INCH-POUND

MIL-PRF-1/1705C
17 August 2004
SUPERSEDING
MIL-PRF-1/1705B
20 November 1998

PERFORMANCE SPECIFICATION SHEET

ELECTRON TUBE, MAGNETRON

TYPE 8896

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the electron tube described herein shall consist of this document and the latest issue of MIL-PRF-1.

DESCRIPTION: Pulsed, coaxial type, tunable, 8,500 to 9,630 MHz, 200 kW nominal peak power output, air cooled.

ABSOLUTE RATINGS:

Parameter:	If	tk	VSWR		Tuner drive torque		T(anode)	T(input bushing)	
Unit:	A	sec	---		inch-pound		°C	°C	
Maximum:	50	---	1.5		8.0		125	270	
Minimum:	---	180	---		--- 1/		--- 2/	--- 2/	
								Pressurization	
Parameter:	Ef	ib	Pi	pi	tpc	rrv	Du	Input	Output
Unit:	V	A	W	kw	µs	kv/µs	---	psia	psia
Minimum:	10.0	32	720	1,000	2.7	225	.0011	45	45
Maximum:	--- 3/	18	---	600	0.2	--- 4/	.0003	--- 5/	--- 6/

PHYSICAL CHARACTERISTICS:

Weight:	19 pounds, maximum.
Dimensions:	See figure 1.
Mounting position:	Any.
Cathode:	Unipotential.

TEST CONDITIONS: 7/ 8/

Parameter:	Ef	tk	tpc	Du	rrv	VSWR
Unit:	V	Sec	µs	---	kv/µs	---
Tolerance:	---	---	±10%	---	Min	Max
Test condition 1:	8.0	180	0.27	0.0004	160	1.1:1
Test condition 2:	6.0	180	1.0	0.0008	160	1.1:1
Test condition 3:	5.0	180	2.5	0.001	160	1.1:1
Test condition 4:	5.0 3/	180 3/	0.5	0.001	225	1.1:1

See footnotes at end of table I.

GENERAL:

Preproduction (First Article) inspection required. 26/

TABLE I. Testing and inspection.

Inspection	MIL-STD-1311 Method	Test	Conditions	Symbol	Limits Min	Limits Max	Unit
Conformance inspection, part 1							
Pressurizing	4003	---	45 psia (min) input and output 5/ 6/	---	---	---	---
Heater current	1301	---	Ef = 9.0 V tk = 180 sec (max)	If	13.5	14.9	A
Operating torque or force	4223	---	TA = 25°C ±5°C 17/	Torque	---	10	in/oz.
RF bandwidth (1)	4308	1	F = F1, F3, and F5 ib = 20 and 28A 10/	BW	---	2/tpc	MHz
RF bandwidth (2)	4308	2	F = F1, F3, and F5 ib = 23 and 30A 10/	BW	---	2/tpc	MHz
RF bandwidth (3)	4308	3	F3 ib = 23 and 30A 10/	BW	---	1.5	MHz
Minor lobes (1)	4308	1	F = F1, F3, and F5 ib = 30 and 28A 10/	SL	9	---	dB
Minor lobes (2)	4308	2	F = F1, F3, and F5 ib = 23 and 30A 10/	SL	10	---	dB
Pulse voltage	4306	2	ib = 25A; F = F1	epy	25.0	29.5	kv
Power output (1)	4250	2	F1 to F5 ib = 30.0 A 22/	Po	190	280	W
Tunable frequency	4218	2 2	Low frequency High frequency 8/ 9/	F F	--- 9,630	8,500 ---	MHz MHz
Stability (1)	4315	3	Ef = 5.5 V ± .5 V; F4 = F; ib = 30A 11/	MP	---	0.2	%
Starting stability	4315	2	F = F1, ib = 30A 11/ 12/	MP	---	0.5	%
Frequency modulation	4318	2	F = F1, F3, and F5 ib = 23 and 30A 13/	FM	---	0.1	%
Time jitter	4318	4	F = F1, F3, and F5	T_J	---	6.0	ns rms
Stability (4)	4315	4	F = F1, F3, and F5; in = 30A 11/ 23/	MP	---	0.4	%

See footnotes at end of table.

TABLE I. Testing and inspection - Continued.

Inspection	MIL-STD-1311 Method	Test	Conditions	Symbol	Limits		Unit
					Min	Max	
Conformance inspection, part 2							
Stability (3)	4315	1	Ef = 7.6 V and 8.4 V; F = F1, F3, and F5; ib = 30A 11/	MP	---	0.2	%
Resettability	4223	2	F = F1, F3, and F4	---	---	5	MHz
Tuning rate	4223	2	ib = 26A 27/	---	IAW Fig. 2	IAW Fig. 2	---
Frequency pulling figure	4310	2	F = F1, F3, and F4; ib = 26 A	ΔF	---	5	MHz
Frequency pushing figure	4311	2	F = F1, F3, and F4; ib = 23 ± 1A ib = 29 ± 1A 30/	$\Delta F/\Delta A$	---	0.1	MHz/A
Power output (2)	4250	3, 4	F1 to F5; ib = 30A 22/	Po	200	350	W
Conformance inspection, part 3							
Life test	4551		Group S; sequential life test portion only 29/	Time	2,500	---	hrs
Intermittent life	4551	2	Group D 31/ 32/	Life	1,667	---	Cycles
Life test end points:							
Power output	4250	2	ib = 22.5 A	Po	120	---	W
RF bandwidth	4308	2	F = F1, F3, and F5	BW	---	2.2/tpc	MHz
Stability	4315	2	F = F1, F2, and F5 ib = 30 A	MP	---	0.3	%
Frequency modulation	---	2	F = F1, F3, and F5 ib = 26A	FM	---	0.2	MHz
Periodic check tests			28/				
Temperature coefficient	4027	2	T(anode) = 0°C to 115°C; F = F4 2/ 15/	$\Delta F/\Delta T$	---	0.25	MHz
Variable frequency vibration (operating)	1031	2	F = F1, F3, and F5 ib = 23 and 30A 13/ 24/	FM	---	2.0	MHz
Shock	1042		G = 15; t = 11 ms 14/ 25/				

See footnotes at end of table.

