

CV3512

MIL-E-1/917A
28 October 1955
SUPERSEDING
MIL-E-1/917
1 August 1955

INDIVIDUAL MILITARY SPECIFICATION SHEET
ELECTRON TUBE, THYRATRON, TETRODE, GAS
JAN-5696

This specification sheet forms a part of the latest issue of Military Specification MIL-E-1.

Rating:	Nonconduction				Conduction				Iel	Ie2	Ik	Ik	Ehk	T _c	tk	Rgl	Alt
	ef	epx	epy	ee2	ee1	Ee2	Ee1	Ie1									
Absolute	V	V	V	Vde	Vde	Vde	Vde	mide	mide	ma	mide	mide	V	-75to/90	10	10	10,000
Maximum:	6.3/10%	500	500	-50	-100	-10	-10	5	5	100	25	25	-100	Note 2	---	---	---
Test Cond:	6.3	---	---	0	---	---	---	Note 1	Note 1	---	---	---	Note 2	---	---	---	---
Cathode:	Coated Unipotential										Height: 1-3/4 in. maximum						
Base:	Miniature Button 7-Pin, E-7-1										Diameter: 3/4 in. maximum						
Pin No.:	1	2	3	4	5	6	7										
Element:	g	k	h	h	g ²	a	g ²										
Envelope: T-5-1/2 (6-1)																	

The following tests shall be performed:

Ref.	Test	Conditions	AQL(%)	Insp. Level or Code	Sym.	LIMITS						Units
						Min.	LAL	Bogle	UAL	Max.	ALD	
Qualification Approval Tests												
3.1	Qualification Approval:	Required for JAN Marking	---	---								
	Cathode:	Coated Unipotential	---	---								
3.4.3	Base Connections:		---	---								
Measurements Acceptance Tests, Part 1: Note 3												
4.10.17.1	Grid Voltage (1):	E _{pp} =350V _{ac} ; R _{g1} =0.1Meg; R _p =5000; Notes 4, 5	0.65	II	Ee1:	-2.3	---	---	---	-3.9	---	Vdc
4.10.17.1	Grid Voltage (2):	E _{pp} =350V _{ac} ; R _{g1} =10Meg; R _p =5000; Notes 4, 5	0.65	II	Ee1:	0	---	---	---	-4.8	---	Vdc
4.10.24	Pulse Emission:	E _{pp} =E _{g1} Head=180V; t _p =2.0-2.5μs; t _r =0.5μs max; t _f =1.0μs max; p _r =100μpps; t _h =5(min); R _a =0.6% noninductive; R _p =40% noninductive; Calibrating Resistor=20% noninductive; Z _m =7.5; t _e =3 max.	0.65	II	ebb:	---	---	---	---	75	---	Volts ←
4.10.17.2	Anode Voltage (1):	Vary E _{bb} ; E _{e1} =0; R _{g1} =0.1Meg; R _p =3000; Note 4	0.65	II	E _b :	---	---	---	---	2	---	Vdc
4.10.17.2	Anode Voltage (2):	E _f =0; E _{e1} =-100; R _{g1} =0; R _p =10,000; Notes 4, 6	0.65	II	E _b :	500	---	---	---	---	---	Vdc
4.9.1	Mechanical:		---	---								
Measurements Acceptance Tests, Part 2												
4.9.19.1	Vibration:	No Voltages	6.5	IA								
4.10.8	Heater Current:		6.5	IA	If:	138	---	---	---	162	---	mA
4.10.15	Heater-Cathode Leakage:	E _{bb} =-100/25Vdc	6.5	IA	I _{hk} :	0	---	---	---	20	---	mide
4.10.17.1	Grid Voltage (3):	E _f =7.0V; E _{pp} =350V _{ac} ; R _{g1} =10Meg; R _p =5000; Notes 4, 5, 7	6.5	IA	Ee1:	0	---	---	---	-5.6	---	Vdc
Acceptance Life Tests												
4.11	Life Test:	Group B; I _b =25mAdc; I _b =150ma; R _{g1} =5000; E _{pp} =350V _{ac} ; Note 8	---	---	t:	500	---	---	---	---	---	hours
4.11.4	Life Test End Point:	Pulse Emission	---	---	ebb:	---	---	---	---	100	---	Volts
Packaging Requirements												
4.9.18.1.6	Container Drop:	(d) Package Group 1; Carton Size B										

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- Note 1: Over a 30 second maximum interval.
- Note 2: Cathode is reference element.
- Note 3: The AQL for the combined defectives for attributes in Measurements Acceptance Tests, Part 1, excluding Mechanical, shall be one percent. A tube having one or more defects shall be counted as one defective. MIL-STD-105, Inspection Level II, shall apply.
- Note 4: Connect pins 5 and 7 to pin 2.
- Note 5: Use miniature steatite socket with grounded shield base. Shield the plate power supply. Use short shielded plate and grid leads. Plate and grid resistors should be noninductive. Connect the grid resistor directly at the socket.
- Note 6: No voltages shall be applied to tube for 20 minutes minimum preceding test.
- Note 7: Preheat 15 minutes minimum under test conditions or under conditions of $E_f \leq 7.0$; E_{pp} vary; $E_{ol} = E_{o2} = 0$; $R_g = 10 \text{ Meg}$; $I_b = 100 \text{ mdc}$. 5 seconds maximum between preheat and test.
- Note 8: Phase of grid voltage adjusted to provide start of conduction at peak of applied anode voltage.
- Note 9: Reference specification shall be of the issue in effect on the date of invitation for bid.