine the total cost for the Repair Services Hours (CLIN 0013). The offeror is to apply their fully burdened labor rate to the specified labor categories and hours for the appropriate Ordering Period. The labor categories and hours per labor category (same level for each Ordering Period) are as follows:

LABOR CATEGORY	REPAIR SERVICES HOURS	
Program Manager	75	
Senior Engineer	75	
Engineer	75	
Senior Electronic Technician	150	
Electronic Technician	150	
Assembler	300	
Quality Assurance	30	
CAD/Configuration Management	0	
TOTAL HOURS	855	Per Ordering Period

Set forth below are the labor categories and the burdened hourly rates to be used during the performance of this contract. Task Orders issued during the respective ordering periods shall incorporate the corresponding labor rates cited below.

ORDERING PERIOD I:

REPAIR SERVICES LABOR CATEGORY	RATE	HOURS	COST
Program Manager		75	
Sr Engineer		75	
Engineer		75	
Sr Electronic Technician		150	
Electronic Technician		150	
Assembler		300	
Quality Assurance		30	
CAD/Configuration Management		0	

b(4)

Total Ordering Period I		855	**$79,695.00**

ORDERING PERIOD II:

REPAIR SERVICES LABOR CATEGORY	RATE	HOURS	COST
Program Manager		75	
Sr Engineer		75	
Engineer		75	
Sr Electronic Technician		150	
Electronic Technician		150	
Assembler		300	
Quality Assurance		30	
CAD/Configuration Management		0	
Total Ordering Period II		855	**$80,985.00**

b(4)

ORDERING PERIOD III:

REPAIR SERVICES LABOR CATEGORY	RATE	HOURS	COST
Program Manager		75	
Sr Engineer		75	
Engineer		75	
Sr Electronic Technician		150	
Electronic Technician		150	
Assembler		300	
Quality Assurance		30	
CAD/Configuration Management		0	
Total Ordering Period III		855	**$85,080.00**

b(4)

ORDERING PERIOD IV:

REPAIR SERVICES LABOR CATEGORY	RATE	HOURS	COST
Program Manager		75	
Sr Engineer		75	
Engineer		75	
Sr Electronic Technician		150	
Electronic Technician		150	
Assembler		300	
Quality Assurance		30	
CAD/Configuration Management		0	
Total Ordering Period IV		855	**$85,605.00**

b(4)

ORDERING PERIOD V:

REPAIR SERVICES LABOR CATEGORY	RATE	HOURS	COST
Program Manager		75	
Sr Engineer		75	
Engineer		75	
Sr Electronic Technician		150	
Electronic Technician		150	
Assembler		300	

b(4)

Quality Assurance	30	b(4)
CAD/Configuration Management	0	
Total Ordering Period V	855	**$88,725.00**
TOTAL CLIN 0013	**4,275**	**$420,090.00**

3. Offerors are to insert their material burden rate per Ordering Period. Offerors are to calculate the price for each Ordering Period by applying the material burden rate to the material price specified below. The total material burden for all Ordering Periods will determine the cost for CLIN 0012. Task Orders issued during the respective Ordering Period shall incorporate the corresponding material burden rate cited below.

DESCRIPTION	MATERIAL	RATE	AMOUNT
Ordering Period I	$50,000		
Ordering Period II	$50,000		
Ordering Period III	$50,000		
Ordering Period IV	$50,000		
Ordering Period V	$50,000		
Total CLIN 0015			**$18,850.00**

b(4)

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0001		1	Each	$0.00	$0.00 NC

Initial Order - (FAT Required)
FFP
Amplifier, Microwave Power Module,
AM-7559/ULQ-21 (V), Type I: In Accordance with the Statement of Work, C-TEXT-01, Specification 13672-ATS637G, Dated 22 March 2006, Attachment (1) and Drawing 1611AS479, Attachment (2). WAIVED.

FOB: Destination
PURCHASE REQUEST NUMBER: 0010205405

FUNDED AMOUNT

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0002		1	Lot	$0.00	$0.00 NC

First Article Testing for CLIN 0001
FFP
Amplifier, Microwave Power Module,
AM-7559/ULQ-21 (V), Type I: In Accordance with the Statement of Work, C-TEXT-01, Specification 13672-ATS637G, Dated 22 March 2006, Attachment (1) and Drawing 1611AS479, Attachment (2). WAIVED.

FOB: Destination
PURCHASE REQUEST NUMBER: 0010205405

FUNDED AMOUNT

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0003		1	Each	$34,250.00	$34,250.00

Initial Order - (FAT Waived)
FFP
Amplifier, Microwave Power Module,
AM-7559/ULQ-21 (V), Type I: In Accordance with the Statement of Work, C-TEXT-01, Specification 13672-ATS637G, Dated 22 March 2006, Attachment (1) and Drawing 1611AS479, Attachment (2).

FOB: Destination
PURCHASE REQUEST NUMBER: 0010205405

FUNDED AMOUNT

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0004		94	Each	$35,149.31	$3,304,035.14

Production Units
FFP
Amplifier, Microwave Power Module,
AM-7559/ULQ-21 (V), Type I: In Accordance with the Statement of Work, C-TEXT-01, Specification 13672-ATS637G, Dated 22 March 2006, Attachment (1) and Drawing 1611AS479, Attachment (2).

* See B-TEXT-01 For Specific Pricing.

FOB: Destination
PURCHASE REQUEST NUMBER: 0010205405

FUNDED AMOUNT

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0005		2	Each	$1,250.00	$2,500.00

Engineering Manual
FFP
Engineering Manual for CLIN 0001 in Accordance with C-TEXT-02.
FOB: Destination
PURCHASE REQUEST NUMBER: 0010205405

FUNDED AMOUNT

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0006		1	Lot		NSP

Technical Data - FAT
FFP
In Accordance with the Contract Data Requirements List (CDRL), DD Form 1423, Exhibit "A". WAIVED.
FOB: Destination
PURCHASE REQUEST NUMBER: 0010205405

FUNDED AMOUNT

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0007		1	Lot	$1,000.00	$1,000.00

Technical Data - FA Waived
FFP
In Accordance with the Contract Data Requirements List (CDRL), DD Form 1423, Exhibit "B".
FOB: Destination
PURCHASE REQUEST NUMBER: 0010205405

FUNDED AMOUNT

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0008		1	Lot		NSP

Technical Data
FFP
In Accordance with the Contract Data Requirements List (CDRL), DD Form 1423, Exhibit "B" Data Items B002 and B004 (MSR/TDS).
FOB: Destination
PURCHASE REQUEST NUMBER: 0010205405

FUNDED AMOUNT

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0009		1	Hours	$1,894,540.00	$1,894,540.00 NTE
	Eng &Tech Support - Labor T&M Engineering and Technical Support Services: Labor, Maximum of 18,600 Hours. * See B-TEXT-02 For Specific Pricing. FOB: Destination PURCHASE REQUEST NUMBER: 0010205405				
				TOT MAX PRICE CEILING PRICE	$1,894,540.00 NTE

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0010		1	Lot	$250,000.00	$250,000.00 NTE
	Eng &Tech Support - Material T&M Engineering and Technical Support Services: Material. FOB: Destination PURCHASE REQUEST NUMBER: 0010205405				
				TOT MAX PRICE CEILING PRICE	$250,000.00 NTE

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0011		1	Lot	$18,850.00	$18,850.00 NTE

Eng &Tech Support - Burden
T&M
Engineering and Technical Support Services:
Material Burden.

* See B-TEXT-02 For Specific Pricing.

FOB: Destination
PURCHASE REQUEST NUMBER: 0010205405

TOT MAX PRICE $18,850.00 NTE
CEILING PRICE

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0012		75	Each	$2,200.00	$165,000.00

Repair Services - Eval
FFP
Repair Services: Teardown and Evaluation of Units.

* See B-TEXT-02 For Specific Pricing.

FOB: Destination
PURCHASE REQUEST NUMBER: 0010205405

FUNDED AMOUNT

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0013		1	Hours	$420,090.00	$420,090.00 NTE
	Repair Services - Labor T&M Repair Services: Labor, Maximum of 4,275 Hours. * See B-TEXT-02 For Specific Pricing. FOB: Destination				
				TOT MAX PRICE CEILING PRICE	$420,090.00 NTE

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0014		1	Lot	$250,000.00	$250,000.00 NTE
	Repair Services - Material T&M Repair Services: Material. FOB: Destination				
				TOT MAX PRICE CEILING PRICE	$250,000.00 NTE

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0015		1	Lot	$18,850.00	$18,850.00 NTE
	Repair Services - Burden				
	T&M				
	Repair Services: Material Burden.				
	* See B-TEXT-02 For Specific Pricing.				
	FOB: Destination				
				TOT MAX PRICE	$18,850.00 NTE
				CEILING PRICE	

CLAUSES INCORPORATED BY FULL TEXT

5252.211-9504 LEVEL OF EFFORT (TIME-AND-MATERIALS AND LABOR-HOUR CONTRACTS) (NAVAIR) (NOV 1999)

(a) Task orders shall establish an anticipated level of effort (projected man-hours) for each CLIN or SLIN and a Ceiling Price for that task order. The ceiling price shall be the sum of: (1) the projected prime Contractor hours multiplied by the appropriate hourly rates prescribed in the schedule; and (2) the estimated amount of materials priced in accordance with the clause entitled, Payments Under Time-and-Materials and Labor-Hour Contracts, including estimated subcontract costs calculated in the same manner as the prime Contractor using the subcontract price schedules.

(b) The Contractor may use any combination of hours of labor categories listed in any single task order, if necessary to perform that task order. Labor categories not shown may not be used without a task order modification. The Contractor may use any combination of prime Contractor labor, subcontractor labor, and other material expense in accomplishing the statement of work within the limits expressed below.

(c) The NAVAIR clause 5252.232-9507, "Limitation of Funds - Time and Material and Labor-Hour Contracts", applies independently to each task order under this contract and nothing in this provision amends the rights or responsibilities of the parties hereto under that clause. In addition, the notifications required by this clause are separate and distinct from any specified in the NAVAIR 5252.232-9507.

(d) The Contractor shall notify the Procuring Contracting Officer immediately in writing whenever it has reason to believe that:

(1) The level of effort the Contractor expects to incur under any order in the next 60 days, when added to the level of effort previously expended in the performance of that order, will exceed seventy-five (75%) percent of the level of effort established for that order; or

(2) The level of effort required to perform a particular order will be greater than the level of effort established for that order.

As part of the notification, the Contractor shall provide the Contracting Officer a revised estimate of the level of effort required to perform the order. As part of the notification, the Contractor also shall submit any proposal for adjustment to the ceiling price that it deems would be equitable if the Government were to increase the level of effort as proposed by the Contractor. Any such upward adjustment shall be prospective only (i.e. will apply only to effort expended after a modification (if any) is issued.

(e) Within thirty days after completion of the work under each task order, the Contractor shall submit the following information directly, in writing, to the ordering officer, the COR and the Defense Contract Audit Agency office to which vouchers are submitted.

(1) The total number of man-hours of direct labor, including subcontract labor, expended and a breakdown of this total showing the number of man-hours expended in each CLIN or SLIN listed in the task order schedule, including the identification of the key employees utilized.

(2) The total labor price plus estimated total allowable material cost incurred under the task order,

(3) In the case of a cost under run, the amount by which the task order amount may be reduced to recover excess funds.

(f) In the event that less than one hundred (100%) percent of the established level of effort for a task order is expended, the Government may require continued performance subject to the remaining obligation.

5252.232-9507 LIMITATION OF FUNDS - TIME AND MATERIAL AND LABOR-HOUR CONTRACTS (NAVAIR) (OCT 2005)

(a) The parties estimate that performance of this contract will not cost the Government more than the ceiling price specified in the Schedule or on the individual Task Order. The contractor agrees to use its best effort to perform the work specified in the Schedule or Task Orders, and all obligations under this contract, within the ceiling price.

(b) The Schedule or individual Task Orders specify the amounts presently available for payment by the Government and allotted to the contract or individual Task Orders, the items covered, and the period of performance it is estimated the allotted amounts will cover. The parties contemplate that the Government will allot additional funds incrementally to the contract or individual Task Orders up to the full ceiling price. The contractor agrees to perform, or have performed, work on the contract up to the point at which the total amount paid and payable by the Government under the contract and individual Task Orders approximates, but does not exceed, the total amount actually allotted by the Government to the contract.

(c) The contractor shall notify the Contracting Officer in writing whenever it has reason to believe that the costs it expects to incur under the contract or an individual Task Order in the next sixty (60) days, when added to all costs previously incurred, will exceed seventy-five (75%) percent of the total amount so far allotted to the contract or Task Order by the Government. The notice shall state the estimated amount of additional funds required to continue performance for the period specified in the Schedule or Task Order.

(d) Sixty (60) days before the end of the period specified in the Schedule or individual Task Order, the contractor shall notify the Contracting Officer in writing of the estimated amount of additional funds, if any, required to continue timely performance under the contract or for any further period specified in the Schedule or Task Order, or otherwise agreed upon, and when the funds will be required.

(e) If, after notification, additional funds are not allotted by the end of the period specified in the Schedule or individual Task Order, or another agreed upon date, upon the contractor's written request the Contracting Officer will terminate the contract or individual Task Order on that date, in accordance with the provisions of the Termination clause of this contract. If the contractor estimates that the funds available will allow it to continued to discharge its obligations beyond that date, it may specify a later date in its request, and the Contracting Officer may terminate the contract or individual Task Order on that later date.

(f) Except as required by other provisions of this contract, specifically citing and stated to be an exception of this clause -

(1) The Government is not obligated to reimburse the contractor for costs incurred in excess of the total amount allotted by the Government to this contract; and

(2) The contractor is not obligated to continue performance under this contract or individual Task Orders (including actions under the Termination clause of this contract), or otherwise incur costs in excess of the amount then allotted to the contract or Task Order by the Government, until a modification is executed increasing the amount allotted by the Government to the contract or Task Order.

(g) The ceiling price shall be increased in accordance with the provisions of FAR clause 52.232-7, "Payments Under Time-and-Materials and Labor-Hour Contracts".

(h) No notice, communication, or representation in any form other than specified in subparagraph (f)(2) above, or from any person other than the Contracting Officer, shall affect the amount allotted by the government to this contract or an individual Task Order. In the absence of the specified notice, the Government is not obligated to

reimburse the contractor for any costs in excess of the total amount allotted by the Government to this contract, whether incurred during the course of the contract or as a result of termination.

(i) When and to the extent the amount allotted by the Government to the contract or an individual Task Order is increased, any costs the contractor incurs before the increase that are in excess of the amount previously allotted by the Government shall be allowable to the same extent as if incurred afterward, unless the Contracting Officer issues a termination or other notice and directs that the increase is solely to cover termination or other specified expenses.

(j) Change orders shall not be considered an authorization to exceed the amount allotted by the Government specified in the Schedule or individual Task Order, unless they contain a statement increasing the amount allotted.

(k) Nothing in this clause shall affect the right of the Government to terminate this contract or an individual Task Order.

Section C - Descriptions and Specifications

C-TEXT-01
C-TEXT-01 STATEMENT OF WORK/ SPECIFICATION

STATEMENT OF WORK

1.0 SCOPE. The Contractor shall fabricate and test Amplifiers in accordance with Statement of Work.

2.0 APPLICABLE DOCUMENTS

2.1 Military Standards
MIL-STD-130L(1) Identification Marking of U.S. Military Property

2.2 Other Government and Industrial Documents
13672-TS637G Amplifier, Microwave Power Module
ISO 9000 International Standards Organization Quality Standard

3.0 REQUIREMENTS. The Contractor shall manufacture, test and deliver Amplifiers. This effort shall be performed under the premises of ISO-9000. Other comparable programs may be approved by the Government.