TABLE I. Testing and inspection - Continued.

Inspection	MIL-STD-1311 Method	Test	Conditions	Symbol	Limits Min	Limits Max	Unit
Periodic check tests - Continued							
Stability (2)	4315	2	Ef = 6 ± .0.3 V; F = F1, F3, and F5; Ib = 30 A 11/	MP	---	0.2	%
Air cooling	1143	2	TA = 25°C; Pi-Po = 500 W 2/ 16/	T	---	TA = +80°C	°C
High-low temperature tuning torque	---	---	No voltages temperature = -55°C to +125°C 17/	Torque	---	15.0	In-oz.
Mechanical tuning fatigue	4223	---	18/	---	25,000	---	cycles
Thermal frequency shift	4030	2	F = F5; t = 15 ± 5 sec 19/	ΔF	---	15	MHz
	---		t = 20 min	ΔF	---	18	MHz
Temperature cycling (nonoperating)	1027	---	20/	---	---	---	---
Variable-frequency vibration (nonoperating)	1031	---	No voltages 10/ 21/	---	---	---	---

1/ The tuner drive shall be capable of supplying a minimum of 15 inch-ounces of torque to the magnetron tuning shaft and shall never supply more than 8.0 inch-pounds of torque (including inertial effects) under stable conditions.

2/ The temperature is to be measured at the point indicated on figure 1.

3/ Prior to the application of high voltage, the cathode shall be heated to the required initial operating temperature. This shall be done by applying 9.0 volts ± 5 percent for 180 seconds minimum. On the application of anode voltage; the heater voltage shall be reduced according to the following:

tpc (µs)	Du	Ib (mA dc)	Ef (V) ±5%
Standby	---	---	9.0
0.25 to 0.30	.0004	Test condition 1	8.0
0.45 to 0.55	.001	Test condition 4	5.0
0.9 to 1.1	.0008	Test condition 2	6.0
0.9 to 1.1	.0003	7.5	8.0
2.25 to 2.75	.001	Test condition 3	5.0

4/ The rate of rise of voltage (rrv) shall be expressed in kilovolts per microsecond (kv/µs) defined by the steepest tangent to the leading edge of the voltage pulse above the 80 percent amplitude point. Any capacitance used in the viewing (measuring) circuit shall not exceed 6 pF.

5/ The seal formed by clamping the magnetron mounting plate against the magnetron test fixture detail of figure 3 or equivalent shall be hermetically tight for one minute minimum with the specified air pressure applied so as to surround the entire input bushing below the mounting plate.

6/ The seal formed by clamping the magnetron output flange against the magnetron test fixture detail of figure 4 or equivalent shall be hermetically tight for one minute minimum with the specified air pressure applied internally to the waveguide.

TABLE I. Testing and inspection - Continued.

7/ The maximum air pressure to assure prevention of electrical breakdown in the output coupling shall be 15 psig for voltage standing wave ratios up to 1.5 with phase shift variable over 360 electrical degrees. The magnetron shall be coupled directly to RG-51/U waveguide with a UG-52/U choke flange modified so that mounting holes provide clearance for number 8 bolts.

8/ Nominal tuner dial readings shall be determined for frequency code letters A, B, and C. Frequencies corresponding to code letters shall be as specified herein. Tuner dial readings shall be determined for cods A and C under test condition 2 and for code B under test condition 3:

Frequency	Code letter designation
F0 = 8,500 MHz	
F1 = 8,600 MHz	A (±10 MHz tolerance)
F2 = 8,750 MHz	
F3 = 9,000 MHz	
F4 = 9,375 MHz	B (±10 MHz tolerance)
F5 = 9,600 MHz	C (±10 MHz tolerance)
F6 = 9,630 MHz	

9/ The specified frequency range, F1 to F5, shall be covered by 130 ± 8 turns of the tuner shaft. The frequency increases as the shaft is driven in a counter-clockwise direction as viewed from the waveguide side of the magnetron.

10/ The radio frequency bandwidth and sidelobes shall be within the limits specified when a VSWR of 1.5 minimum is introduced in the load at a distance of 1 ± .0.05 meters from the magnetron flange and phase is adjusted at the start of each measurement to produce maximum degradation.

11/ Stability shall be measured in terms of the average number of output pulses missing, expressed as a percentage of the number of input pulses applied during the period of observation. The missing pulses (MP) due to any causes are considered to be missing if the rf energy is less than 70 percent of the normal energy level. The stability shall be measured when a VSWR of 1.5 minimum is introduced in the load at a distance of 1 ± .0.05 meters from the magnetron flange and phase is adjusted at the start of each measurement to produce maximum instability. The missing pulse count shall be performed over a 3 minute test interval.

