

TYPE MXT-13/6795A

The applicable provisions of the latest issue of MIL-E-1 pertain to this specification.

Description: X-Band TR, 9000-9400 Mc.

Application: Branched Duplexer

Ratings:

	<u>Min.</u>	<u>Max.</u>	<u>Unit</u>
Transmitter po:	: 4.0	---	kw
Open Circuit Ignitor Voltage:	: -650	---	Vdc
Ignitor Current:	: 100	200	μAde
Altitude:	: ---	35,000	ft.
Ambient Temperature Range (non-operating):	: -40	+100	°C

Recommended Ignitor Operating Current: 150 μAde (note 1)

Mounting: Any (either end may be used as output or input).

Weight: 2.2 oz. (approx.)

Packing: In accordance with MIL-E-75

<u>Ref.</u>	<u>Test</u>	<u>Conditions</u>	<u>Sym.</u>	<u>Min.</u>	<u>Max.</u>	<u>Unit</u>
<u>GENERAL</u>						
E50.2	Holding Period:	_____	t:	158	---	hr.
D20	Dimensions:	Per attached Outline:	---	---	---	---
E1136	Container Drop:	(1); Package	---	---	---	---
<u>QUALIFICATION (Note 7)</u>						
E1006	Salt Spray	----	---	---	---	---
E4026	Shock	6 Impact Blows Note 2	---	---	---	---
E1011	Humidity	Note 8	---	---	---	---
E1021	Thermal Shock	Note 8	---	---	---	---
E4201	Vibration	G = 10 Planes x and y t = 60 sec. Note 2	---	---	---	---
E1002	Altitude	35,000 feet	---	---	---	---

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Includes two-page Outline.

<u>Ref.</u>	<u>Test</u>	<u>Conditions</u>	<u>Sym.</u>	<u>Min.</u>	<u>Max.</u>	<u>Unit</u>
<u>QUALITY CONFORMANCE INSPECTION, PART 1 (Notes 7,9)</u>						
E4473	VSWR:	F=9000±0.1%Mc; F=9200±0.1%Mc; F=9400±0.1%Mc; σ' =1.05 max.; Note 3	σ :	---	1.4	---
E4416	Insertion Loss (l):	F=9200Mc; Iz=0uAdc;	Li:	---	0.7	db
E4406	Ignitor Voltage Drop:	Ii=100uAdc; Note 4	Eid:	-200	-375	Vdc
E4451	Flat Leakage Power:	F=9200Mc; po=40±10%kw; σ' =1.10 max.; tpl=1.0±0.15us; tp2=0.5±0.15us; pr=1000; Ii=100uAdc;	pf:	---	40	mw
E4446	Spike Leakage Energy:	See Flat Leakage Power;	Ws:	---	0.2	erg
E4006	Temperature Cycle:	-----	----	---	---	---
<u>QUALITY CONFORMANCE INSPECTION, PART 2 (Note 9)</u>						
E4421	Ignitor Interaction:	Ii=100uAdc;	Δ Li:	---	0.2	db
E4401	Ignitor Ignition Time:	Ebb=-700Vdc; Ri=5.5 meg.;	t:	---	5.0	sec.
E4488	Arc Loss:	po=4.0kw; tp=1.0us; pr=1000;	----	---	0.8	db
E4471	Recovery Time:	F=9200Mc; po=40kw; tp=1.0us; pr=1000; Iz=100uAdc; Note 5	t:	---	10	us
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<u>Ref.</u>	<u>Test</u>	<u>Conditions</u>	<u>Sym.</u>	<u>Min.</u>	<u>Max.</u>	<u>Unit</u>
<u>QUALITY CONFORMANCE INSPECTION, PART 3 (Note 7)</u>						
4.7	Life Test:	F=9200Mc; po=40kw; tp=1.0us; prf=1000; Iz=100uAdc; Note 6	t:	500	---	hr.
4.7.3	Life Test End Point:	Recovery Time; po=40kw; Flat Leakage Power; Spike Leakage Energy; Insertion Loss;	t: pf: ws: Li:	--- --- --- ---	20 50 0.25 0.7	us mw erg db
<p>Note 1: The recommended ignitor operating current is for a tube with an average ignitor voltage drop. The following formula should be used to determine the value of the required series resistance:</p> $R_i = \frac{E_{bb} - E_{id}}{150}$ <p>where R_i = total series resistance (megohms) E_{bb} = open circuit supply voltage (volts) E_{id} = average (center) ignitor voltage drop (volts)</p> <p>At least 0.5 megohms of the total should be located as close as possible to the ignitor top cap to prevent oscillation.</p> <p>Note 2: There shall be no evidence of shorts between keep-alive electrodes as indicated by a short indicator during vibration.</p> <p>Note 3: With either end used as the input the tube shall satisfy the conditions of this specification.</p> <p>Note 4: The ignitor voltage drop shall be measured after the tube fires with a high resistance voltmeter, 20,000 ohms per volt or greater, and shall be within the specified limits.</p>						

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Note 5: The recovery time shall be measured after 30 minutes of operation under the specified conditions.