3.1 Amplifiers. The Contractor shall provide the quantities specified in the contract. The Amplifiers shall meet the specification requirements referenced in this contract.

3.2 Data. The Contractor shall provide Monthly Progress Reports in accordance with Exhibit B. The report shall include, but not be limited to, the following items: technical progress, scheduling, issues and a status of billings and funds received against the contract including both progress and final acceptance payments.

3.3 Confirguration Management/Data Management. The Contractor shall document any proposed design changes and obtain approval from the Government prior to upgrade fabrication in accordance with Exhibit B.

3.4 Nomenclature. The Contractor shall request confirmation of official nomenclature and serial number prefix in accordance with Exhibit B.

3.5 Testing. The Contractor shall provide First Article and Production Test Procedures, First Article Test Report and Test Data Sheets in accordance with Exhibit B.

3.6 Engineering Manual Requirements: The Engineering Manual shall contain information necessary for engineering personnel to use and support the equipment. This information shall contain, as a minimum, a technical description of the equipment operation including the operation of all major subassemblies, functional block diagrams, schematics, assembly drawings sufficient to identify all components shown on the schematics and as built external form factor drawings including connector and mounting locations. This manual shall be in contractor format.

4.0 QUALITY ASSURANCE. The Contractor's quality assurance program shall meet the requirements of ANSI/Q9001/Q9003 or an equivalent quality system model. The QA program shall address material and parts selection, process control, workmanship, inspection and configuration management.

SPECIFICATION

Work under this contract shall be performed in accordance with the following documents and all other terms and conditions contained herein.

Attachment 1: NAWCWD Performance Specification, Amplifier, Microwave Power Module, 13672-ATS637G. *

*Performance Specification 13672-TS637G contains both the Type I and Type II Amplifier, Microwave Power Modules. **Be advised that all offerors are to propose only on the Type I Amplifier, Microwave Power Module.**

Attachment 2: NAVAIR Drawing 1611AS479D.

Exhibit B: Contract Data Requirements List (DD Form 1423). First Article Waived.

C-TXT-02

C-TXT-02 SPECIFICATIONS, AMENDMENTS OR REVISIONS APPLICABLE

The following is a list of all applicable revisions or amendments to specifications cited in the Schedule or cited in referenced drawings:

SPECIFICATION	TITLE	REVISION/ AMENDMENT	DATE
ANSI/ASQ 9000	Quality Management and Quality Assurance Standards - Guidelines for Selection and Use		2000
ANSI/ISO/ASQ 9001	Quality Systems - Model for Quality Assurance in Design, Development, Production, Installation and Servicing		15 SEP 94
ANSI/ASQ 9004-	Quality Management Systems Elements – Guidelines for Performance Improvements		2000
ANSI/NCSL Z540-1	Calibration Laboratories and Measuring and Test Equipment - General Requirements		JAN 94
ANSI/VITA1	VME 64 Specifications		1994
ASTM D 3951-95B(1)	Standard Practice for Commercial Packaging		11 SEP 95
FED-STD-595	Colors (Guidance Only)		11 JAN 94
ISO 10012-1	Quality Assurance Requirements for Measurement Management Systems - Requirements for Measurement Process and Measuring Equipment		APR 03
MIL-STD-130K	Identification Marking of U. S. Military Property		15 JAN 00
MIL-STD-461	Requirement for Control of Electromagnetic Interference Characteristics of Subsystems and Equipment	E	20 AUG 99
MIL-STD-704	Aircraft Electric Power Characteristics	E	1 MAY 91
MIL-STD-810	Engineering Test Methods - Engineering Guidelines (Guidance Only)	E	9 FEB 90

C-TXT-05

C-TXT-05 CONTRACT DATA REQUIREMENTS LIST (MAR 1996)

Technical Data shall be in accordance with the attached Contract Data Requirements Lists, CDRL, DD Form 1423, Exhibit "B" of this contract.

C-TEXT-03

C-TEXT-03 NAWCWD STATEMENT OF WORK, AMPLIFIER, MICROWAVE POWER MODULES REPAIR SERVICES

1.0 SCOPE

1.1 The Contractor shall furnish all parts, components, material, documentation and necessary technical service for the repair of Amplifier, Microwave Power Module units, which are owned by the government.

1.2 The work to be performed will relate only to units previously procured to the applicable performance specification or envelope drawings, under this contract or prior contracts, with expired warranties. It shall not include any research and development efforts, nor will it include any parts, components, subassemblies, or materials, which are not an integral part of the original units.

1.3 The Government will ship units in need of repair to the contractor for disassembly and evaluation. After disassembly, if the unit can be repaired for the evaluation fee, the contractor shall repair the unit, perform the required testing and return the unit to the Government. If the unit cannot be repaired for the evaluation fee, the contractor will provide the Government with a short narrative explaining the failure mechanism and the corrective action required, together with a schedule and cost for repairing the unit. The Government will review the estimate for acceptability and enter into discussions with the contractor if necessary. Upon completion of this process, the Government may issue a Time and Material delivery order to cover the work. Once the contractor receives the executed order, he shall complete the repair required within the negotiated schedule. If the Government determines that the unit is beyond economical repair, the disposition of the unit shall be as directed by the Contracting Officer.

2.0 Applicable Documents

2.1 Specification

13672-ATS637G	Amplifier, Microwave Power Module

2.2 Envelope Drawing

NAVAIR 1611AS479C	Amplifier, Microwave Power Module, AM-7559/ULQ-21(V)

3.0 Technical Tasks

3.1 The contractor shall provide repair services and replacement parts for existing equipment, to return non-operational equipment to its original performance specifications as follows:

3.2 The repaired subject unit shall meet the requirements described in the applicable performance specification or envelope drawing as specified in the applicable Delivery Order.

3.3 The repaired subject unit shall be tested in accordance with the acceptance test procedures called out in the applicable performance specification or envelope drawing as specified in the applicable Delivery Order.

4.0 Reports, Data and Deliverables

4.1 The contractor shall prepare a test report on each unit repaired in accordance with the basic contract's Exhibit B.

4.2 The contractor shall include the repair effort in the monthly progress reports in accordance with the basic contract's Exhibit B.

C-TEXT-04

C-TEXT-04 NAWCWD STATEMENT OF WORK AMPLIFIER, MICROWAVE POWER MODULES ENGINEERING AND TECHNICAL SUPPORT SERVICES

1.0 SCOPE

1.1 The contractor shall furnish all material, parts, components, and engineering and technical services necessary to modify and or develop new variants of the Amplifier, Microwave Power Modules.

1.2 The work will be performed in accordance with the mutually accepted Statement of Work (SOW) and shall meet the requirements in the modified or supplemental performance specification as specified in the applicable Delivery Order.

1.3 On receipt of a new requirement, the Government will generate and provide the contractor with a modified or supplemental performance specification and a SOW. The SOW will specify if existing Government Furnished Equipment (GFE) is to be modified, if a unit currently in production is to be modified, or if a new order against an existing CLIN is to be exercised for modification. The contractor will then provide a short technical narrative as to how the new performance requirement will be incorporated into the existing design, together with a cost and schedule proposal for the subject effort. As a minimum the cost proposal shall include material, subcontracts and labor broken down into the various categories. The Government will review the proposal for acceptability and enter into discussions with the contractor if necessary. Upon completion of this process, the Government may issue a Time and Material delivery order to cover the work. Once the contractor receives the executed order, he shall complete the effort within the negotiated schedule.

2.0 Applicable Documents

2.1 Specification

13762-ATS637G	Amplifier, Microwave Power Module

2.2 Envelope Drawings

NAVAIR 1611AS479C	Amplifier, Microwave Power Module, AM-7559/ULQ-21(V)

3.0 Technical Tasks

3.1 The contractor shall provide all necessary resources to modify GFE or production units in accordance with the revised performance specification and or drawing.

3.2 The SOW and revised performance specification and or drawing will describe the required level of testing. The contractor shall revise existing test procedures, or generate new procedures to meet the requirements of the SOW and revised performance specification and or drawing.

3.3 The contractor shall test the modified units to verify conformance with the SOW and performance specification and or drawing.

3.4 The contractor shall update the engineering manual to reflect the additional configuration and or capability.

4.0 Reports, Data and Deliverables

4.1 The contractor shall prepare a test report on each unit in accordance with the basic contract's Exhibit B.

4.2 The contractor shall include the effort under the SOW in the monthly progress reports in accordance with the basic contract's Exhibit B.

4.3 The contractor shall update the Engineering Manual in accordance with the basic contract's C-Text-01, Statement of Work paragraph 3.6, Engineering Manual Requirements.

Section D - Packaging and Marking

D-TXT-01

D-TXT-01 PREPARATION FOR DELIVERY

Material shall be packed for shipment using the best commercial practice and in such a manner that will be in compliance with the National Motor Freight Classification (NMFC) and/or the Department of Transportation (DOT), for acceptance by common carrier and safe delivery at destination.

CLAUSES INCORPORATED BY FULL TEXT

5252.247-9507 PACKAGING AND MARKING OF REPORTS (NAVAIR) (OCT 2005)

(a) All unclassified data shall be prepared for shipment in accordance with best commercial practice. Classified reports, data and documentation, if any, shall be prepared for shipment in accordance with the National Industry Security Program Operating Manual, DoD 5220.22-M.

(b) The contractor shall prominently display on the cover of each report the following information:
(1) Name and business address of contractor.
(2) Contract Number/Delivery/Task order number.
(3) Contract/Delivery/Task order dollar amount.
(4) Whether the contract was competitively or non-competitively awarded.
(5) Name of sponsoring individual.
(6) Name and address of requiring activity.

5252.247-9508 PROHIBITED PACKING MATERIALS (NAVAIR) (JUN 1998)

The use of asbestos, excelsior, newspaper or shredded paper (all types including waxed paper, computer paper and similar hydroscopic or non-neutral material) is prohibited. In addition, loose fill polystyrene is prohibited for shipboard use.

Section E - Inspection and Acceptance

E-TXT-02

E-TXT-02 INSPECTION AND ACCEPTANCE (DEST-PROMPT PAY)

(a) Inspection and acceptance shall be at destination by Commander, Naval Warfare Center Weapons Division, Code 539400E, Point Mugu, CA, or his duly authorized representative.

(b) As authorized by FAR 32.905(a)(1)(ii), Section I Clause FAR 52.232-25, Prompt Payment, paragraph (a)(6)(i), is modified to show Constructive Acceptance of the supplies shall be made within 30 calendar days after delivery at destination or performance of services.

(c) Inspection and acceptance of Technical Data shall be at the destination specified in Exhibits A and B, Contract Data Requirements List, DD Form 1423.

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0001	Destination	Government	Destination	Government
0002	Destination	Government	Destination	Government
0003	Destination	Government	Destination	Government
0004	Destination	Government	Destination	Government
0005	Destination	Government	Destination	Government
0006	Destination	Government	Destination	Government
0007	Destination	Government	Destination	Government
0008	Destination	Government	Destination	Government
0009	Destination	Government	Destination	Government
0010	Destination	Government	Destination	Government
0011	Destination	Government	Destination	Government
0012	Destination	Government	Destination	Government
0013	N/A	N/A	N/A	Government
0014	N/A	N/A	N/A	Government
0015	N/A	N/A	N/A	Government

CLAUSES INCORPORATED BY REFERENCE

52.246-2	Inspection Of Supplies--Fixed Price	AUG 1996
52.246-6	Inspection--Time-And-Material And Labor-Hour	MAY 2001
52.246-16	Responsibility For Supplies	APR 1984

CLAUSES INCORPORATED BY FULL TEXT

52.246-11 HIGHER-LEVEL CONTRACT QUALITY REQUIREMENT (FEB 1999)

The Contractor shall comply with the higher-level quality standard selected below.

NUMBER	TITLE	DATE	TAILORING
ANSI/ASQC Q9000-1	Quality Management and Quality Assurance Standards – Guidelines for Selection and Use	15 SEP 94	None
ANSI/ISO/ASQC Q9001	Quality Systems – Model for Quality Assurance in Design, Development, production, Installation, and Servicing	15 SEP 94	None
ANSI/ASQC Q9004-1	Quality Management and Quality System Elements - Guidelines	15 SEP 94	None

NOTE: ANSI/ASQC Q9000-1, ANSI/ISO/ASQC Q9001, and ANSI/ASQC Q9004-1 are used in combination with each other. The Contractor may propose an alternative quality standard. Acceptable alternative standards are MIL-I-45208 or MIL-Q-9858.

252.246-7000 MATERIAL INSPECTION AND RECEIVING REPORT (MAR 2003)

(a) At the time of each delivery of supplies or services under this contract, the Contractor shall prepare and furnish to the Government a material inspection and receiving report in the manner and to the extent required by Appendix F, Material Inspection and Receiving Report, of the Defense FAR Supplement.

(b) Contractor submission of the material inspection and receiving information required by Appendix F of the Defense FAR Supplement by using the Wide Area WorkFlow-Receipt and Acceptance (WAWF-RA) electronic form (see paragraph (b)(1) of the clause at 252.232-7003) fulfills the requirement for a material inspection and receiving report (DD Form 250).

5252.246-9512 INSPECTION AND ACCEPTANCE (NAVAIR) (OCT 2005)

(a) Inspection and acceptance of the supplies or services to be furnished hereunder shall be performed by Commander, Naval Air Warfare Center Weapons Division, Code 539400E, Point Mugu, CA, or his duly authorized representative.

(b) Acceptance of all Contract Line Items/Subcontract Line Items (CLINs/SLINs) shall be made by signature of the accepting authority on a DD Form 250, Material Inspection and Receiving Report. Acceptance will only occur when the accepting authority is sure that inspections performed demonstrate compliance with contract requirements.

Section F - Deliveries or Performance

CLAUSES INCORPORATED BY REFERENCE

52.211-17	Delivery of Excess Quantities	SEP 1989
52.242-15	Stop-Work Order	AUG 1989
52.242-17	Government Delay Of Work	APR 1984
52.247-34	F.O.B. Destination	NOV 1991

CLAUSES INCORPORATED BY FULL TEXT

52.211-8 TIME OF DELIVERY (JUN 1997)

(a) The Government requires delivery to be made according to the following schedule:

REQUIRED DELIVERY SCHEDULE

ITEM	DESCRIPTION	QTY/ UNIT	WITHIN DAYS AFTER DATE OF ISSUANCE OF DELIVERY ORDER OR THE SPECIFIC EVENT SPECIFIED HEREIN
0003	Initial Order Unit (FAT Waived) MPM Type I	1 EA	Deliver no later than 330 days after issuance of Delivery Order.
0004	IDIQ Production Units – MPM Type I	94 EA	Deliver at a minimum rate of 5 each per month to commence within 300 days after issuance of Delivery Order. *
0005	Engineering Manual – MPM Type I	2 EA	Deliver within 90 days after issuance of Delivery Order.
0009 Through 0011	Engineering & Technical Support.	1 LO	Period of performance will be as specified on individual Delivery Order.
0012 Through 0015	Repair Support	1 LO	Period of performance will be as specified on individual Delivery Order.

*In the event that two or more Delivery Orders are issued for CLIN 0002 and the delivery schedules overlap, the minimum rate of 5 each per month applies to the aggregate number on order under the contract (all Delivery Orders combined); however, the 300 day lead time for each order commences on the date of issuance of the order.

The Government will evaluate equally, as regards time of delivery, offers that propose delivery of each quantity within the applicable delivery period specified above. Offers that propose delivery that will not clearly fall within the applicable required delivery period specified above will be considered nonresponsive and rejected. The Government reserves the right to award under either the required delivery schedule or the proposed delivery schedule, when an offeror offers an earlier delivery schedule than required above. If the offeror proposes no other delivery schedule, the required delivery schedule above will apply.