12/ After the nonoperational holding period of 168 hours minimum, the anode voltage shall be applied 180 seconds (max) after the application of the standby heater voltage (Ef). The missing pulse count test interval of 3 minutes shall start immediately after the application of anode voltage.

13/ For frequency modulation measurements, the maximum peak-to-peak frequency deviation shall not exceed the specification. The test shall be performed using alternating current (60 to 400 Hz) in the heater at the specified voltage. The test shall be run excluding thermal drift and pushing effects. The test equipment shall have a bandpass of 10 megaHertz minimum at the 3 dB points.

14/ Readings taken during and after test shall not deviate more than 25 percent from readings taken before test, except that initial readings less than 10 percent of the maximum specified limits may increase to no more than 25 percent of the maximum specified limit.

15/ Temperature measurements shall be made only after thermal equilibrium has been reached.

16/ With an air flow at standard atmospheric conditions of 35 cubic feet per minute at a back pressure not to exceed 3 inches of water directed at the tube, using a duct which fits snugly to the cooling fins, the rise above ambient specified shall not be exceeded.

17/ The tuning mechanism shall operate as specified over the entire frequency range.

18/ The tuning shaft shall be continuously driven at a speed of approximately 1,400 rpm. At the completion of the test, the tube shall meet the tuning and test condition 2 requirements. The backlash shall not exceed 10 MHz. During the test, the tuning shaft may not be lubricated. A cycle consists of two complete excursions each in opposite directions through the tuning range of the magnetron.

TABLE I. Testing and inspection - Continued.

19/ The tuner dial shall be set for frequency F5. Cooling air shall be applied so that under test condition 2, the temperature (TA) as measured at the indicated area in accordance with figure 1 shall fall between 80°C and 100°C after thermal equilibrium has been reached. Measure and record the actual frequency. The tube shall then be allowed to cool with no voltages applied for at least 15 minutes before the following test. Anode voltage, as specified for test condition 2, shall be applied after a maximum of 180 seconds of heater warm-up time. The frequency as measured 15 ± 5 seconds after application of pulse voltage shall be within the limit specified from that measured and recorded at the start of the test. The frequency shall then be measured at approximately 3 minute intervals until 20 minutes have elapsed. A graph of frequency versus time shall be constructed using the data. The maximum frequency deviation from the previously recorded thermal equilibrium frequency shall not exceed the limit specified.

20/ The tube shall be placed within a test chamber wherein a temperature of 70°C Is maintained. The tube shall be exposed to this temperature for a period of 4 hours, at the conclusion of which and within 5 minutes, the tube shall be transferred to a chamber having an internal temperature of -55°C. The tube shall be subjected to this temperature for a period of 4 hours. This constitutes one cycle. The number of complete cycles shall be three. The duration of the exposure at each extreme temperature shall not be less than that specified and may be extended to over-night exposure to prevent interruption of the transfer cycle. At the conclusion of the third cycle, the tube shall be removed from the test chamber, returned to ambient (25°C ± 5°C) temperature, and within a period of one hour shall meet Resettability, paragraph 8 of MIL-STD-1311 test method 4223 and Tuning Rate, paragraph 2.3 of test method 4223 in MIL-STD-1311.

21/ The magnetron shall be vibrated in each of three mutually perpendicular planes (see figure 1) through the following amplitudes for both resonance and cycling tests:

5 Hz to 14 Hz.	0.375 inch D. A.
14 Hz to 200 Hz.	2 g
200 Hz to 1,000 Hz.	1 g
1,000 Hz to 1,500 Hz.	0.5 g

Any mechanical resonance that may be encountered during the test shall be sustained at the frequency and specified amplitude which produced the resonance for the period of time specified in the standard. When more than one resonant frequency condition is encountered, the test shall center on the frequency that produces the most pronounced resonant condition. Should more than one pronounced resonant condition be encountered, the time at resonance shall be equally divided between each of the resonant conditions.

22/ To demonstrate compliance with this requirement, power output must be measured at the minimum and maximum power points in the range from F1 to F5.

23/ The test shall be performed using a missing pulse detector, i.e., energy comparator. The detector shall be adjusted so that all pulses missing more than 10 percent of the energy content shall be counted. The acceptable limit shall not exceed that specified. The test interval shall be three minutes.

24/ The tube shall be mounted in a resonance free jig and vibrated while operating in each of three (3) mutually perpendicular planes (see figure 1) through the following amplitude for cycling tests:

5 Hz to 15 Hz.	0.2 inch D. A.
15 Hz to 50 Hz.	2 g
50 Hz to 250 Hz.	1.5 g
250 Hz to 1,000 Hz.	0.75 g
1,000 Hz to 1,500 Hz.	0.5 g

25/ The magnetron shall be mounted on a test plate and dropped 10 times on each of three mutually perpendicular planes parallel to the reference planes A, B, and C in accordance with figure 1. The shock impulses shall have a duration of 11 ± 1 milliseconds as measured at the one-quarter amplitude points. The acceleration shall be 15 g. No physical change shall result and the magnetron shall meet the requirements of conformance inspection, part 1. This is a nondestructive test.

TABLE I. Testing and inspection - Continued.

26/ First Article Inspection: The First Article sample furnished by the contractor/manufacturer shall consist of preproduction tubes in the quantity indicated by table III of MIL-PRF-1. In addition, the contractor shall furnish along with the test reports written assurance that:

a. The First Article sample is representative of the product to be furnished under the contract.

b. Production articles will be fabricated in the facility that produced the sample tubes.

c. Production articles will be fabricated from new materials.