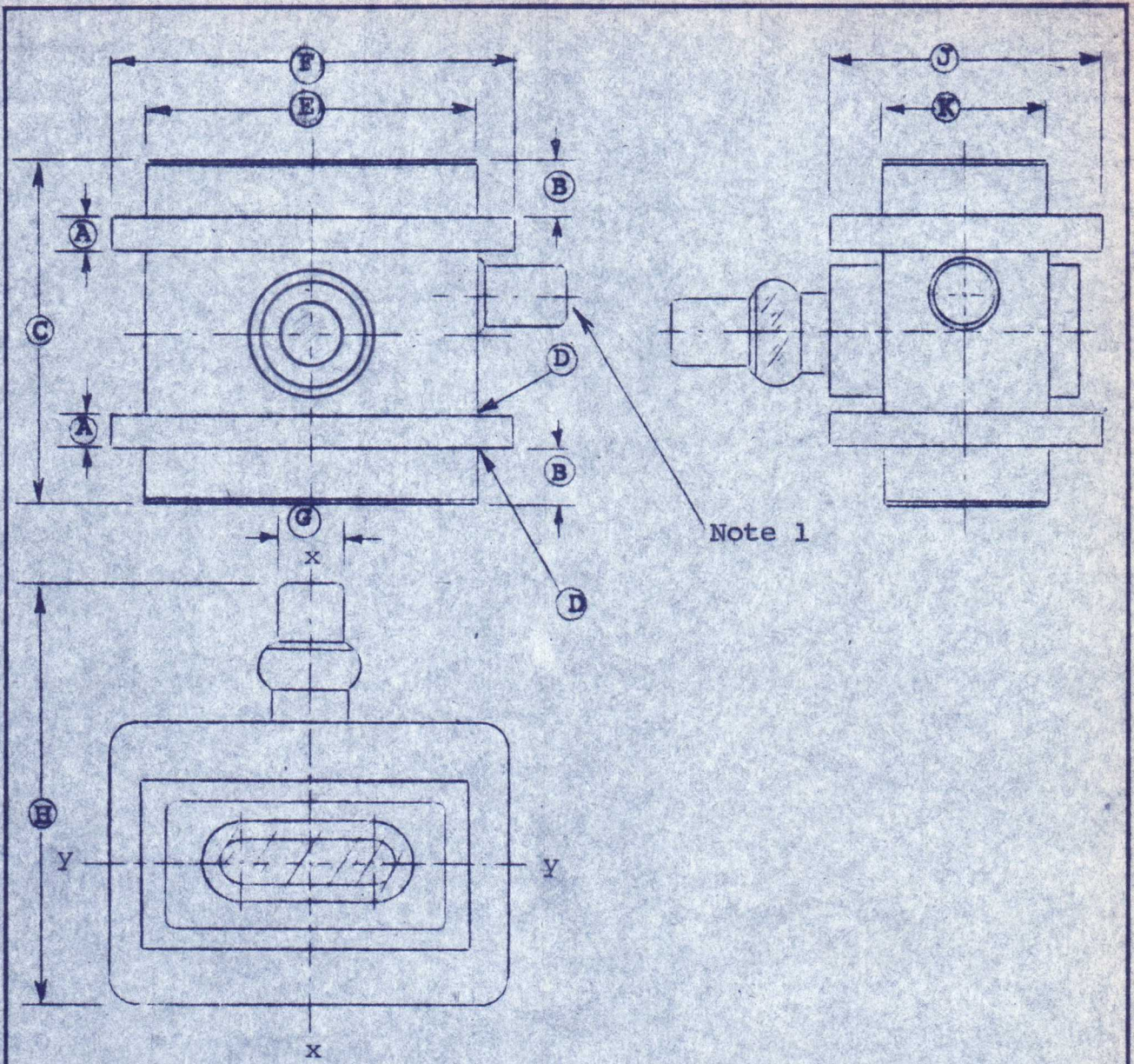
Note 6: This test shall be conducted with the tube mounted in a rat-race duplexer under the specified conditions. There shall be no arcing across the front face of the window during this test.

Note 7: All tests listed hereon shall be performed during Qualification Inspection; however, these tests are normally performed during Qualification Inspection only.

Note 8: After exposure to this test, the tube shall satisfy the requirements specified under Ignitor Ignition Time and Voltage Drop.

Note 9: AQLs per paragraph 4.1.1 of MIL-E-1E.

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	OUTLINE MXT-13/6795A MXT-95/6795B MXT-156/6795	

DIM.	AQL (% DEFECTIVE)	INSPECTION LEVEL	LIMITS IN INCHES		LIMITS IN MM	
			MIN.	MAX.	MIN.	MAX.
QUALIFICATION						
A			0.092	0.102	2.33	2.60
E			0.995	1.010	25.27	27.94
F			1.195	1.205	30.35	30.61
G			0.245	0.255	6.22	6.48
J			0.695	0.705	17.65	17.91
K			0.495	0.510	12.57	12.96
QUALITY CONFORMANCE INSPECTION, PART 1						
B	} Note 2	} I	0.180	0.190	4.57	4.83
C			1.011	1.021	25.67	25.94
D			---	0.030	---	0.77
QUALITY CONFORMANCE INSPECTION, PART 2						
H	6.5	S-3	---	1.312	---	33.33

Note 1: Exhaust stem not to extend beyond flanges more than 0.187 inches.

Note 2: The AQL for the combined mechanical defectives in Quality Conformance Inspection, Part 1, shall be 1%, MIL-STD-105 applies.

Note 3: Special marking upon customer's request.

Note 4: Finishing:
Plating: Cadmium (.0003) over copper strike.
No paint.

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