OFFEROR'S PROPOSED DELIVERY SCHEDULE

ITEM	DESCRIPTION	QTY/ UNIT	WITHIN DAYS AFTER DATE OF ISSUANCE OF DELIVERY ORDER OR THE SPECIFIC EVENT SPECIFIED HEREIN
0001	Initial Order Unit (FAT Waived) MPM Type I	1 EA	Deliver no later than _____ days after issuance of Delivery Order.
0002	IDIQ Production Units – MPM Type I	94 EA	Deliver at a minimum rate of _____ each per month to commence within _____ days after issuance of Delivery Order. *
0003	Engineering Manual – MPM Type I	2 EA	Deliver within _____ days after approval of First Article Test Report.
0006 Through 0008	Engineering & Technical Support.	1 LO	Period of performance will be as specified on individual Delivery Order.
0009 Through 0012	Repair Support	1 LO	Period of performance will be as specified on individual Delivery Order.

(b) Attention is directed to the Contract Award provision of the solicitation that provides that a written award or acceptance of offer mailed or otherwise furnished to the successful offeror, results in a binding contract. The Government will mail or otherwise furnish to the offeror an award not later than the day award is dated. Therefore, the offeror should compute the time available for performance beginning with the actual date of award, rather than the date the written notice of award is received from the Contracting Officer through the ordinary mails. However, the Government will evaluate an offer that proposes delivery based on the Contractor's date of receipt of the contract or notice of award by adding (1) five calendar days for delivery of the award through the ordinary mails, or (2) one working day if the solicitation states that the contract or notice of award will be transmitted electronically. (The term "working day" excludes weekends and U.S. Federal holidays.) If, as so computed, the offered delivery date is later than the required delivery date, the offer will be considered nonresponsive and rejected.

5252.247-9505 TECHNICAL DATA AND INFORMATION (NAVAIR) (FEB 1995)

Technical Data and Information shall be delivered in accordance with the requirements of the Contract Data Requirements List, DD Form 1423, Exhibit B, attached hereto, and the following:

(a) The contractor shall concurrently deliver technical data and information per DD Form 1423, Blocks 12 and 13 (date of first/subsequent submission) to all activities listed in Block 14 of the DD Form 1423 (distribution and addresses) for each item. Additionally, the technical data shall be delivered to the following cognizant codes, who are listed in Block 6 of the DD Form 1423.

NAWCWD Code 539400E Tom Williams thomas.h.williams@navy.m

			il
NAWCWD	Code 539400E	Joellen Poston	Joellen.poston@navy.mil
NAWCWD	Code 539400E	Don Fitch	Don.fitch@navy.mil
ACO		Julie Kemper	Julie.kemper@dcma.mil

(b) Partial delivery of data is not acceptable unless specifically authorized on the DD Form 1423, or unless approved in writing by the PCO.

(c) The Government review period provided on the DD Form 1423 for each item commences upon receipt of all required data by the technical activity designated in Block 6.

(d) A copy of all other correspondence addressed to the Contracting Officer relating to data item requirements (i.e., status of delivery) shall also be provided to the codes reflected above and the technical activity responsible for the data item per Block 6, if not one of the activities listed above.

(e) The PCO reserves the right to issue unilateral modifications to change the destination codes and addresses for all technical data and information at no additional cost to the Government.

(f) Unless otherwise specified in writing, rejected data items shall be resubmitted within thirty (30) days after receipt of notice of rejection.

F-TXT-08 SHIPPING INSTRUCTIONS (POINT MUGU) (MAR 2003)

The articles to be furnished hereunder shall be delivered all transportation charges paid by the Contractor to Naval Air Station, Point Mugu, CA.

Ship To: NAVAL BASE VENTURA COUNTY (NBVC)
Receiving Officer, Code N41VW/BLDG 65
N68936-07-D-0016
Point Mugu, CA 93042-5033

Mark For: ATS Receiving Desk
Bldg. 351, Room 1210, Extension 9267

Failure to mark each shipping label and packing list as indicated above may result in return of shipment at your expense, or will cause a delay in processing your invoice for payment.

RECEIVING DOCK HOURS are from 0800 TO 1530, MONDAY THROUGH THURSDAY EXCLUDING HOLIDAYS WHEN THE RECEIVING DOCK WILL BE CLOSED.

Section G - Contract Administration Data

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5252.201-9502 CONTRACTOR'S AUTHORIZED CONTRACT COORDINATOR AND TECHNICAL LIAISON (NAVAIR) (OCT 2005)

(a) The contractor shall state below the name and telephone numbers of the contractor's employees responsible for coordination of contract functions/liaison with the Contracting Officer and/or Contract administrator, and providing technical assistance as required regarding product specifications, functionality, etc.

CONTRACT COORDINATOR:

NAME:	**Barbara Perez**
PHONE (BUS):	**(610) 252-7331 ext 222**
PHONE (AFTER HOURS):	**(610) 252-1059**
EMAIL:	**bperez@tritonetd.com**

ALTERNATE:

NAME:	**Paul Jones**
PHONE (BUS):	**(610) 252-7331 ext 203**
PHONE (AFTER HOURS):	**(610) 349-1435**
EMAIL:	**pjones@tritonetd.com**

(b) The contractor shall notify the Contracting Officer and/or Contract Administrator in advance, in writing, of any changes in the above listed personnel.

5252.232-9513 INVOICING INSTRUCTIONS AND PAYMENT (WAWF INSTRUCTIONS) (MAR 2006)

(a) Invoices for goods received or services rendered under this contract shall be submitted electronically through Wide Area Work Flow – Receipt and Acceptance (WAWF):

(1) The vendor shall self-register at the web site https://wawf.eb.mil. Vendor training is available on the Internet at http://www.wawftraining.com. Additional support can be obtained by calling the NAVY WAWF Assistance Line: 1-800-559-WAWF (9293).

(2) WAWF Vendor "Quick Reference" Guides are located at the following web site: http://www.acquisition.navy.mil/navyaos/content/view/full/3521

(3) Select the invoice type within WAWF as specified below. Back up documentation (such as timesheets, etc.) can be included and attached to the invoice in WAWF. Attachments created in any Microsoft Office product are attachable to the invoice in WAWF. Total limit for the size of files per invoice is 5 megabytes.

(b) The following information, regarding invoice routing DODAAC's, must be entered for completion of the invoice in WAWF:

WAWF Invoice Type:	Access the following web site for information on invoice types: http://www.wawftraining.com/courses/ content_package /content_files/menuTree.html Click on Vendor, then Determine Type of Document to Create.
Issuing Office DODAAC	**N68936**
Admin Office DODAAC:	**S3915A**
Inspector DODAAC (if applicable):	**N68936**
Ship To DODAAC (for Combo), Service Acceptor DODAAC (for 2 in 1), Service Approver DODAAC (for Final Cost Voucher) (if applicable)	**N68936**
Acceptor DODAAC (if applicable):	
Local Processing Office (LPO –if applicable):	
DCAA Office DODAAC (Cost Voucher Approver – if applicable):	**HAA391**
Paying Office DODAAC:	**HQ0337**

(c) The contractor shall submit invoices / cost vouchers for payment per contract terms. Contractors approved by DCAA for direct billing will not process vouchers through DCAA, but may submit directly to DFAS. Final voucher submission will be approved by Commander, NAWCWD or his duly appointed representative.

(d) The Government shall process invoices / cost vouchers for payment per contract terms.

(e) For each invoice / cost voucher submitted for payment, the contractor shall also email the WAWF automated invoice notice directly to the following points of contact:

Name	Email	Phone	Role
Tom Williams	Thomas.h.williams@navy.mil	805-989-3538	Technical POC
Don Fitch	Don.fitch@navy.mil	805-989-3587	Alt. Technical POC

5252.242-9513 FUNDING TO BE PROVIDED ON TASK ORDERS (NAVAIR) (OCT 2005)

All funding for this contract will be provided on the individual task orders. Task Order 0001 issued concurrent to award of this contract meets the Government's minimum requirement.

G-TXT-01 ATTENTION! E-MAIL ADDRESS REQUIRED FOR DISTRIBUTION (APR 2002)

All Naval Air Warfare Center Weapons Division Contracts/ Purchase Orders and other related documents are now distributed by electronic mail. Please provide the e-mail address to which distribution of contracts/purchase orders should be made.

E-Mail Address: **bperez@tritonetd.com**

G-TXT-09 CONTRACT ADMINISTRATION (APR 2002)

(a) The Contract Administration Services component listed in block 6 of the Standard Form 26 is the designated the Contract Administration Officer (CAO) for this contract in the performance of certain assigned contract administration functions for the Principal Contracting Officer (PCO) in accordance with FAR 42.202(e). The Administrative Contracting Officer (ACO) assigned responsibility for administration of this contract by the above designated CAO will advise the Contractor of any necessary instructions and procedures to be followed in dealing with any applicable Government office(s) or individuals. All questions and communications concerning contract administration shall be directed to or via the ACO except under certain circumstances as authorized by him.

(b) If this contract authorizes shipment at the expense of the Government, requests for Government bills of lading should be submitted to the Transportation Officer at the above address.

(c) Special Contract Administration functions to be performed by the ACO listed above are:
NONE

Section H - Special Contract Requirements

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5252.216-9506 MINIMUM AND MAXIMUM QUANTITIES (NAVAIR) (MAR 1999)

As referred to in paragraph (b) of FAR 52.216-22 " Indefinite Quantity" of this contract, the contract minimum and maximum quantities are as follows.

CLIN	MINIMUM	MAXIMUM
0003	1 Each *	1 Each
0004	1 Each	94 Each
0005	2 Each *	2 Each
0007	1 Lot *	1 Lot
0009 Through 0011	1 Lot	1 Lot
0012	0 Each	75 Each
0013 Through 0015	0 Lot	1 Lot

5252.216-9534 TASK ORDERS PROCEDURES (NAVAIR) (OCT 2005)

(a) The following activity (ies) or individual(s) is/are designated as Ordering Officer(s):

Naval Air Warfare Center Weapons Division
Contracts Department

The above activity (ies) or individual(s) is/are responsible for issuing and administering any orders placed hereunder. Ordering Officers may negotiate revisions/modifications to orders, but only within the scope of this contract. Ordering Officers have no authority to modify any provision of this basic contract. Any deviation from the terms of the basic contract must be submitted to the Procuring Contracting Officer (PCO) for contractual action. Ordering Officers may enter into mutual no cost cancellations of orders under this contract and may reduce the scope of orders/tasks, but a Termination for Convenience or Termination for Default may only be issued by the PCO.

(b) Task orders. All orders issued hereunder are subject to the terms and conditions of this contract. The contract shall control in the event of conflict with any order. When mailed, an order shall be "issued" for purposes of this contract at the time the Government deposits the order in the mail, or, if transmitted by other means, when physically delivered to the contractor.

(c) A task order shall be issued for each order. In addition to any other data that may be called for in the contract, the following information shall be specified in each order, as applicable:

(1) Date of order.
(2) Contract and task order number.
(3) Applicable contract line item number (CLIN).
(4) Description of the task to be performed.
(5) Description of the end item or service.

(6) DD Form 254 (Contract Security Classification).
(7) DD Form 1423 (Contract Data Requirements List).
(8) Exact place of performance.
(9) The inspecting and accepting codes.
(10) Estimated cost and fee and level of effort by labor category (and billing rate if known).
(11) List of Government furnished property and the estimated value of the property.
(12) Invoice and payment provisions to the extent not covered by the contract.
(13) Accounting and appropriation data.
(14) Period of performance.
(15) Organizational Conflict of Interest provisions.
(16) Type of order (e.g., completion, term, FFP)

(d) Negotiated Agreement. For task orders with an estimated value of greater than $5,000, the information contained in each task order with respect to labor categories, man-hours and delivery date shall be the result of a negotiated agreement reached by the parties in advance of issuance of the order.

(1) The Ordering Officer shall furnish the contractor with a written preliminary task order and request for proposal. The request shall include:

(i) a description of the specified work required,
(ii) the desired delivery schedule,
(iii) the place and manner of inspection and acceptance, and

(2) The contractor shall, within the time specified by the preliminary task order, provide the Ordering Officer with a proposal to perform, which shall include:

(i) the required number of labor hours by labor classification and scheduled billing rates, for each end product or task,
(ii) overtime hours by labor category,
(iii) proposed completion or delivery dates,
(iv) other direct costs (i.e., direct material, travel subsistence, and similar costs)
(v) dollar amount and type of any proposed subcontracts, and
(vi) total estimated cost/price.

The cost factors utilized in determining the estimated cost/price under any order shall be the rates applicable at time the order is issued.

(3) Upon receipt of the proposal, the Ordering Officer shall review the estimates therein to ensure acceptability to the Government, enter into such discussions with the contractor as may be necessary to correct and revise any discrepancies in the proposal, and effect whatever internal review procedures are required. Should the Ordering Officer and contractor be unable to reach agreement as to the terms of the order prior to its issuance, the conflict shall be referred to the Contracting Officer.

(4) For task orders under the dollar amount indicated in paragraph (d), the procedures for reaching agreement are as follows:

(i) The Ordering Officer shall issue a fully funded, unilaterally executed task order representing a firm order for the total requirement.

(ii) In the event the contractor cannot perform in accordance with the terms and conditions and within the estimated cost of the task order, he shall:

(A) notify the Ordering Officer immediately,
(B) submit a proposal for the work requested in the task order,
(C) not commence performance until such time that differences between the task order and the contractor's proposal are resolved and a modification, if necessary, is issued.

(e) Total Estimated Dollar Amount. The total estimated dollar amount of each order constitutes a ceiling price for that order. The requirements for notification set forth in Federal Acquisition Regulation **paragraphs (b) and (c) of FAR Clause 52.232-20, Limitation of Cost** are applicable to individual task orders. The ceiling amount for each order may not be exceeded unless authorized by a modification to the order. All revisions providing additional funds to a task order will include fee in the same manner as established in the basic task order.

(f) Modifications. Modifications to orders shall be issued using a Standard Form 30 and shall include the information set forth in paragraph (c) above, as applicable.

5252.227-9505 TECHNICAL DATA AND COMPUTER SOFTWARE IDENTIFICATION IN ENGINEERING CHANGE PROPOSALS (ECPs) (NAVAIR)(AUG 1987)

Each Engineering Change Proposal (ECP) submitted by the Contractor shall identify each item of technical data and computer software delivered by the Contractor under any prior Navy contract required to be revised as a result of the proposed change and shall include an estimated price and cost proposal to furnish the revisions.

5252.227-9507 NOTICE REGARDING THE DISSEMINATION OF EXPORT-CONTROLLED TECHNICAL DATA (NAVAIR) (OCT 2005)

(a) Export of information contained herein, which includes release to foreign nationals within the United States, without first obtaining approval or license from the Department of State for items controlled by the International Traffic in Arms Regulations (ITARS), or the Department of Commerce for items controlled by the Export Administration Regulations (EAR), may constitute a violation of law.

(b) For violation of export laws, the contractor, its employees, officials or agents are subject to:

(1) Imprisonment and/or imposition of criminal fines; and

(2) Suspension or debarment from future Government contracting actions.

(c) The Government shall not be liable for any unauthorized use or release of export-controlled information, technical data or specifications in this contract.

(d) The contractor shall include the provisions or paragraphs (a) through (c) above in any subcontracts awarded under this contract.

5252.243-9504 AUTHORIZED CHANGES ONLY BY THE CONTRACTING OFFICER (NAVAIR) (JAN 1992)

(a) Except as specified in paragraph (b) below, no order, statement, or conduct of Government personnel who visit the contractor's facilities or in any other manner communicates with contractor personnel during the performance of this contract shall constitute a change under the "Changes" clause of this contract.