The contractor shall furnish a test plan to the Contracting Officer for approval before proceeding with First Article inspection. The test plan shall list all production test and laboratory test facilities to be used in First Article inspection and production phases of the contract. Upon receipt of test plan approval, the contractor shall proceed with First Article inspection. First Article inspection shall include all tests and requirements of this specification and conform to table I of MIL-PRF-1, where applicable. Upon conclusion of First Article inspection, three copies of the test report (see MIL-HDBK-831 for guidance) and certified by the Government Representative shall be forwarded along with the test samples to the Contracting Officer for approval.

27/ Frequency versus tuner dial divisions shall not deviate more than specified between F1 and F5 in figure 2 when tuning the tube dial in either direction, except that when tuning in the counter-clockwise direction, tuning need not conform between F5-100 and F5.

28/ If these tests have been previously performed by the tube manufacturer, and if the material, manufacturing process, and test requirements are the same as when the test(s) were performed, the subject test(s) need not be performed.

29/ The power stability life test shall be performed on a multi-pulsewidth line-type modulator containing a shunt overload relay circuit in accordance with figure 5. The modulator shall be designed so that in the event the shunt overload circuit is activated, the modulator and magnetron shall return to a “Standby” condition and “Operate” can be obtained only by manual reset. The test shall be performed under test condition 1 at a frequency corresponding to the maximum power output within the specified frequency range, F1 to F5, with a VSWR of 1.5 minimum located at a distance of 1 ± 0.05 meters from the magnetron flange. Phase shall be adjusted under test condition 3 to that point throughout the test. Testing shall be in accordance with the test schedule below with the change over from test condition 1 to test condition 3 being accomplished in no more than three (3) seconds and the heater voltage changing directly from that specified in test condition 1 to that specified in test condition 3 during the switchover.

The test sequence shall be as follows:

	Test Schedule	Test condition 1 Running condition	Test condition 3 Test condition
Cycle	Time (hr)	ib in amps	ib in amps
1	$1.8 \pm .2$	25	30
2	$1.8 \pm .2$	25	30
3	$1.8 \pm .2$	25	30
4	$1.8 \pm .2$	25	30
5	$15.5 \pm .5$	25	30

At each switchover, the tube shall be operated in test condition 3 for 10 minutes before returning to test condition 1. Repeat cycles 1 to 5 inclusive until the specified life is attained. The time required to complete cycles 1 to 5 inclusive shall be $24 \pm .5$ hours.

TABLE I. Testing and inspection - Continued.

30/ Peak current through the magnetron shall alternately be the limits as specified under test condition. Test shall be run to exclude the effects of thermal drift and frequency instability not due to pushing.

31/ Except that “month” in 4.3.8 of MIL-PRF-1 be replaced with “2 months”.

32/ The intermittent life test shall be conducted while the phase of a 1.5 minimum VSWR located at a distance of 1 ± 0.05 meters from the magnetron flange is uniformly and continuously cycled through 360 electrical degrees with a time interval of approximately 30 minutes per cycle. Simultaneously the magnetron frequency, starting at F1, increasing to F5, then decreasing to F1 (see figure 2) shall be changed approximately 100 MHz increments each 8 hours.

Condition	Ib	Ef	Duration (minutes)
Standby	0	9.0	3
Test (1)	10.0	8.0	6
Test (2)	20.0	6.0	21
Off	0	0	10

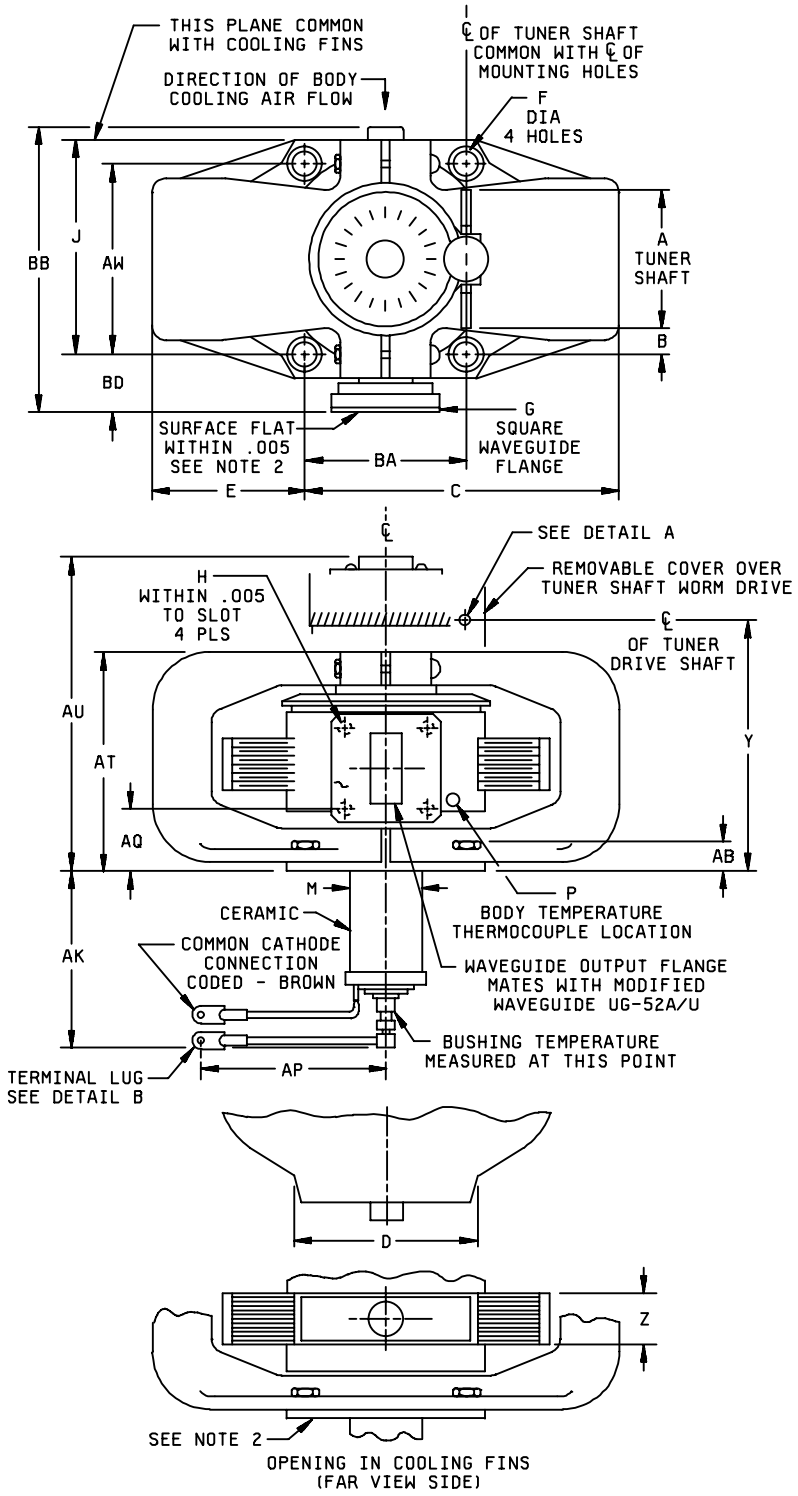
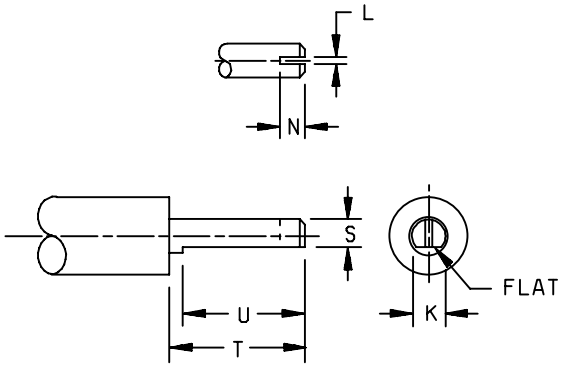
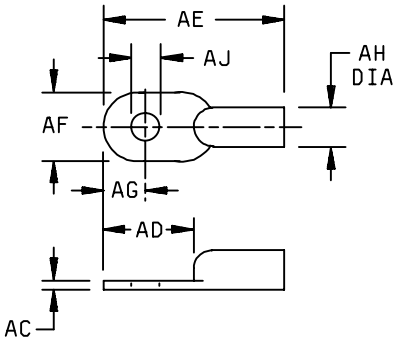


FIGURE 1. Outline configuration of tube type 8896.



DETAIL A
TYPICAL BOTH ENDS



DETAIL B

Dimensions									
Ltr	Inches		Millimeters		Ltr	Inches		Millimeters	
	Min	Max	Min	Max		Min	Max	Min	Max
Conformance inspection, part 1					Conformance inspection, part 3				
B	.189	.375	4.80	9.53	C	---	6.375	---	161.93
F	.277	.287	7.04	7.29	E	---	3.875	---	98.43
K	.1865	.1895	4.74	4.81	J	3.250	3.500	82.55	88.90
L	.040	.045	1.02	1.14	Z	.938	1.080	23.83	27.43
M	---	2.250	---	57.15	AF	---	.300	---	7.62
Y	4.175	4.425	106.05	112.40	AJ	.165	---	4.19	---
AK	---	3.000	---	76.20	Nominal dimensions				
AP	3.625	4.125	92.08	104.78	D	3.375		85.73	
AQ	1.125	1.285	28.58	32.64	H	.164-32 UNC-2B		4.16-32 UNC-2B	
AU	---	6.625	---	168.28	N	.125		3.18	
BB	---	4.975	---	126.37	P	.112-40 UNC-2B x .250 Min DP		2.84-40 UNC-2B x .250 Min DP	
BD	.932	1.062	23.67	26.97	U	.625		15.88	
Conformance inspection, part 2					T	.688		17.48	
A	2.370	2.380	60.20	60.45	AB	.600		15.24	
G	1.813	1.937	46.05	49.20	AC	.050		1.27	
S	.151	.161	3.84	4.09	AD	.468		11.89	
AW	2.985	3.015	75.82	76.58	AE	.938		23.83	
BA	2.485	2.515	63.12	63.88	AH	.188		4.78	
					AG	.218		5.54	
					AT	3.875		98.43	

NOTES:
1. Metric equivalents (to the nearest 0.01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
2. Waveguide flange meeting surface, mounting plate surface area, and joints within these areas must be capable of providing a hermetic seal.

FIGURE 1. Outline configuration of tube type 8896 - Continued.