(b) The contractor shall not comply with any order, direction or request of Government personnel unless it is issued in writing and signed by the Contracting Officer, or is pursuant to specific authority otherwise included as a part of this contract.

(c) The Contracting Officer is the only person authorized to approve changes in any of the requirements of this contract and notwithstanding provisions contained elsewhere in this contract, the said authority remains solely the Contracting Officer's. In the event the contractor effects any change at the direction of any person other than the Contracting Officer, the change will be considered to have been made without authority and no adjustment will be made in the contract price to cover any increase in charges incurred as a result thereof. The address and telephone number of the Contracting Officer is:

Mary Jacobs
Naval Air Warfare Center Weapons Division
China Lake Contracts Department, Code 220000D

China Lake, CA 93555-6108

(760) 939-6043
mary.jacobs@navy.mil

5252.243-9505 ENGINEERING CHANGES (NAVAIR)(OCT 2005)

(a) After contract award, the Contracting Officer may solicit, and the contractor is encouraged to propose independently, engineering changes to the equipment, software specifications or other requirements of this contract. These changes may be proposed for reasons of economy, improved performance, or to resolve increased data processing requirements. If the proposed changes are acceptable to both parties, the contractor shall submit a price change proposal to the Government for evaluation. Those proposed engineering changes that are acceptable to the Government will be processed as modifications to the contract.

(b) This applies only to those proposed changes identified by the contractor, as a proposal submitted pursuant to the provisions of this clause. As a minimum, the following information shall be submitted by the contractor with each proposal:

(1) A description of the difference between the existing contract requirement and the proposed change, and the comparative advantages and disadvantages of each.

(2) Itemized requirements of the contract that must be changed if the proposal is adopted, and the proposed revision to the contract for each such change.

(3) An estimate of the changes in performance costs, if any, that will result from adoption of the proposal.

(4) An evaluation of the effects the proposed change would have on collateral costs to the Government such as Government-furnished property costs, costs of related items, and costs of maintenance and operation.

(5) A statement of the time by which the change order adopting the proposal must be issued so as to obtain the maximum benefits of the changes during the remainder of this contract. Also, any effect on the contract completion time or delivery schedule shall be identified.

(c) Engineering change proposals submitted to the Contracting Officer shall be processed expeditiously. The Government shall not be liable for proposal preparation costs or any delay in acting upon any proposal submitted pursuant to this clause. The contractor has the right to withdraw, in whole or in part, any engineering change proposal not accepted by the Government within the period specified in the engineering change proposal. The decision of the Contracting Officer as to the acceptance of any such proposal under this contract shall be final and shall not be subject to the "Disputes" clause of the contract.

(d) The Contracting Officer may accept any engineering change proposal submitted pursuant to this clause by giving the contractor written notice thereof. This written notice may be given by issuance of a modification to this contract. Unless and until a modification is executed to incorporate an engineering change proposal under this contract, the contractor shall remain obligated to perform in accordance with the terms of the existing contract.

(e) If an engineering change proposal pursuant to this clause is accepted and applied to this contract, an equitable adjustment in the contract price and in any other affected provisions of this contract shall be made in accordance with the "Changes" clause.

(f) The contractor is requested to identify specifically any information contained in its engineering change proposal which it considers confidential and/or proprietary and which it prefers not to be disclosed to the public. The identification of information as confidential and/or proprietary is for information purposes only and shall not be binding on the Government to prevent disclosure of such information. Offerors are advised that such information may be subject to release upon request pursuant to the Freedom of Information Act (5 U.S.C. 552).

Section I - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

52.202-1	Definitions	JUL 2004
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
52.203-6	Restrictions On Subcontractor Sales To The Government	JUL 1995
52.203-7	Anti-Kickback Procedures	JUL 1995
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	JAN 1997
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	JAN 1997
52.203-12	Limitation On Payments To Influence Certain Federal Transactions	SEP 2005
52.204-4	Printed or Copied Double-Sided on Recycled Paper	AUG 2000
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment	JAN 2005
52.211-5	Material Requirements	AUG 2000
52.211-15	Defense Priority And Allocation Requirements	SEP 1990
52.215-2	Audit and Records--Negotiation	JUN 1999
52.215-8	Order of Precedence--Uniform Contract Format	OCT 1997
52.215-10	Price Reduction for Defective Cost or Pricing Data	OCT 1997
52.215-11	Price Reduction for Defective Cost or Pricing Data--Modifications	OCT 1997
52.215-12	Subcontractor Cost or Pricing Data	OCT 1997
52.215-13	Subcontractor Cost or Pricing Data--Modifications	OCT 1997
52.215-14	Integrity of Unit Prices	OCT 1997
52.215-21	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data--Modifications	OCT 1997
52.219-8	Utilization of Small Business Concerns	MAY 2004
52.219-9 Alt II	Small Business Subcontracting Plan (Jul 2005) Alternate II	OCT 2001
52.219-25	Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting	OCT 1999
52.222-1	Notice To The Government Of Labor Disputes	FEB 1997
52.222-19	Child Labor -- Cooperation with Authorities and Remedies	JAN 2006
52.222-20	Walsh-Healey Public Contracts Act	DEC 1996
52.222-21	Prohibition Of Segregated Facilities	FEB 1999
52.222-26	Equal Opportunity	APR 2002
52.222-35	Equal Opportunity For Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans	DEC 2001
52.222-36	Affirmative Action For Workers With Disabilities	JUN 1998
52.222-37	Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, and Other Eligible Veterans	DEC 2001
52.223-6	Drug-Free Workplace	MAY 2001
52.223-14	Toxic Chemical Release Reporting	AUG 2003
52.225-8	Duty-Free Entry	FEB 2000
52.225-13	Restrictions on Certain Foreign Purchases	FEB 2006
52.227-1	Authorization and Consent	JUL 1995
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	AUG 1996
52.229-3	Federal, State And Local Taxes	APR 2003
52.232-1	Payments	APR 1984

52.232-7	Payments Under Time-And-Materials And Labor Hour Contracts	AUG 2005
52.232-8	Discounts For Prompt Payment	FEB 2002
52.232-9	Limitation On Withholding Of Payments	APR 1984
52.232-11	Extras	APR 1984
52.232-16	Progress Payments	APR 2003
52.232-17	Interest	JUN 1996
52.232-23	Assignment Of Claims	JAN 1986
52.232-25	Prompt Payment	OCT 2003
52.232-33	Payment by Electronic Funds Transfer--Central Contractor Registration	OCT 2003
52.233-1	Disputes	JUL 2002
52.233-3	Protest After Award	AUG 1996
52.242-2	Production Progress Reports	APR 1991
52.242-13	Bankruptcy	JUL 1995
52.243-1	Changes--Fixed Price	AUG 1987
52.243-3	Changes--Time-And-Material Or Labor-Hours	SEP 2000
52.244-5	Competition In Subcontracting	DEC 1996
52.245-2	Government Property (Fixed Price Contracts)	MAY 2004
52.246-23	Limitation Of Liability	FEB 1997
52.246-25	Limitation Of Liability--Services	FEB 1997
52.248-1	Value Engineering	FEB 2000
52.249-2	Termination For Convenience Of The Government (Fixed-Price)	MAY 2004
52.249-6 Alt IV	Termination (Cost Reimbursement) (May 2004) - Alternate IV	SEP 1996
52.249-8	Default (Fixed-Price Supply & Service)	APR 1984
52.249-14	Excusable Delays	APR 1984
52.253-1	Computer Generated Forms	JAN 1991
252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense-Contract-Related Felonies	DEC 2004
252.203-7002	Display Of DOD Hotline Poster	DEC 1991
252.204-7000	Disclosure Of Information	DEC 1991
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7004 Alt A	Central Contractor Registration (52.204-7) Alternate A	NOV 2003
252.205-7000	Provision Of Information To Cooperative Agreement Holders	DEC 1991
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country	MAR 1998
252.211-7003	Item Identification and Valuation	JUN 2005
252.215-7000	Pricing Adjustments	DEC 1991
252.219-7003	Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (DOD Contracts)	APR 1996
252.223-7004	Drug Free Work Force	SEP 1988
252.225-7001	Buy American Act And Balance Of Payments Program	JUN 2005
252.225-7002	Qualifying Country Sources As Subcontractors	APR 2003
252.225-7005	Identification Of Expenditures In The United States	JUN 2005
252.225-7012	Preference For Certain Domestic Commodities	JUN 2004
252.227-7013	Rights in Technical Data--Noncommercial Items	NOV 1995
252.227-7014	Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation	JUN 1995
252.227-7016	Rights in Bid or Proposal Information	JUN 1995
252.227-7019	Validation of Asserted Restrictions--Computer Software	JUN 1995
252.227-7027	Deferred Ordering Of Technical Data Or Computer Software	APR 1988
252.227-7030	Technical Data--Withholding Of Payment	MAR 2000

252.227-7037	Validation of Restrictive Markings on Technical Data	SEP 1999
252.231-7000	Supplemental Cost Principles	DEC 1991
252.232-7003	Electronic Submission of Payment Requests	MAY 2006
252.232-7004	DOD Progress Payment Rates	OCT 2001
252.232-7010	Levies on Contract Payments	SEP 2005
252.242-7004	Material Management And Accounting System	NOV 2005
252.243-7001	Pricing Of Contract Modifications	DEC 1991
252.243-7002	Requests for Equitable Adjustment	MAR 1998
252.244-7000	Subcontracts for Commercial Items and Commercial Components (DoD Contracts)	NOV 2005
252.245-7001	Reports Of Government Property	MAY 1994
252.246-7001	Warranty Of Data	DEC 1991
252.247-7023	Transportation of Supplies by Sea	MAY 2002
252.247-7024	Notification Of Transportation Of Supplies By Sea	MAR 2000

CLAUSES INCORPORATED BY FULL TEXT

52.216-18 ORDERING (OCT 1995)

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from:

Initial Order	Concurrent with contract award.	Date
Ordering Period I	Date of contract award plus one (1) year.	
Ordering Period II	End of Ordering Period I plus one (1) year.	
Ordering Period III	End of Ordering Period II plus one (1) year.	
Ordering Period IV	End of Ordering Period III plus one (1) year.	
Ordering Period V	End of Ordering Period IV plus one (1) year.	

(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.

(c) If mailed, a delivery order or task order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

52.216-19 ORDER LIMITATIONS (OCT 1995)

(a) Minimum order. When the Government requires supplies or services covered by this contract in an amount of less than one Microwave Power Module Amplifier unit, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) Maximum order. The Contractor is not obligated to honor--

(1) Any order for a single item in excess of 50 units;

(2) Any order for a combination of items in excess of 100 units; or

(3) A series of orders from the same ordering office within 30 days that together call for quantities exceeding the limitation in subparagraph (1) or (2) above.

(c) If this is a requirements contract (i.e., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR)), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in paragraph (b) above.

(d) Notwithstanding paragraphs (b) and (c) above, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within 14 days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

52.216-22 INDEFINITE QUANTITY (OCT 1995)

(a) This is an indefinite-quantity contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the "maximum." The Government shall order at least the quantity of supplies or services designated in the Schedule as the "minimum."

(c) Except for any limitations on quantities in the Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after the delivery schedule.

52.219-4 NOTICE OF PRICE EVALUATION FOR HUBZONE SMALL BUSINESS CONCERNS (JUL 2005)

(a) Definition. HUBZone small business concern, as used in this clause, means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

(b) Evaluation preference.

(1) Offers will be evaluated by adding a factor of 10 percent to the price of all offers, except-

(i) Offers from HUBZone small business concerns that have not waived the evaluation preference; and

(ii) Otherwise successful offers from small business concerns.

(2) The factor of 10 percent shall be applied on a line item basis or to any group of items on which award may be made. Other evaluation factors described in the solicitation shall be applied before application of the factor.

(3) A concern that is both a HUBZone small business concern and a small disadvantaged business concern will receive the benefit of both the HUBZone small business price evaluation preference and the small disadvantaged business price evaluation adjustment (see FAR clause 52.219-23). Each applicable price evaluation preference or adjustment shall be calculated independently against an offeror's base offer. These individual preference amounts shall be added together to arrive at the total evaluated price for that offer.

(c) Waiver of evaluation preference. A HUBZone small business concern may elect to waive the evaluation preference, in which case the factor will be added to its offer for evaluation purposes. The agreements in paragraph (d) of this clause do not apply if the offeror has waived the evaluation preference.

[ ] Offer elects to waive the evaluation preference.

(d) Agreement. A HUBZone small business concern agrees that in the performance of the contract, in the case of a contract for

(1) Services (except construction), at least 50 percent of the cost of personnel for contract performance will be spent for employees of the concern or employees of other HUBZone small business concerns;

(2) Supplies (other than procurement from a nonmanufacturer of such supplies), at least 50 percent of the cost of manufacturing, excluding the cost of materials, will be performed by the concern or other HUBZone small business concerns;

(3) General construction, at least 15 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns; or

(4) Construction by special trade contractors, at least 25 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns.

(e) A HUBZone joint venture agrees that in the performance of the contract, the applicable percentage specified in paragraph (d) of this clause will be performed by the HUBZone small business participant or participants;

(f) A HUBZone small business concern nonmanufacturer agrees to furnish in performing this contract only end items manufactured or produced by HUBZone small business manufacturer concerns. This paragraph does not apply in connection with construction or service contracts.

52.223-11 OZONE-DEPLETING SUBSTANCES (MAY 2001)

(a) Definition. Ozone-depleting substance, as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR part 82 as--

(1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or

(2) Class II, including, but not limited to, hydrochlorofluorocarbons.

(b) As required by 42 U.S.C. 7671j(b), (c), and (d) and 40 CFR Part 82, Subpart E, the Contractor shall label products which contain a class I or class II ozone-depleting substance or are manufactured with a process that uses class I or class II ozone-depleting substances, or containers of class I or class II ozone-depleting substances, as follows: "WARNING: Contains (or manufactured with, if applicable) _____*_____, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere."

*The Contractor shall insert the name of the substance(s).

52.233-4 APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM (OCT 2004)

United States law will apply to resolve any claim of breach of this contract.

52.244-2 SUBCONTRACTS (AUG 1998)

(a) Definitions. As used in this clause--

"Approved purchasing system" means a Contractor's purchasing system that has been reviewed and approved in accordance with Part 44 of the Federal Acquisition Regulation (FAR).

"Consent to subcontract" means the Contracting Officer's written consent for the Contractor to enter into a particular subcontract.

"Subcontract" means any contract, as defined in FAR Subpart 2.1, entered into by a subcontractor to furnish supplies or services for performance of the prime contract or a subcontract. It includes, but is not limited to, purchase orders, and changes and modifications to purchase orders.

(b) This clause does not apply to subcontracts for special test equipment when the contract contains the clause at FAR 52.245-18, Special Test Equipment.

(c) When this clause is included in a fixed-price type contract, consent to subcontract is required only on unpriced contract actions (including unpriced modifications or unpriced delivery orders), and only if required in accordance with paragraph (d) or (e) of this clause.

(d) If the Contractor does not have an approved purchasing system, consent to subcontract is required for any subcontract that--

(1) Is of the cost-reimbursement, time-and-materials, or labor- hour type; or

(2) Is fixed-price and exceeds--

(i) For a contract awarded by the Department of Defense, the Coast Guard, or the National Aeronautics and Space Administration, the greater of the simplified acquisition threshold or 5 percent of the total estimated cost of the contract; or

(ii) For a contract awarded by a civilian agency other than the Coast Guard and the National Aeronautics and Space Administration, either the simplified acquisition threshold or 5 percent of the total estimated cost of the contract.