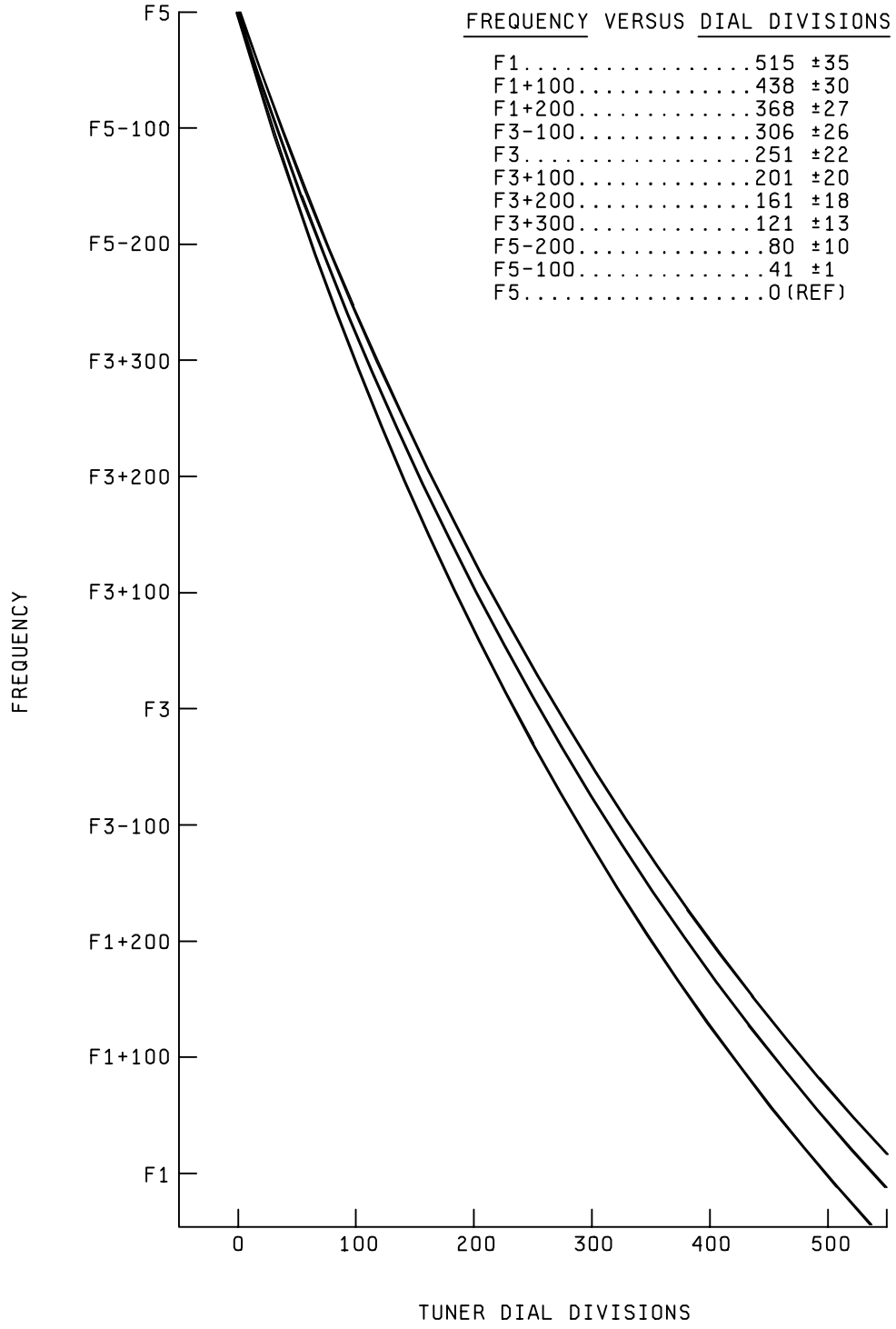


FIGURE 2. Frequency versus tuner dial divisions.