(e) If the Contractor has an approved purchasing system, the Contractor nevertheless shall obtain the Contracting Officer's written consent before placing the following subcontracts:

$10,000.00 and Above.

(f)(1) The Contractor shall notify the Contracting Officer reasonably in advance of placing any subcontract or modification thereof for which consent is required under paragraph (c), (d), or (e) of this clause, including the following information:

(i) A description of the supplies or services to be subcontracted.

(ii) Identification of the type of subcontract to be used.

(iii) Identification of the proposed subcontractor.

(iv) The proposed subcontract price.

(v) The subcontractor's current, complete, and accurate cost or pricing data and Certificate of Current Cost or Pricing Data, if required by other contract provisions.

(vi) The subcontractor's Disclosure Statement or Certificate relating to Cost Accounting Standards when such data are required by other provisions of this contract.

(vii) A negotiation memorandum reflecting--

(A) The principal elements of the subcontract price negotiations;

(B) The most significant considerations controlling establishment of initial or revised prices;

(C) The reason cost or pricing data were or were not required;

(D) The extent, if any, to which the Contractor did not rely on the subcontractor's cost or pricing data in determining the price objective and in negotiating the final price;

(E) The extent to which it was recognized in the negotiation that the subcontractor's cost or pricing data were not accurate, complete, or current; the action taken by the Contractor and the subcontractor; and the effect of any such defective data on the total price negotiated;

(F) The reasons for any significant difference between the Contractor's price objective and the price negotiated; and

(G) A complete explanation of the incentive fee or profit plan when incentives are used. The explanation shall identify each critical performance element, management decisions used to quantify each incentive element, reasons for the incentives, and a summary of all trade-off possibilities considered.

(2) The Contractor is not required to notify the Contracting Officer in advance of entering into any subcontract for which consent is not required under paragraph (c), (d), or (e) of this clause.

(g) Unless the consent or approval specifically provides otherwise, neither consent by the Contracting Officer to any subcontract nor approval of the Contractor's purchasing system shall constitute a determination--

(1) Of the acceptability of any subcontract terms or conditions;

(2) Of the allowability of any cost under this contract; or

(3) To relieve the Contractor of any responsibility for performing this contract.

(h) No subcontract or modification thereof placed under this contract shall provide for payment on a cost-plus-a-percentage-of- cost basis, and any fee payable under cost-reimbursement type subcontracts shall not exceed the fee limitations in FAR 15.404- 4(c)(4)(i).

(i) The Contractor shall give the Contracting Officer immediate written notice of any action or suit filed and prompt notice of any claim made against the Contractor by any subcontractor or vendor that, in the opinion of the Contractor, may result in litigation related in any way to this contract, with respect to which the Contractor may be entitled to reimbursement from the Government.

(j) The Government reserves the right to review the Contractor's purchasing system as set forth in FAR Subpart 44.3.

(k) Paragraphs (d) and (f) of this clause do not apply to the following subcontracts, which were evaluated during negotiations:

52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS (FEB 2006)

(a) Definitions. As used in this clause--

"Commercial item" has the meaning contained in the Federal Acquisition Regulation 2.101, Definitions.

"Subcontract" includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c)(1) The Contractor shall insert the following clauses in subcontracts for commercial items:

(i) 52.219-08, Utilization of Small Business Concerns (May 2004) (15 U.S.C.637(d)(2)(3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceed $500,000 ($1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (Apr 2002) (E.O. 11246).

(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Dec 2001) (38 U.S.C. 4212(a));

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (Jun 1998) (29U.S.C. 793).

(v) 52.222-39, Notification of Employee Rights Concerning Payment of Union Dues or Fees (Dec 2004) (E.O. 13201). Flow down as required in accordance with paragraph (g) of FAR clause 52.222-39).

(vi) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) (46 U.S.C. Appx 1241 and 10 U.S.C. 2631) (flow down required in accordance with paragraph (d) of FAR clause 52.247-64).

(2) While not required, the Contractor may flow down to subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es): www.arnet.gov/far/ or http://farsite.hill.af.mil.

52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any Defense Federal Acquisition Regulation (48 CFR Chapter 2) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

252.211-7005 SUBSTITUTIONS FOR MILITARY OR FEDERAL SPECIFICATIONS AND STANDARDS (NOV 2005)

(a) *Definition.* "SPI process," as used in this clause, means a management or manufacturing process that has been accepted previously by the Department of Defense under the Single Process Initiative (SPI) for use in lieu of a specific military or Federal specification or standard at specific facilities. Under SPI, these processes are reviewed and accepted by a Management Council, which includes representatives of the Contractor, the Defense Contract Management Agency, the Defense Contract Audit Agency, and the military departments.

b) Offerors are encouraged to propose SPI processes in lieu of military or Federal specifications and standards cited in the solicitation. A listing of SPI processes accepted at specific facilities is available via the Internet at http://guidebook.dcma.mil/20/guidebook_process.htm (paragraph 4.2).

(c) An offeror proposing to use an SPI process in lieu of military or Federal specifications or standards cited in the solicitation shall[ ]

(1) Identify the specific military or Federal specification or standard for which the SPI process has been accepted;

(2) Identify each facility at which the offeror proposes to use the specific SPI process in lieu of military or Federal specifications or standards cited in the solicitation;

(3) Identify the contract line items, subline items, components, or elements affected by the SPI process; and

(4) If the proposed SPI process has been accepted at the facility at which it is proposed for use, but is not yet listed at the Internet site specified in paragraph (b) of this clause, submit documentation of Department of Defense acceptance of the SPI process.

(d) Absent a determination that an SPI process is not acceptable for this procurement, the Contractor shall use the following SPI processes in lieu of military or Federal specifications or standards:

(Offeror insert information for each SPI process)

loch

SPI Process:

Facility:

Military or Federal Specification or Standard:

Affected Contract Line Item Number, Subline Item Number, Component, or Element:

(e) If a prospective offeror wishes to obtain, prior to the time specified for receipt of offers, verification that an SPI process is an acceptable replacement for military or Federal specifications or standards required by the solicitation, the prospective offeror□

(1) May submit the information required by paragraph (d) of this clause to the Contracting Officer prior to submission of an offer; but

(2) Must submit the information to the Contracting Officer at least 10 working days prior to the date specified for receipt of offers.

5252.204-9503 EXPEDITING CONTRACT CLOSEOUT (NAVAIR) (JAN 2007)

(a) As part of the negotiated fixed price or total estimated amount of this contract, both the Government and the Contractor have agreed to waive any entitlement that otherwise might accrue to either party in any residual dollar amount of $1,000 or less at the time of final contract closeout. The term "residual dollar amount" shall include all money that would otherwise be owed to either party at the end of the contract, except that, amounts connected in any way with taxation, allegations of fraud and/or antitrust violations shall be excluded. For purposes of determining residual dollar amounts, offsets of money owed by one party against money that would otherwise be paid by that party might be considered to the extent permitted by law.

(b) This agreement to waive entitlement to residual dollar amounts has been considered by both parties. It is agreed that the administrative costs for either party associated with collecting such small dollar amounts could exceed the amount to be recovered.

5252.204-9504 DISCLOSURE OF CONTRACT INFORMATION (JAN 2007)

(a) The Contractor shall not release to anyone outside the Contractor's organization any unclassified information (e.g., announcement of contract award), regardless of medium (e.g., film, tape, document), pertaining to any part of this contract or any program related to this contract, unless the Contracting Officer has given prior written approval.

(b) Requests for approval shall identify the specific information to be released, the medium to be used, and the purpose for the release. The Contractor shall submit its request to the Contracting Officer at least ten (10) days before the proposed date for release.

(c) The Contractor agrees to include a similar requirement in each subcontract under this contract. Subcontractors shall submit requests for authorization to release through the prime contractor to the Contracting Officer.

Section J - List of Documents, Exhibits and Other Attachments

Exhibit/Attachment Table of Contents

DOCUMENT TYPE	DESCRIPTION	PAGES	DATE
Attachment 1	NAWCWD Performance Specification 13672-ATS637G Amplifier, Microwave Power Module	17	22 March 2006
Attachment 2	NAVAIR Drawing 1611AS479D	2	
Exhibit B	Contract Data Requirements List (CDRL) DD Form 1423 Exhibit B.	7	12 June 2006

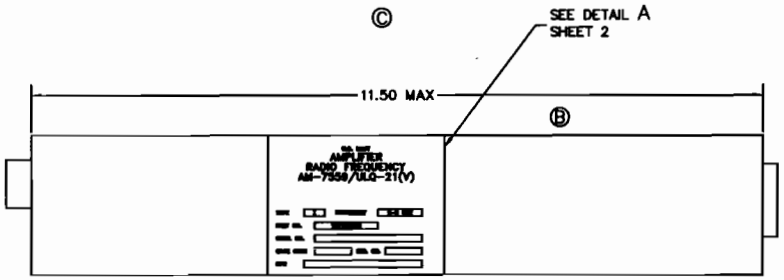
NOTES:

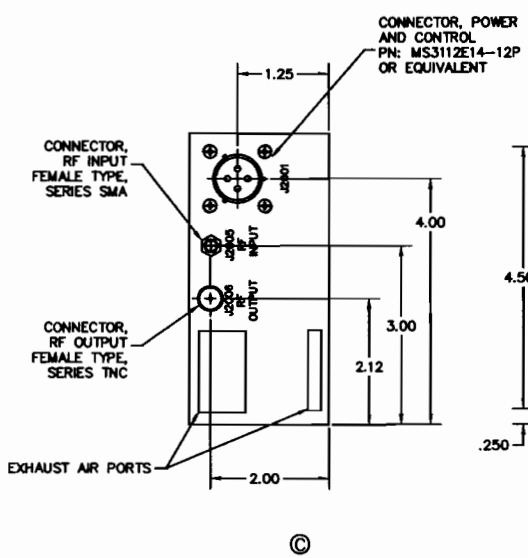
1. THE PROCUREMENT OF THIS ITEM IS GOVERNED BY SPECIFICATION 13672-TS637.
2. IDENTIFICATION PLATE SHALL BE AS SHOWN IN DETAIL A. INFORMATION SHALL BE BLACK, PERMANENT, AND LEGIBLE. CONTRACT AND SERIAL NUMBER SHALL BE MARKED IN APPROPRIATE BLOCKS.
3. STAMP INDICATED REFERENCE DESIGNATIONS IN BLACK. MARKING INFORMATION SHALL BE PERMANENT AND LEGIBLE.
4. MAXIMUM DIMENSIONS SHALL INCLUDE ALL ATTACHING HARDWARE SUCH AS SCREWS, WASHERS, ETC., WHERE APPLICABLE.
5. REQUEST FOR OFFICIAL CONFIRMATION OF NOMENCLATURE FOR THE UNITS SHALL BE SUBMITTED PRIOR TO MANUFACTURE OF NAMEPLATE. NAMEPLATE SHALL REFLECT THE LATEST TYPE DESIGNATION.

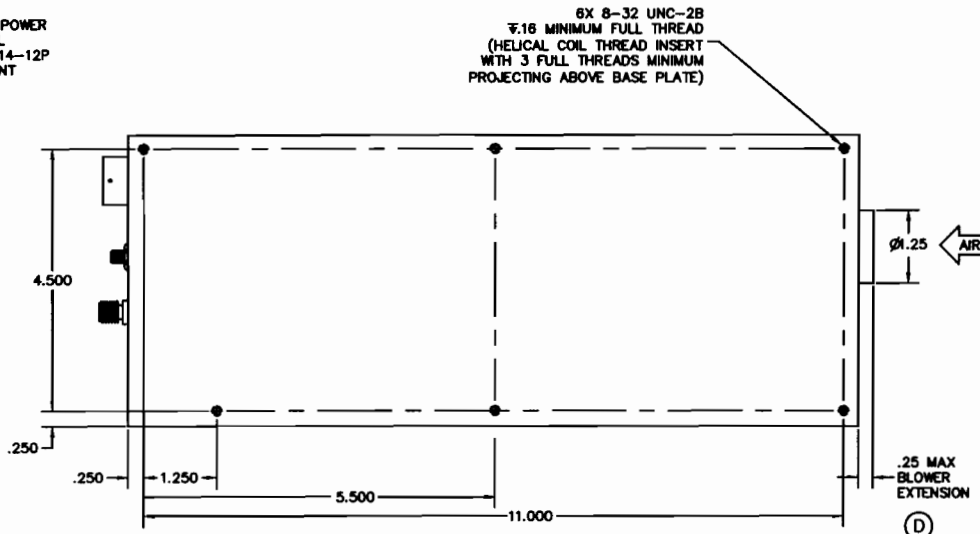
REVISIONS

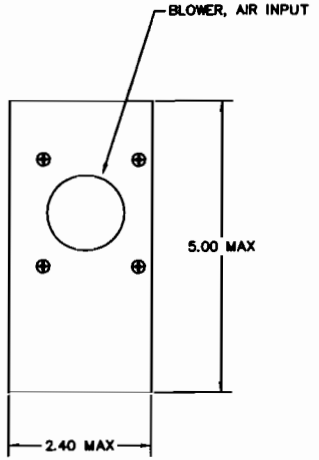
SYM	DESCRIPTION	BY	DATE	APPROVED
A	REVISED AND REDRAWN SEE ECP 97ATS53-25.1	TRACOR	981229	JRG
B	SEE NOR 03ATS53-03.1	SvT	030129	JP
C	SEE NOR 03ATS53-20.2	SvT	030702	JRG
D	SEE NOR 391868.1	SvT		

COMPUTER GENERATED DRAWING -- MAKE CHANGES TO DATA BASE NOT TO THIS COPY.









ENVELOPE DRAWING

CLASSIFICATION OF CHARACTERISTICS (DOD-STD-2101)

CRITICAL - NONE
MAJOR - NONE
MINOR - ALL CHARACTERISTICS

1611AS721	———	AN/ULQ-21(V)
NEXT ASSY	LISTED ON	USED ON
APPLICATION		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES
ANGLES ±1°30'
.XX DECIMALS ±.02
.XXX DECIMALS ±.005
PART SHALL BE FREE OF BURRS
BROKEN EDGES ——— MAX
FILLETS ——— R MAX
SURFACE ROUGHNESS ———
INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100
DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH ANSI 14.5M-82
DO NOT SCALE THIS DRAWING

NAVAL AIR WARFARE CENTER WEAPONS DIVISIONS POINT MUGU, CALIF. 93042

PE	THB	9/17/97
CM	JP	9/17/97
CHECKED		
DRAWN	SvT-SB	8/14/97
APPROVED FOR NAVAIRSYSCOM		
BY DIRECTION		

DEPARTMENT OF THE NAVY
NAVAL AIR SYSTEMS COMMAND
WASHINGTON, D.C. 20360

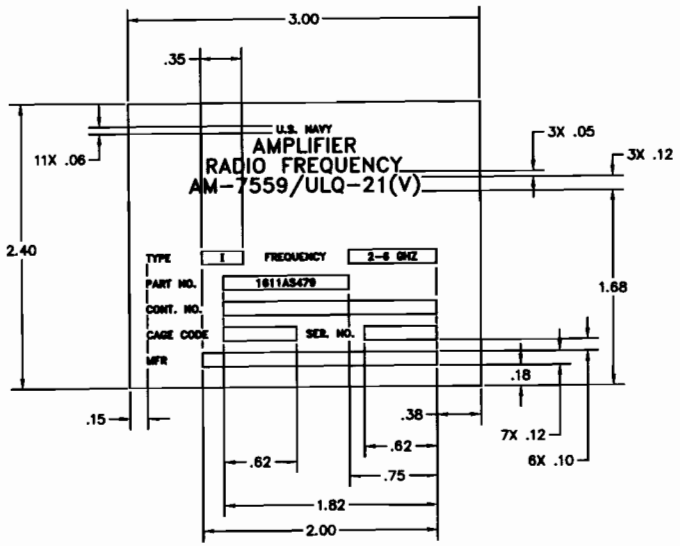
AMPLIFIER, MICROWAVE POWER MODULE AM-7559/ULQ-21(V)

SIZE	CAGE CODE	NAVAIRSYSCOM DWG NO.	REV
D	30003	1611AS479	D

SCALE 1/1 | UNIT WT | SHEET 1 OF 2

1611AS479

REVISIONS				
SYM	DESCRIPTION	BY	DATE	APPROVED
A	REVISED AND REDRAWN SEE ECP 97ATS53-25.1	TRACOR	12/29/98	JRG
B	SEE NOR 03ATS53-03.1	SvT	030129	JP
C	SEE NOR 03ATS53-20.2	SvT		



DETAIL A
SCALE: 2/1

1611AS479

CLASSIFICATION OF CHARACTERISTICS (DOD-STD-2101)

CRITICAL –
MAJOR – } SEE SHEET 1
MINOR –

SIZE	CAGE CODE	NAVAIRSYSCOM DWG NO.	REV
D	30003	1611AS479	D
SCALE 1/1	UNIT WT	SHEET 2 OF 2	

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP TM OTHER: CMAN MISC
0010	A	

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
Amplifier, MPM (E-F Band)		

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A001	REQUEST FOR NOMENCLATURE	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-CMAN 81254A (SEE BLK 16)	SOW para 3.4	NAWCWPNSDIV, CODE 539400E

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	See Block 16	1TIME	90 DAC

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	N/A	N/A

16. Remarks

BLOCK 4: Submit a letter requesting confirmation of official nomenclature and serial number prefix only. Do not fill out DD Form 61. MIL-STD-196, 1812, 280 and DOD-STD-100 do not apply.