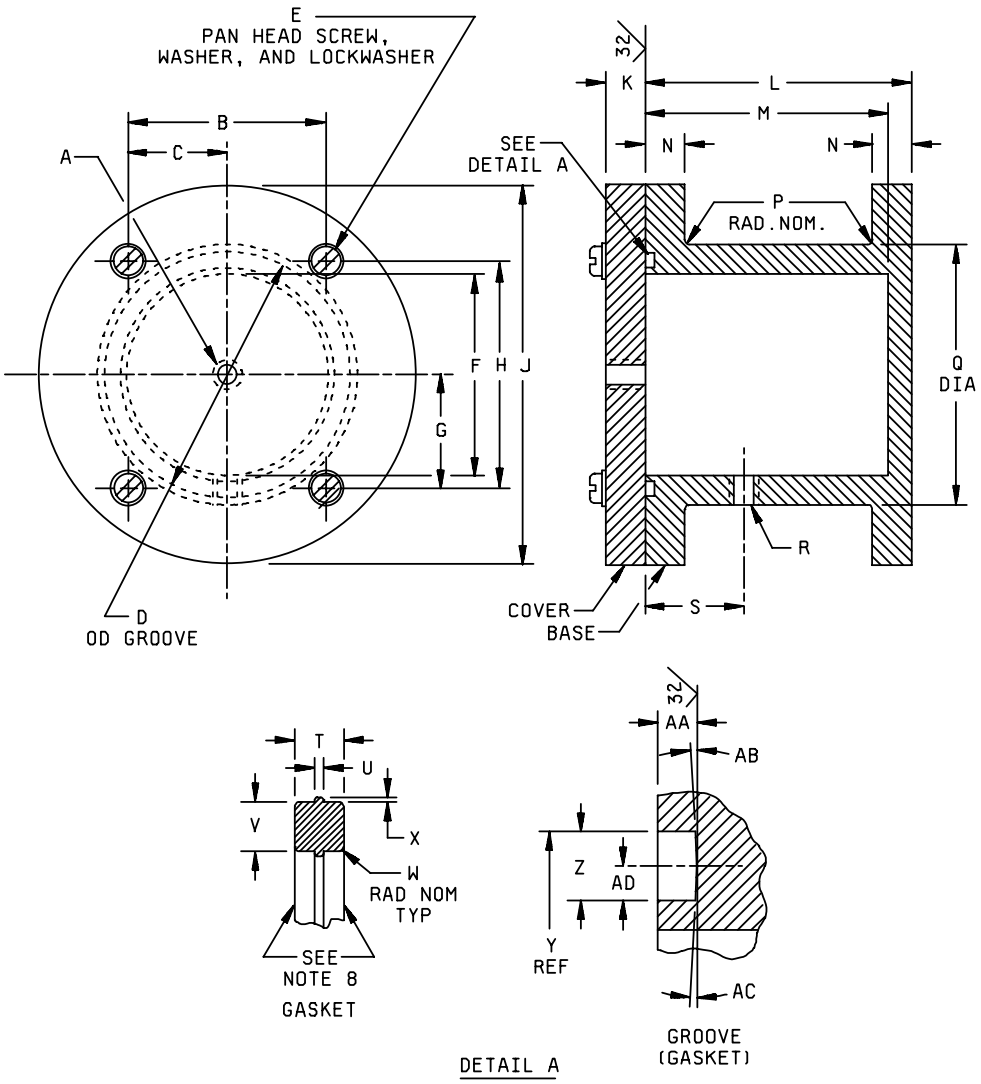


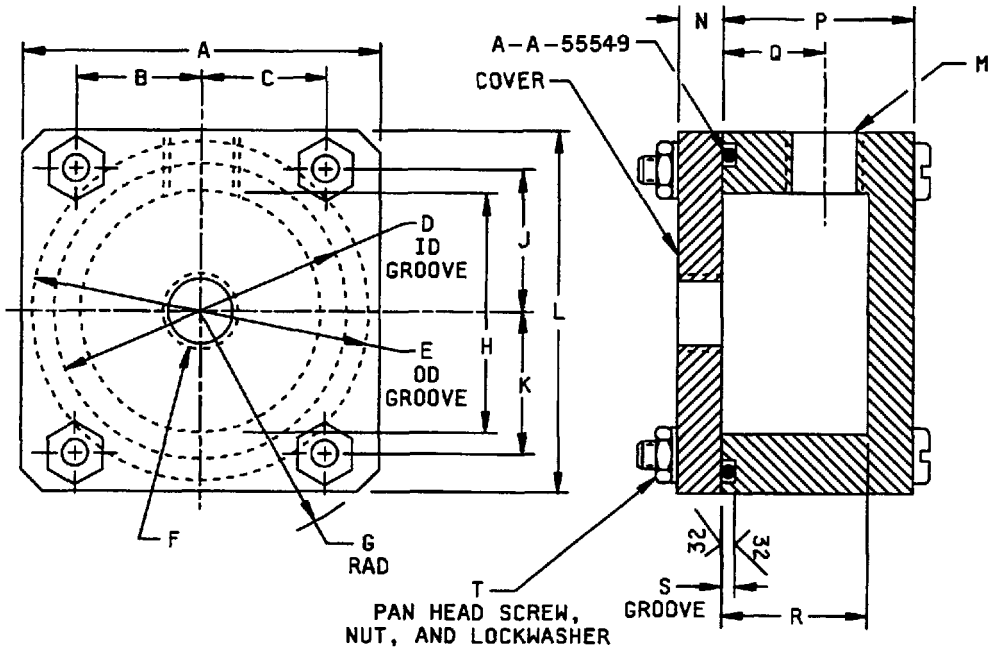
FIGURE 3. Magnetron input test fixture.

Dimensions									
Ltr	Inches		Millimeters		Ltr	Inches		Millimeters	
	Min	Max	Min	Max		Min	Max	Min	Max
A	.125-27 NPT		3.18-27 NPT		Q	3.359 dia	3.390 dia	85.32 dia	86.11 dia
B	2.495	2.505	63.37	63.63	R	.125-27 NPT		3.18-27 NPT	
C	1.245	1.255	31.62	31.88	S	1.359	1.391	34.52	35.33
D	3.167	3.177	80.44	80.69	T	.134	.142	3.40	3.61
E	.250-20 x 1.0 LG		6.25-20 x 10. LG		U	---	.005	---	0.13
F	2.609	2.640	66.27	67.06	V	.127	.135	3.23	3.43
G	1.495	1.505	37.97	38.23	W	.030 Rad Nom		0.76 Rad Nom	
H	2.995	3.005	76.07	76.33	X	---	.005 typ	---	0.13 typ
J	4.984	5.016	126.59	127.41	Y	3.167	3.177	80.44	80.70
K	.484	.516	12.29	13.11	Z	.182	.192	4.62	4.88
L	3.484	3.516	88.49	89.31	AA	.111	.113	2.82	2.87
M	3.234	3.265	82.14	82.93	AB	1°30'	2°30'	1°30'	2°30'
N	.484	.516	12.29	13.11	AC	1°30'	2°30'	1°30'	2°30'
P	.062 Nom		1.57 Nom		AD	.088	.098	2.23	2.49

NOTES:

1. Material (base and cover) corrosion resistance in accordance with ASTM-A484/A484M and ASTM-A582/A582M.
2. Material (gasket) LS-53 fluorosilicone rubber 45 ± 5 duro. shore A.
3. Dimension are in inches, with millimeter equivalents provided.
4. Diameters shall be concentric within .005 T.I.R.
5. Remove all burrs, break sharp edges.
6. Surfaces of base and cover shall be $\sqrt{}^{125}$ finish, unless as noted.
7. Surfaces with $\sqrt{}^{32}$ finish shall be free of tool marks and scratches.
8. Gasket surfaces indicated shall be free of any defects, blemishes, or surface irregularities.
9. Passivate in accordance with MIL-F-14072 (E300) (base and cover).
10. This fixture to be used for the pressurization test.