BLOCK 9: Use Distribution Statement C: Distribution authorized to U.S. Government agencies and their contractors; to protect publications required for official use or for administrative or operational purposes only; 15 April 2005. Other requests for this document shall be referred to Commander: Naval Air Warfare Center Weapons Division (Code 539400E), Point Mugu, CA 39042-5049.
DISTRUCTION NOTICE - for unclassified, limited documents, destroy by any method that will prevent disclosure of contents or reconstruction of the document.

14. DISTRIBUTION a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
NAVAL AIR			
ENGINEERING			
CENTER			
LAKEHURST,NJ			
CODE 41K00B120-3	0	1	0
NAWCWPNS			
POINT MUGU,CA			
93042-5049			
CODE 539400E			
ATTN: T. WILLIAMS	0	1	0
15. TOTAL →	0	2	0

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
Naval Air Warfare Center, Weapons Division, China Lake, CA 93555-6100	15 May 2006	DRRB Chairperson	060612

DD Form 1423-1, 1 Jun 9090

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0010	**A**	TDP TM OTHER: MGMT MISC

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
Amplifier, MPM (E-F Band)		

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A002	**PROGRAM PROGRESS REPORT**	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MGMT-80555 (SEE BLK 16)	**SOW para 3.2**	**NAWCWPNS CODE 5394003**

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	**See Block 16**	**MTHLY**	**35 DAC**
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
N/A		**EOM**	**EOM+5 DAYS**

16. Remarks

BLOCK 4: Contractor format is approved.

BLOCK 9: Use Distribution Statement C: Distribution authorized to U.S. Government agencies and their contractors; to protect publications required for official use or for administrative or operational purposes only; 15 April 2005. Other requests for this document shall be referred to Commander: Naval Air Warfare Center Weapons Division (Code 539400E), Point Mugu, CA 39042-5049.
DISTRUCTION NOTICE - for unclassified, limited documents, destroy by any method that will prevent disclosure of contents or reconstruction of the document.

14. DISTRIBUTION	b. COPIES		
a. ADDRESSEE	Draft	Final	
		Reg	Repro
NAWCWPNS			
thomas.h.william	**0**	**1**	**0**
@navy.mil			
joellen.poston@navy.mil	**0**	**1**	**0**
15. TOTAL →	**0**	**2**	**0**

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
Naval Air Warfare Center, Weapons Division, China Lake, CA 93555-6100	**15 May 2006**	**DRRB Chairperson**	**060612**

DD Form 1423-1, 1 Jun 9090

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0010	**A**	TDP TM OTHER: CMAN MISC

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
Amplifier, MPM (E-F Band)		

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A003	**ENGINEERING CHANGE PROPOSAL**	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-CMAN-80639C (SEE BLK 16)	**SOW para 3.3**	**NAWCWPNS CODE 539400E**

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	**See Block 16**	**ASREQ**	**SEE BLOCK 16**
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
A		**N/A**	**SEE BLOCK 16**

16. Remarks

BLOCK 4: Change May be in contractor format.

BLOCK 9: Use Distribution Statement C: Distribution authorized to U.S. Government agencies and their contractors; to protect publications required for official use or for administrative or operational purposes only; 15 April 2005. Other requests for this document shall be referred to Commander: Naval Air Warfare Center Weapons Division (Code 539400E), Point Mugu, CA 39042-5049.
DISTRUCTION NOTICE - for unclassified, limited documents, destroy by any method that will prevent disclosure of contents or reconstruction of the document.

BLOCKS 12 and 13: Contractor to submit 15 DA identification of need for change.

BLOCK 14: Submit transmittal and all enclosures to NAWCWPNS AND ACO. Submit a copy of the letter of transmittal only, to the PCO.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
NAWCWPNS			
thomas.h.williams			
@navy.mil	0	1	0
joellen.poston@navy.mil	0	1	0
ATTN: ACO	0	1	0
ATTN: PCO	0	1	0
See Block 16			
15. TOTAL →	0	4	0

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
Naval Air Warfare Center, Weapons Division, China Lake, CA 93555-6100	**15 May 2006**	**DRRB Chairperson**	**060612**

DD Form 1423-1, 1 Jun 9090

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0010	**A**	TDP TM OTHER: CMAN MISC

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
Amplifier, MPM (E-F Band)		

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A004	**REQUEST FOR DEVIATION**	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-CMAN-80640C (SEE BLK 16)	**SOW para 3.3**	**NAWCWPNS CODE 539400E**

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	**See Block 16**	**ASREQ**	**SEE BLOCK 16**
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
A		**N/A**	**SEE BLOCK 16**

16. Remarks

BLOCK 4: Change May be in contractor format.

BLOCK 9: Use Distribution Statement C: Distribution authorized to U.S. Government agencies and their contractors; to protect publications required for official use or for administrative or operational purposes only; 15 April 2005. Other requests for this document shall be referred to Commander: Naval Air Warfare Center Weapons Division (Code 539400E), Point Mugu, CA 39042-5049.
DISTRUCTION NOTICE - for unclassified, limited documents, destroy by any method that will prevent disclosure of contents or reconstruction of the document.

BLOCKS 12 and 13: Contractor to submit 15 DA identification of need for change.

BLOCK 14: Submit transmittal and all enclosures to NAWCWPNS AND ACO. Submit a copy of the letter of transmittal only, to the PCO.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
NAWCWPNS			
thomas.h.williams			
@navy.mil	**0**	**1**	**0**
joellen.poston@navy.mil	**0**	**1**	**0**
ATTN: ACO	**0**	**1**	**0**
ATTN: PCO	**0**	**1**	**0**
See Block 16			
15. TOTAL →	**0**	**4**	**0**

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
Naval Air Warfare Center, Weapons Division, China Lake, CA 93555-6100	**15 May 2006**	**DRRB Chairperson**	**060612**

DD Form 1423-1, 1 Jun 9090

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0010	A	TDP TM OTHER: CMAN MISC

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
Amplifier, MPM (E-F Band)		

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A005	NOTICE OF REVISION (NOR)	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-CMAN-80642C (SEE BLK 16)	SOW para 3.3	NAWCWPNS CODE 539400E

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	See Block 16	ASREQ	SEE BLOCK 16
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
A		N/A	SEE BLOCK 16

16. Remarks

BLOCK 4: Change May be in contractor format.

BLOCK 9: Use Distribution Statement C: Distribution authorized to U.S. Government agencies and their contractors; to protect publications required for official use or for administrative or operational purposes only; 15 April 2005. Other requests for this document shall be referred to Commander: Naval Air Warfare Center Weapons Division (Code 539400E), Point Mugu, CA 39042-5049.
DISTRUCTION NOTICE - for unclassified, limited documents, destroy by any method that will prevent disclosure of contents or reconstruction of the document.

BLOCKS 12 and 13: Contractor to submit 15 DA identification of need for change.

BLOCK 14: Submit transmittal and all enclosures to NAWCWPNS AND ACO. Submit a copy of the letter of transmittal only, to the PCO.

14. DISTRIBUTION	b. COPIES		
a. ADDRESSEE	Draft	Final	
		Reg	Repro
thomas.h.williams			
@navy.mil	0	1	0
joellen.poston@navy.mil	0	1	0
ATTN: ACO	0	1	0
ATTN: PCO	0	1	0
See Block 16			
15. TOTAL	0	4	0

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
Naval Air Warfare Center, Weapons Division, China Lake, CA 93555-6100	15 May 2006	DRRB Chairperson	060612

DD Form 1423-1, 1 Jun 9090

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0010	A	TDP TM OTHER: NDTI MISC

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
Amplifier, MPM (E-F Band)		

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A006	TEST PROCEDURES	FIRST ARTICLE & PRODUCTION

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-NDTI-80603	SOW para 3.5	NAWCWPNS CODE 539400E

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	See Block 16	ONE/R	SEE BLOCK 16

8. APP CODE		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
A		N/A	SEE BLOCK 16

16. Remarks

BLOCK 9: Use Distribution Statement C: Distribution authorized to U.S. Government agencies and their contractors; to protect publications required for official use or for administrative or operational purposes only; 15 April 2005. Other requests for this document shall be referred to Commander: Naval Air Warfare Center Weapons Division (Code 539400E), Point Mugu, CA 39042-5049.
DISTRUCTION NOTICE - for unclassified, limited documents, destroy by any method that will prevent disclosure of contents or reconstruction of the document.

BLOCKS 12 and 13: Submit preliminary copies by letter 210 DAC. Submit final copies 30 days after receipt of Governments, if any.

BLOCK 14: Submit transmittal and all enclosures to NAWCWPNS. Submit a copy of the final Test Procedure to the ACO. Submit a copy of the letter of transmittal only, to the PCO.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
NAWCWPNS			
thomas.h.williams			
@navy.mil	1	1	0
joellen.poston@navy.mil	1	1	0
ATTN: ACO	0	1	0
ATTN: PCO	0	1	0
See Block 16			
15. TOTAL →	2	4	0

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
Naval Air Warfare Center, Weapons Division, China Lake, CA 93555-6100	15 May 2006	DRRB Chairperson	060612

DD Form 1423-1, 1 Jun 9090

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0010	**A**	TDP TM OTHER: NDTI MISC

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
Amplifier, MPM (E-F Band)		

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A007	**TEST/INSPECTION REPORT**	**PRODUCTION TEST DATA**

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-NDTI-80809B (SEE BLK 16)	**SOW para 3.5**	**NAWCWPNS CODE 539400E**

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
N/A	**See Block 16**	**ITIME**	**SEE BLOCK 16**
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
N/A		**N/A**	**SEE BLOCK 16**

16. Remarks

BLOCK 4: Report shall consist of completed data sheets, that are generated using CDRL Item A006.

BLOCK 9: Use Distribution Statement C: Distribution authorized to U.S. Government agencies and their contractors; to protect publications required for official use or for administrative or operational purposes only; 15 April 2005. Other requests for this document shall be referred to Commander: Naval Air Warfare Center Weapons Division (Code 539400E), Point Mugu, CA 39042-5049.
DISTRUCTION NOTICE - for unclassified, limited documents, destroy by any method that will prevent disclosure of contents or reconstruction of the document.

BLOCKS 12, 13 and 14: Submit one completed data sheet with each unit shipped showing all test results.

14. DISTRIBUTION	b. COPIES		
a. ADDRESSEE	Draft	Final	
		Reg	Repro
See Block 16			
15. TOTAL			

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
Naval Air Warfare Center, Weapons Division, China Lake, CA 93555-6100	**15 May 2006**	**DRRB Chairperson**	**060612**

DD Form 1423-1, 1 Jun 9090

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP TM OTHER: NDTI MISC
0010	A	

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
Amplifier, MPM (E-F Band)		

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A008	TEST/INSPECTION REPORT	FIRST ARTICLE REPORT

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-NDTI-80809B (SEE BLK 16)	SOW para 3.5	NAWCWPNS CODE 539400E

7. DD 250 REQ	9.DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
DD	See Block 16	ITIME	330 DAC
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
N/A		N/A	SEE BLOCK 16

16. Remarks

BLOCK 4: Except magnetic medial shall be compatible with Microsoft Office (Windows). Compatibility with CALS is not required. Delete 10.2.2 through 10.2.3.3, 10.2.6.1 through 10.2.6.3, 10.2.6.4.2 through 10.2.6.6 and 0.2.7.2.

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DD Form 1423-1, 1 Jun 909

PERFORMANCE SPECIFICATION
AMPLIFIER, MICROWAVE POWER MODULE

1.0 SCOPE

1.1 Scope. This Specification establishes the performance, test and acceptance requirements for a Microwave Power Module Amplifier, herein referred to as the amplifier.

1.2 Classification. The amplifiers consist of the following Types as specified in the contract

a. Type I 2.0 to 6.0 GHz in accordance with drawing 1611AS479

b. Type II 6.0 to 18.0 GHz in accordance with drawing 1611AS474

2.0 APPLICABLE DOCUMENTS

2.1 Government Documents

2.1.1 Standards The following standards form part of this specification to the extent specified herein.

STANDARDS

MILITARY

MIL-STD-461	Requirements for Control of Electromagnetic Interference Characteristics of Subsystems and Equipment
MIL-STD-704	Aircraft Electrical Power Characteristics
MIL-STD-810	Environmental Test Methods - Engineering Guidelines (Guidance only)

FEDERAL

FED-STD-595	Color (Guidance only)

2.1.2 Drawings The following drawings form a part of this specification to the extent specified herein.

NAVAL AIR SYSTEMS COMMAND
(Code Ident. 30003)

1611AS479	Amplifier, Radio Frequency, AM-7559/ULQ-21(V)
1611AS474	Amplifier, Radio Frequency, AM-7536/ULQ-21(V)

Copies of standards and drawings required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.

2.1.3 Order of precedence In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence. In the event of a conflict between references cited herein, guidance shall be obtained from the contracting activity. Nothing in this specification, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3.0 REQUIREMENTS

3.1 Description The amplifier is used to amplify radio frequency (RF) signals existing in the microwave region of electromagnetic energy. Due to unique vehicle mounting constraints; specific form factor, weight and prime power consumption requirements are imposed.

3.2 First Article When specified, a sample shall be subjected to first article inspection (see 4.4).

3.3 Interface

3.3.1 External Electrical and RF External electrical interface shall be through connectors J2001, J2005, and J2006 and located as shown on drawing 1611AS479 (Type I) or 1611AS474 (Type II). Connector Type and function shall be as specified in TABLE I.

3.3.2 External mechanical The external mechanical interface for the amplifier shall be as shown on drawing 1611AS479 (Type I) or 1611AS474 (Type II). The mechanical interface shall enable direct installation into Government selected electronics platforms using existing mounting holes.

3.4 Performance requirements The amplifier shall meet all the performance requirements specified in 3.4.1 through 3.4.21.

3.4.1 Frequency range The Frequency range of the amplifier shall be as specified in 1.2.

3.4.2 RF Output power The amplifier, when operated into a 50 ohm load with Voltage Standing Wave Ratio (VSWR) of 1.5:1 ± 10% varied through all phase angles, shall provide a minimum RF output power as specified below:

3.4.2.1 Type I:
2.0 to 6.0 GHz 50 Watts (+47 decibels with reference to one milliwatt (dBm))
2.9 to 3.5 GHz 100 Watts (+50 dBm)

3.4.2.2 Type II:
6.0 to 18 GHz 50 Watts (+47 dBm))
8.0 to 15 GHz 80 Watts (+49 dBm)
8.5 to 10.5 GHz 100 Watts (+50 dBm)

3.4.3 Output termination mismatch The amplifier shall meet specified frequency range and RF output power with an output VSWR of 1.5:1 nominal. The amplifier shall not be damaged when operating at maximum power into a load with a VSWR up to and including 3.0:1 over the specified frequency range and at any phase angle.

3.4.4 Input termination mismatch The amplifier shall meet all specified requirements with an input mismatch up to 3.0:1.

TABLE I. Electrical and RF Interface Types and Functions

Reference Designation	Connector Type	Pin Assignment	Function
J2001	MS3122E14-12P		**Primary Power and Control**
		J & K	+28 VDC
		L & M	+28 VDC Return
		A	Operate Command
		B	Override Command
		C	Standby Indication
		D	Operate Indication
		F	Fault Indication
J2005		Female SMA	**RF Input**
J2006		Female TNC	**RF Output**

3.4.5 Input power

3.4.5.1 Input Voltage The amplifier shall operate as required when supplied with a power source as specified in TABLE II and FIGURES 8 and 9 of MIL-STD-704 except the steady state voltage shall be +28 ±3 volt direct current (VDC).

3.4.5.2 Current drain The amplifier current drain shall be not greater than 15 amperes (A). As a goal, the current shall not be greater than 10 A.

3.4.5.3 Low voltage protection The amplifier shall not be damaged by primary power voltages of less than +25 VDC, although specified performance is not required during low voltage periods. The amplifier shall automatically resume specified operation when the input voltage returns to within specified limits.

3.4.6 Warm-up time The amplifier shall achieve specified output power and all other performance requirements within 180 seconds after application of primary power.

3.4.7 Small signal gain The small signal gain shall be between 55 and 65 decibels (dB) across the band.

3.4.8 Gain at rated power Gain at rated power shall be greater than 50 dB across the applicable frequency range.

3.4.9 Gain flatness The amplifier shall have maximum gain variation of +/- 3dB for any 1 GHz bandwidth across the operating frequencies listed in 2.2. In addition, within any 100 MHz bandwidth across operating frequencies , the amplifier shall have maximum gain variation of +/- 1.25dB.

3.4.10 Thermal Gain Variation When the temperature is varied across the range specified in 3.6.f, the amplifier shall have a maximum small signal variation of ±2.5 dB at any point within the specified frequency range.

3.4.11 Duty Cycle The amplifier shall be capable of 100 percent duty cycle.

3.4.12 Spectral purity All residual noise components within ±100 kHz of the carrier shall be down not less than 40 dB from the carrier.

3.4.13 Thermal noise With no input, broadband thermal noise shall be not greater than -28 dBm/MHz. As a goal, the broadband thermal noise shall be not greater than -40 dBm/MHz.

3.4.14 Thermal protection The amplifier shall be equipped with automatically resettable thermal overload protection.

3.4.15 Harmonic and Spurious emissions For a Type I unit, in-band and out-of-band harmonic emissions shall be suppressed not less than 0 dB from the carrier level when the unit is operated at the fundamental rated power output of 3.4.2 with an input signal between 2 and 2.5 GHz. In-band and out-of-band harmonic emissions shall be suppressed not less than 6 dB from the carrier level when the unit is operated at the fundamental rated power output of 3.4.2 with an input signal between 3 and 4 GHz. In band and out-of-band harmonic emissions shall be suppressed not less than 15 dB from the carrier level when the unit is operated at the fundamental rated power output of 3.4.2 with an input signal between 4 and 6 GHz. For a Type II unit, in-band and out-of-band harmonic emissions shall be suppressed not less than 2.5 dB from the carrier level when the unit is operated at the fundamental rated power output of 3.4.2 with an input signal between 6 and 9 GHz. In-band and out-of-band harmonic emissions shall be suppressed not less than 16 dB from the carrier level when the unit is operated at the fundamental rated output power of 3.4.2 with an input signal between 9 and 10 GHz. In-band and out-of-band harmonic emissions shall be suppressed not less than 20 dB from the carrier level when the unit is operated at the fundamental output power of 3.4.2 with an input signal between 10 and 18 GHz. In-band and out-of-band (to 26 GHz) spurious emissions shall be suppressed not less than 30 dB from the carrier level.

3.4.16 Maximum input power The amplifier shall not be damaged by an application of RF power of +23 dBm or less at the RF input connector with the amplifier in OFF, STANDBY or OPERATE mode of operation. If the amplifier goes into an overdrive fault condition, the fault shall reset automatically after the input is reduced to the level required to produce the rated power output specified in 3.4.2.

3.4.17 Fault protection The amplifier shall contain electronic overload, thermal cutout and time delay circuits to provide fault protection for the amplifier. The protective functions shall automatically reset upon clearance of the fault. In addition to the fault protection, the amplifier shall be capable of overriding the fault protection circuitry and forcing the amplifier into the operate condition, if possible. Negative impacts on the amplifier reliability and degraded performance will be accepted in an override condition. The override command shall be +28V ±3V with maximum current of 100 milliamperes (mA).

3.4.18 Controls and Indicators The amplifier shall provide the following controls and status indicators:

a. Operate command: The Operate command shall be 28V ±3V with maximum current of 100 mA. Operate shall cause rated performance if the necessary time delay has elapsed. The operate command may be applied coincident with application of primary power. The amplifier shall achieve rated power within 100 ms of command application.

b. Override command: The override command shall be 28V±3V with a maximum current of 100 mA. Override shall force the amplifier into the operate condition if possible, overriding any fault conditions.

c. Status monitoring: Remote monitoring of the STANDBY, OPERATE and FAULT conditions shall be indicated by the presence of 5V ±0.5V with a source current of 20 mA minimum. Connections shall be as defined in TABLE I.

3.4.19 Power time delay The amplifier shall incorporate a time delay feature not exceeding the warm up time specified in 3.4.6 to protect the amplifier in case of prime power loss. Momentary loss of power shall not result in a complete time delay. The length of the delay shall be dependent on the duration of the prime power loss.

3.4.20 Cooling If required the amplifier shall have self contained forced air cooling. The cooling provisions shall be packaged within the maximum envelope illustrated on drawings 1611AS479 (Type I) and 1611AS474 (Type II). Power dissipation of any cooling provisions shall, when combined with other amplifier functions, meet the requirements of 3.4.5.2. The cooling provisions shall allow the amplifier to function when subjected to any combination of the environmental conditions specified in 3.6 herein.

3.4.21 Amplitude modulation The amplifier with an input signal as specified in 3.4.1 and at any fixed power level less than that specified in 3.4.16 shall not generate amplitude modulations greater than 0.25 dB peak to peak.

3.4.22 Electromagnetic interference The amplifier shall not generate electromagnetic interference (EMI) signals through radiation, power or signal line conduction, nor through signals or spikes fed back to inputs selected or non selected. Radiation from and shielding of the amplifier shall be accordance with MIL-STD-461E.

3.5 Physical characteristics

3.5.1 Conformance to documents The amplifier shall be in accordance with the applicable drawings as specified in the contract and shall meet all the requirements specified herein.

3.5.2 External adjustments No external adjustments shall be available on the amplifier.

3.5.3 Weight The weight of the amplifier shall be not greater than 12 pounds for the Type I amplifier and 10 pounds for the Type II amplifier.

3.5.4 External RF connections All external RF connections shall be reinforced in order to prevent damage during mishandling and external strain placed on the connectors.

3.5.5 Finish. The amplifiers shall be finished as specified below. FED STD-595 color numbers may be used for guidance.

Type I	Lusterless Orange	Color Number 32246
Type II	Lusterless Blue	Color Number 35180

3.6 Environmental conditions The amplifier shall meet all requirements specified herein prior to, during and after the following environmental conditions, separately or in any reasonable combination thereof. The amplifier shall not exhibit any temporary or permanent degradation as the result of exposure to any of the following environments:

a. Temperature-altitude:	Barometric pressure reduced to the equivalent of 40,000 feet altitude and -40 degrees Celsius (°C) temperature.
b. Vibration:	Random vibration at 10 to 2000 Hz and ± 10 Gravity Units (g) Root Mean Square (RMS). Vibration isolators shall not be used.
c. Shock:	Acceleration pulses at 12 g levels with a duration of 11 ms in all axes in any directions. Shock isolators shall not be used.
d. Humidity:	An atmosphere containing 95% or greater relative humidity at temperatures ranging from +28 to +71 °C.
e. Storage Temperature:	Temperatures ranging from -54 to +71 °C.
f. Operating Temperature:	Temperatures ranging from -40 to +71 °C
g. Thermal shock:	Temperatures ranging from -54 to +71 °C.
h. Acceleration:	Acceleration up to and including 20 G.

3.7 Shelf life The amplifier shall be designed to function and operate as required herein, following a storage period of 5 years in normally available Government storage facilities at temperatures varying from -54°C to +71°C and relative humidity ranging from 15 percent to 95 percent. If degassing of the amplifier is required, the procedures and period shall be provided.

3.8 Reliability Reliability testing shall be conducted on the First Article Unit.

3.8.1 Mean time between failures (MTBF) The amplifier shall have an MTBF of 500 hrs for a temperature of 50°C.

3.9 Design and construction

3.9.1 Workmanship The contractor shall provide a proposed quality assurance program. This method need not be complicated but shall describe how the contractor proposes to maintain control over the materials, processes and workmanship in order to meet the performance requirements, particularly reliability, specified herein.

3.9.2 Nameplate and markings The nameplate shall be as specified on drawings 1611AS479 (Type I) and 1611AS474 (Type II). Interchangeable parts and assemblies shall be legibly marked. Confirmation of official nomenclature and serial number prefixes shall be requested by the contractor.

3.9.3 Safety The amplifier produced as described in this specification shall present no safety hazard to operating personnel.

3.9.4 Human performance and human engineering The amplifier shall be constructed and configured to minimize human error during installation, operation, removal and maintenance.

4.0 QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure the amplifier conforms to prescribed requirements.

4.1.1 Inspection system The contractor shall assure product conformance to the requirements, inspections, and tests specified herein. The contractor's quality assurance program shall be planned and used in a manner to achieve a level of quality and reliability commensurate with the intended application specified herein.

4.1.2. Material control procedures Material controls shall ensure that only conforming materials and articles are used. Materials and articles not conforming to or not required for the operation involved, shall be removed from the work operations. Positive action shall be taken to protect controlled processes or operations from contamination by residue from non-conforming materials and from previous operations.

4.1.3 Responsibility for compliance All items must meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specifications shall not relieve the contractor of the responsibility of assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of defective or substandard material.

4.1.4 Test procedures Separate test procedures shall be prepared for the first article and acceptance testing. The environmental and reliability test procedures shall be included as part of the first article test procedures as a separate section.

4.1.5 Test data Detailed test data shall be prepared by the contractor. This data shall identify all rejections and corrective actions taken.

4.2 Classification of inspections The inspection requirements specified herein are classified as follows:

a. First article (see 4.5)
   (1) Performance demonstration tests (see 4.7.2)
   (2) Environmental tests (see 4.7.3)
   (3) Reliability tests (see 4.5.2)

b. Quality conformance inspection (see 4.6)
   (1) Manufacturing burn-in tests (see 4.6.2)
   (2) Acceptance tests (see 4.6.1)

4.3 Inspection conditions Unless otherwise specified herein all tests and inspections shall be conducted under the following conditions:

a. Temperature (ambient): +23 ± 10 °C

b. Atmospheric pressure: Normal pressure of the test facility

c. Humidity: 10% to 90%

d. External power: +28.0 ± 3.0 VDC applied to J2001

e. Termination mismatch: A load having a minimum VSWR of 1.5:1 ±10% with respect to 50 ohms and worst case phase angle adjusted.

4.3.1 Calibration All test equipment used in the acceptance of the amplifier shall have a valid calibration traceable to the National Institute of Standards and Technology.

4.4 First article sample Unless otherwise specified in the contract or purchase order the first article sample shall consist of one amplifier. Unless otherwise specified in the contract or purchase order, when first article is required, first article inspections shall be conducted by the contractor. The first article sample shall be manufactured using the same methods, materials, processes and procedures proposed for production. Any production by the contractor before acceptance of the first article sample shall be at the contractor's risk. Subsequent to first article approval, the contractor shall not change materials, processes, or procedures without prior approval of the procuring activity.

4.5 First article tests The first article sample shall be subjected to the inspections and tests of TABLE II and shall be performed in the sequence specified in the approved test procedures. Unless specified in the approved test procedures, preventive maintenance or adjustments shall not be performed upon the amplifier during the period of this test. The contractor shall prepare a first article test report.

4.5.1 First article failure analysis and corrective action Failure of the amplifier to pass any of the first article examinations and tests specified herein shall be cause for rejection of the first article sample. Procuring activity approval is required before implementation of any corrective action in the first article sample.

4.5.2 Reliability test Reliability tests shall be performed on the first article sample. Reliability test report shall be prepared and included in the first article test report as a separate section. The amplifier shall be operated under ambient conditions for a period as specified in TABLE III with the amplifier in an operate status for at least 75 percent of the total test hours. If the amplifier exhibits a failure prior to reaching an accept or reject criteria, the decision to repair and subject the unit to further reliability testing, or whether a subsequent first article unit shall be selected, shall require Government concurrence.

4.6 Quality conformance tests

4.6.1 Acceptance tests Acceptance tests shall be conducted on each amplifier offered for acceptance and shall consist of the tests specified in TABLE II.

4.6.1.1 Acceptance tests data The contractor shall prepare acceptance test data sheets for each amplifier offered for acceptance.

4.6.2 Manufacturing burn-in test The amplifier shall be operated under the conditions specified herein for a period of 10 hours without failure. A failure shall be anything that causes malfunctioning of the equipment. Only those adjustments shall be permitted which can be made by using such controls or adjustments that are accessible to the operator during normal use of the amplifier. The test shall be run at ambient temperature and humidity conditions. The amplifier shall be vibrated (without vibration isolators) for a period of 10 minutes prior to the beginning of the 10 hour period of operations. Vibration shall be at any non-resonant frequency between 20 and 30 Hz at a level of ±3 g's. Where feasible, the amplifier shall be operated during this vibration period for the purpose of
detecting flaws and imperfect workmanship. The direction of vibration shall be vertical to the normal mounting plane for five minutes and lateral to the plane for five minutes. Where it is not feasible to vibrate the amplifier in two directions, the vertical direction shall be used. During the 10 hour period of operation following the ten minute vibration period, the amplifier shall be mechanically cycled

periodically through its various phases of operation. Should a failure occur, it shall be repaired and the test started over, except that the 10 minute vibration period need not be repeated when it is certain the failure was not a result of the vibration. Should repetitive failures occur, corrective action shall be taken to eliminate this defect from future amplifier. A record shall be kept of all failures and shall be made available for viewing by the Government upon request by the procuring activity. The ten hour period specified above may be composed of two five hour periods to conform with standard working hours. The Manufacturing Burn-In test data shall be part of the test data sheets.