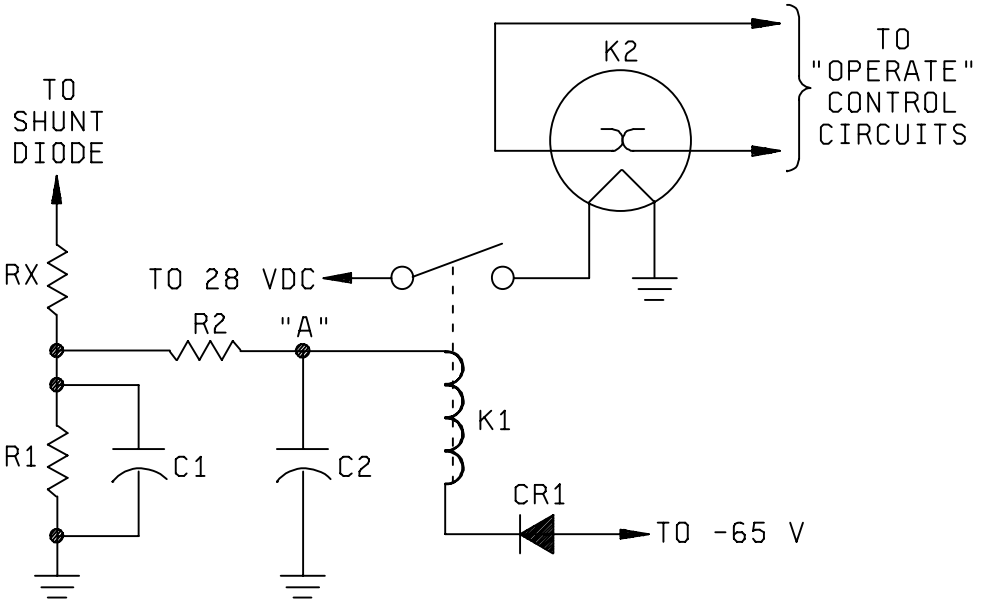
FIGURE 3. Magnetron input test fixture - Continued.



Dimensions									
Ltr	Inches		Millimeters		Ltr	Inches		Millimeters	
	Min	Max	Min	Max		Min	Max	Min	Max
A	1.860	1.890	47.24	48.00	K	.735	.739	18.67	18.77
B	.674	.678	17.12	17.22	L	1.860	1.890	47.24	48.00
C	.674	.678	17.12	17.22	M	.125-27 NPT		3.18-27 NPT	
D	1.558	1.561	39.57	39.65	N	.235	.265	5.97	6.73
E	1.774	1.777	45.06	45.13	P	.985	1.015	25.02	25.78
F	.125-27 NPT		3.18-27 NPT		Q	.485	.515	12.32	13.08
G	1.235	1.265	31.37	32.13	R	.735	.765	18.67	18.77
H	1.235	1.265	31.37	32.13	S	.063	.067	16.00	1.70
J	.735	.739	18.67	18.77	T	#.8-32 x 1.5 LG		#.8-32 x 1.5 LG	

NOTES:
1. Material: (Base and cover) corrosion resistance in accordance with ASTM-A484/A484M and ASTM-A582/A582M.
2. Dimensions are in inches, with millimeters equivalents provided.
3. Diameters shall be concentric within .005 T.I.R.
4. Remove all burrs, break sharp edges.
5. Surfaces with $\sqrt{}^{32}$ finish shall be free of defects, blemishes, tool marks, scratches, or surface irregularities.
6. Passivate in accordance with MIL-F-14072 (E300).
7. This fixture is to be used for the pressurization test.

FIGURE 4. Magnetron output test fixture.



C1 = 1.0 µF, 600 V, 20 percent
C2 = 1.0 µF, 600 V, 20 percent

CR1 – IN 484A

K1 – Relay, armature, current sensitive coil
DC resistance 2,500 ± 10 percent ohms
Pull in current: 2.9 ± .2 mA
Drop out current: 1.16 mA or less
Similar to Allied Control Co.
New York, NY Type RSHX-145

K2 - Relay, Thermal
Time delay: 1.5 sec at 24 V heater voltage
Similar to Warren G-V unit of General Signal Corp.
Whippany, NJ Type HM-01-NC-28

R1 – 4K, 5W, 1 percent
R2 – 10K, 5 W, 1 percent
RX – to be determined by supplier, so that when output of PFN is shorted to ground, voltage at “A” is -95 V.

FIGURE 5. Power stability life test control circuit.

NOTES

Referenced documents. In addition to MIL-PRF-1, this specification sheet sheet references MIL-STD-1311, MIL-HDBK-831, MIL-F-14072, A-A-55549, ASTM-A484/A484M, and ASTM-A582/A582M.

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the previous issue.

Custodians:
Air Force - 11

Review activities:
Air Force - 99

Preparing activity:
DLA - CC

(Project 5960-3715)

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