4.6.3 Post test Post test shall consist of the verification of the following requirements:

a. Frequency range and output power (4.7.2.1)
b. Small signal gain (4.7.2.3)
c. Gain at rated power (4.7.2.4)
d. Spectral Purity (4.7.2.5)
e. Thermal noise (4.7.2.6)

TABLE II. First Article and Quality Conformance Tests

Explanation of Tests	Requirements	First Article Test	Performance Demonstration Tests
1. Visual Examination			
a. Dimensions	3.5.1	4.7.1.1	4.7.1.1
b. Weight	3.5.3	4.7.1.2	4.7.1.2
c. Nameplate and Marking	3.9.2	4.7.1.3	4.7.1.3
d. Workmanship	3.9.1	4.7.1.4	4.7.1.4
e. Finish	3.5.5	4.7.1.5	4.7.1.5
2. Manufacture Burn-in Test	4.6.2		4.6.2
3. Performance Tests			
a. Frequency range and output power	3.4.1	4.7.2.1	4.7.2.1
	3.4.2		
	3.4.3		
	3.4.5.2		
	3.4.6		
	3.4.11		
	3.4.3	4.7.2.2	
b. Output termination mismatch	3.4.7	4.7.2.3	4.7.2.3
	3.4.9		
c. Small signal gain	3.4.8	4.7.2.4	4.7.2.4
	3.4.12	4.7.2.5	4.7.2.5
d. Gain at rated power	3.4.13	4.7.2.6	4.7.2.6
f. Spectral purity	3.4.15	4.7.2.7	4.7.2.7
		4.7.2.7.1	4.7.2.7.2
g. Thermal noise	3.4.5.1	4.7.2.8	
h. Harmonic and spurious emissions	3.4.5.3		
	3.4.17	4.7.2.9	
i. Low voltage operation	3.4.18	4.7.2.10	
	3.4.5.1	4.7.2.11	
	3.4.5.2		
j. Fault protection	3.4.4	4.7.2.12	
k. Controls and indicators	3.4.16	4.7.2.13	
l. Primary power variation	3.4.19	4.7.2.14	
	3.4.21	4.7.2.15	
	3.4.22	4.7.2.16	
m. Input termination mismatch			
n. Maximum input power			
o. Power time delay			
p Amplitude modulation			
p. Electromagnetic interference			
4. Environmental			
a. Temperature altitude	3.6	4.7.3.2	
b. Thermal shock	3.6	4.7.3.5	
c. Vibration	3.6	4.7.3.3	
d. Humidity	3.6	4.7.3.4	
5. Reliability	3.8	4.5.2	

TABLE III. Reliability Accept / Reject Criteria

Number of Failures	Minimum Hours Required to Continue Test	Minimum Hours Required for Acceptance
0	0	375
1	0	540
2	57	705
3	222	870
4	387	1,035
5	552	1,035
6	717	1,035
7	Failed test	Failed test

4.7 Inspection and test methods Details of methods and procedures shall be as specified in the approved test procedures (see 4.1.4).

4.7.1 Visual examinations Visual examinations shall be as specified in 4.7.1.1 through 4.7.1.5.

4.7.1.1 Dimensions The amplifier shall be inspected for conformance with 3.5.1.

4.7.1.2 Weight The amplifier shall be inspected for conformance with 3.5.3.

4.7.1.3 Nameplate and marking The amplifier shall be inspected for conformance with 3.9.2.

4.7.1.4 Workmanship The amplifier shall be inspected for conformance with 3.9.1.

4.7.1.5 Finish The amplifier shall be inspected for conformance with 3.5.5.

4.7.2 Performance tests Performance tests shall be performed as specified in TABLE II. The test specimen shall be operated for conformance with 3.4. When tests are conducted with no incremental or swept input frequency applied, the input signal shall be at mid-band sufficient to cause rated power output.

4.7.2.1 Frequency range and output power The amplifier shall be operated under the conditions of 4.3 except that an input signal sufficient to produce rated RF output power shall be swept across the frequency band. The input power applied shall be as specified in 3.4.5 and the warm-up time shall be as specified in 3.4.6. In the event that swept measurement techniques are not used, individual measurements shall be made in steps not greater than 0.5 GHz. The amplifier shall meet the requirements specified in 3.4.1, 3.4.2, 3.4.3, 3.4.5.2, 3.4.6 and 3.4.11.

4.7.2.2 Output termination mismatch The amplifier shall be connected to a load having a minimum VSWR of 2.5:1 with the phase angle varied between 0 and 360 degrees. The tests of 4.7.2.1 shall be repeated (RF output may be less than specified in 3.4.2).

4.7.2.3 Small signal gain The amplifier shall be operated under the conditions of 4.3 and an input signal sufficient to produce RF power 10 dB below rated output power shall be swept across the frequency band. In the event that swept measurement techniques are not used, individual measurements shall be made in steps not greater than 0.5 GHz. The amplifier shall meet the requirements specified in 3.4.7 and 3.4.9.

4.7.2.4 Gain at rated power The amplifier shall be operated under the conditions of 4.3 and an input signal sufficient to produce rated RF output power shall be swept across the frequency band. In the event that swept measurement techniques are not used, individual measurements shall be made in steps not greater than 0.5 GHz. The amplifier shall meet the requirements specified in 3.4.8.

4.7.2.5 Spectral purity The amplifier shall meet the requirements of 3.4.12. The initial measurement resolution shall be 10 kHz per division.

4.7.2.5.1 First article test The amplifier shall be operated at saturation with an input signal applied in increments of 0.5 GHz.

4.7.2.5.2 Production test The amplifier shall be operated at saturation with an input signal applied 100 MHz above

the minimum frequency specified in 1.2, midband, and 100 MHz below the maximum frequency specified in 1.2.

4.7.2.6 Thermal noise The amplifier shall be operated with no input signal applied and shall meet the requirements of 3.4.13.

4.7.2.7 Harmonic and spurious emissions The amplifier shall meet the requirements specified in 3.4.15 across the frequency range of 1.0 to 26 GHz.

4.7.2.7.1 First Article harmonic test For First Article testing, the amplifier shall be operated at saturation with an input signal applied in increments of 0.5 GHz.

4.7.2.7.2 Acceptance harmonic test For acceptance testing of production units, the amplifier shall be operated at saturation with an input signal applied 100 MHz above the minimum frequency specified in 1.2, midband and 100 MHz below the maximum frequency specified in 1.2.

4.7.2.8 Low voltage operation The amplifier shall be operated under the conditions specified in 4.3. The input power shall be reduced to +16 ±0.5 VDC for a period of not less than five minutes. At the end of this period, the input power shall be restored within the limits specified in 3.4.5.1 and the following observed:

a. Frequency range and output power (See 4.7.2.1)
b. Gain at rated power (See 4.7.2.4)
c. Spectral purity (See 4.7.2.5)

4.7.2.9 Fault protection The amplifier shall be tested for fault protection by the introduction of non-destructive simulated faults. The operation of fault protection functions and the associated presence and non-presence of fault indicators shall meet the requirements specified in 3.4.17.

4.7.2.10 Controls and indicators The amplifier controls and indicators shall be tested under simulated operational conditions and meet the requirements of 3.4.18.

4.7.2.11 Primary power variation

A. Steady state voltage test: With an input signal sufficient to cause rated RF output power, primary power shall be applied. The primary power shall be adjusted to +25, -0.0/+0.5 VDC and the following observed:

    1. Frequency range and output power (See 4.7.2.1)
    2. Gain at rated power (See 4.7.2.4)

    With primary power adjusted to +31, -0.5/+0.0 VDC, The test and observations shall be repeated.

B. Primary power ripple test: The primary power with a ripple of 3.0 Volts peak to peak and a frequency spectrum from 50 to 1,500 Hz shall be applied to the amplifier and the following observed:

    1. Frequency range and output power (See 4.7.2.1)
    2. Gain at rated power (See 4.7.2.4)
    3. Spectral Purity (4.7.2.5)

4.7.2.12 Input termination mismatch The amplifier shall operate under the conditions of 4.3 except that an input signal presenting a VSWR of 3.0:1 or greater to the input of the amplifier with an amplitude sufficient to produce RF output power 10 dB below rated power shall be applied and the following observed: The amplifier shall meet the requirements specified in 3.4.4.

a. Spectral purity (See 4.7.2.5)
b. Harmonic and spurious emissions (See 4.7.2.7)

4.7.2.13 Maximum input power An input signal with a minimum power as specified in 3.4.16 at the midband frequency shall be applied to J2001 with power removed from the unit. After 2 minutes, power shall be connected and the amplifier placed in the standby mode of operation. After 4 minutes, the amplifier shall be switched to operate and operated for 2 minutes. The RF input power shall then be reduced to the level required to produce rated RF output power and the following observed:

a. Frequency range and output power (See 4.7.2.1)
b. Gain at rated power (See 4.7.2.4)

4.7.2.14 Power time delay The amplifier shall be operated with power dropouts of various durations to demonstrate conformance with 3.4.19.

4.7.2.15 Amplitude modulation The amplifier shall be operated under the conditions of 4.3. An input signal at 2.5 GHz for a Type I amplifier and 7 GHz for a Type II amplifier sufficient to cause rated power shall be applied to the amplifier. While monitoring the amplifier output on a spectrum or network analyzer, the input signal level shall be slowly lowered to a level insufficient to produce a detectable RF output power. The output shall be observed for conformance with 3.4.21. The test shall be repeated at 3, 3.5, 4, 5 and 6 GHz for a Type I amplifier and 9, 10, 11, 13 and 15 GHz for a Type II amplifier.

4.7.2.16 Electromagnetic interference The power lead conducted emission test CE102, CE106 for emissions from 10 kHz to 18 GHz, and RE102 for radiated emission electric fields of MIL-STD-461E shall be performed to ensure that the amplifier meets the requirements of 3.4.22.

4.7.3 Environmental tests Environment tests shall be as specified in 4.7.3.1 through 4.7.3.5. Required post test shall consist of the test specified in 4.6.3.

4.7.3.1 Environmental conditions The environmental conditions shall be as specified in 3.6. Should a test anomaly occur during tests, a report shall be prepared by the contractor which shall include an analysis of the causes of the test anomaly and the corrective action taken to prevent its recurrence.

4.7.3.2 Temperature-altitude The amplifier shall be adjusted for maximum current draw and tested to demonstrate conformance with 3.6.a, 3.6.e and 3.6.f. The test cycle illustrated in TABLE IV shall be used. The amplifier shall be subjected to a minimum of five test cycles. The post tests specified in 4.6.3 shall be used to demonstrate satisfactory amplifier operation. MIL-STD-810 method 520 may be used as guidance.

TABLE IV. Temperature Altitude Test Cycle

Time (Minutes)	Temperature	Altitude	Equipment
0	Minimum	Ambient	Off
60	Minimum	Ambient	On
120	Minimum	Ambient	On
*			Off
120	-40° C	Maximum	On
180	-40 °C	Maximum	On
*			Off
180	Maximum	Ambient	On
240	Maximum	Ambient	On

* The amount of time required to adjust the chamber to the specified conditions ±10% shall not be counted in the test time

4.7.3.3 Vibration The amplifier shall be tested to demonstrate conformance with 3.6.b. The test item configuration shall be that of a realistically deployed, unprotected amplifier. Vibration isolators shall not be used. The amplifier shall be vibrated along three axes, one axis at a time, for not less than one hour each per cycle. The amplifier shall be operated continuously, as if it were in operational use during test. The post tests specified in 4.6.3 shall be used to demonstrate satisfactory amplifier operation. Vibration spectrum and intensity shall be in accordance with FIGURE 1. MIL-STD-810, Method 514 may be used as guidance.

4.7.3.4 Humidity The amplifier shall be tested to demonstrate conformance with 3.6.d. The test item configuration shall be that of a realistically deployed, unprotected amplifier. The test cycle described below shall be used. After the last test cycle, the post tests specified in 4.6.3 shall be used to demonstrate satisfactory amplifier operation. If required, the test plan shall describe how this test will be tailored to normal work schedules. MIL-STD-810, Method 507 may be used as guidance.

a. Perform pretest of the unit to verify operation. Post test from previous test procedures may be used. Install the amplifier in the test chamber.

b. Gradually raise the internal chamber temperature to 60°C and relative humidity to 95% ± 5% over a period of two hours.

c. Maintain the conditions of step b for not less than 6 hours.

d. Maintain 85% or greater relative humidity and reduce the internal chamber temperature in eight hours to 30°C and 95% ±5% relative humidity.

e. Maintain 30°C and 95% ±5% relative humidity for an additional eight hours.

f. Repeat steps b, c, d and e for a total of ten cycles (not less than 240 hours).

4.7.3.5 Thermal shock The amplifier shall be tested to demonstrate conformance with 3.6.g. The test item configuration shall be that of a realistically deployed, unprotected amplifier. The test cycle described below shall be used. After the last test cycle, the post tests specified in 4.6.3 shall be used to demonstrate satisfactory amplifier operation. If required, the test plan shall describe how this test will be tailored to normal work schedules. MIL-STD-810, Method 503 may be used as guidance.

a. Perform pretest of the unit to verify operation. Post test from previous test procedures may be used. Install the amplifier in the test chamber.

b. Adjust the internal chamber temperature to the low temperature extreme listed in 3.6.g. Maintain this temperature for one hour or until the unit has stabilized, whichever is longer.

c. Transfer the amplifier to the high temperature environment in no more than five minutes.
The chamber shall return to the maximum temperature extreme in not more than five minutes. Maintain this temperature for one hour or until the unit has stabilized, whichever is longer.

d. Transfer the amplifier to the low temperature environment as above and stabilize at that temperature.

e. Repeat steps c and d.

f. Repeat step e.

g. Return the amplifier to ambient conditions and perform the post tests specified in 4.6.3 to verify performance.

5.0 PACKAGING

5.1 Preservation-packaging, and packing Preservation and packaging shall be as specified in the contract or purchase order.

5.2 Marking Marking shall be as specified in the contract or purchase order.

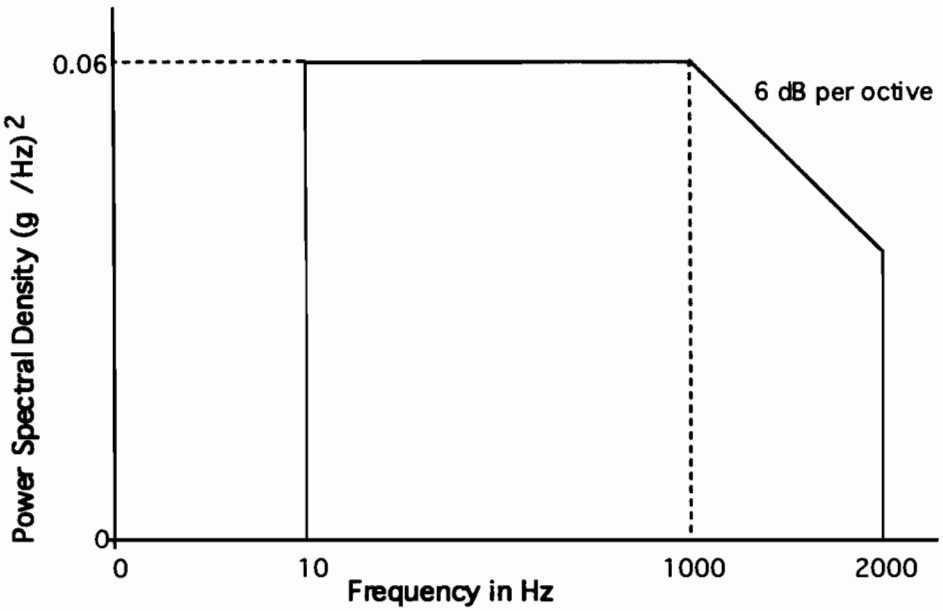

FIGURE 1. Vibration Curve