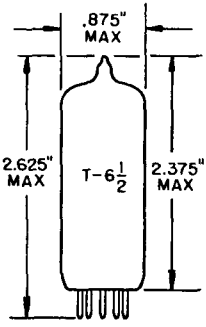
TUNG-SOL

TRIODE - PENTODE

MINIATURE TYPE



GLASS BULB
SMALL BUTTON 9 PIN
BASE E9-1
OUTLINE DRAWING
JEDEC 6-3

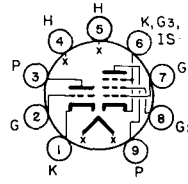
FOR COLOR

AND BLACK-AND-WHITE

T.V. RECEIVERS

COATED UNIPOTENTIAL CATHODE

ANY MOUNTING POSITION



BOTTOM VIEW
BASING DIAGRAM
JEDEC 9DX

THE 10JA8 IS A HIGH-MU TRIODE AND A PENTODE IN THE 9 PIN MINIATURE CONSTRUCTION. THE TRIODE UNIT IS DESIGNED FOR SERVICE AS A SYNC SEPARATOR, SYNC CLIPPER AND PHASE INVERTER WHILE THE PENTODE UNIT IS DESIGNED FOR OPERATION AS A VIDEO AMPLIFIER. EXCEPT FOR HEATER RATINGS AND CHARACTERISTICS THE 10JA8 IS IDENTICAL TO THE 6JA8.

DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

		TRIODE UNIT	PENTODE UNIT	
GRID 1 TO PLATE		4.6	MAX. 0.1	pf
INPUT		2.6	11	pf
OUTPUT		2.6	4.4	pf
COUPLING:				
PENTODE GRID1 TO TRIODE PLATE	MAX.	0.005		pf
PENTODE PLATE TO TRIODE GRID	MAX.	0.018		pf
PENTODE PLATE TO TRIODE PLATE	MAX.	0.17		pf

CONTINUED ON FOLLOWING PAGE

PRINTED IN U.S.A.

CONTINUED FROM PRECEDING PAGE

HEATER CHARACTERISTICS AND RATINGS

DESIGN MAXIMUM VALUES -SEE EIA STANDARD RS-239

AVERAGE CHARACTERICTICS	10.5 VOLTS	450	MA.
HEATER WARM-UP TIME	APPROX.	11	SECONDS
LIMITS OF SUPPLIED CURRENT	450 ± 30		MA.

HEATER-CATHODE VOLTAGE:	TRIODE UNIT	PENTODE UNIT	
HEATER NEGATIVE WITH RESPECT TO CATHODE			
TOTAL DC AND PEAK	200	200	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE			
DC COMPONENT	100	100	VOLTS
TOTAL DC AND PEAK	200	200	VOLTS

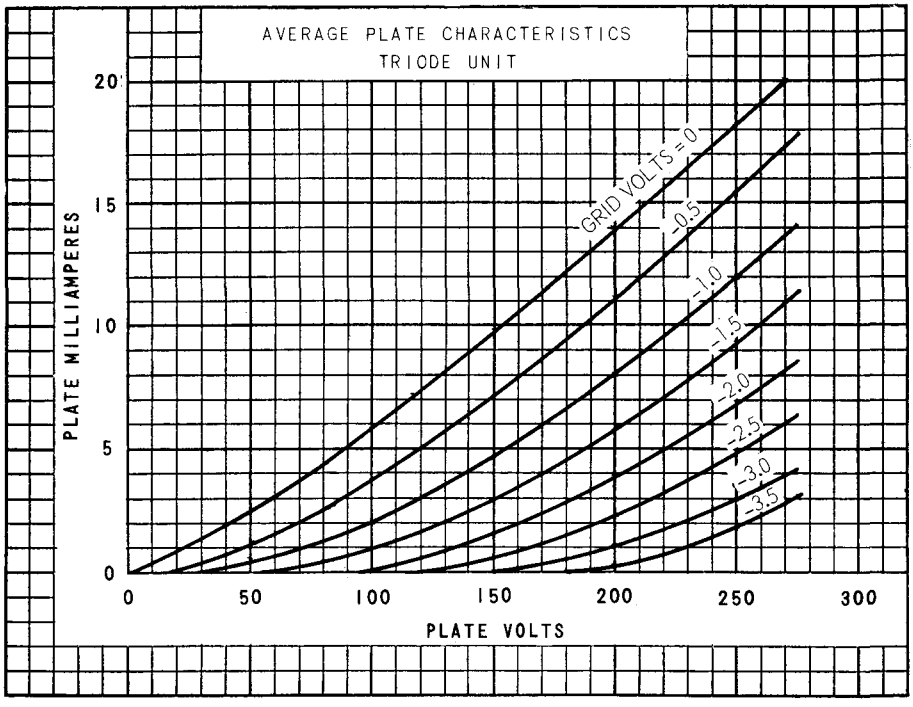
MAXIMUM RATINGS

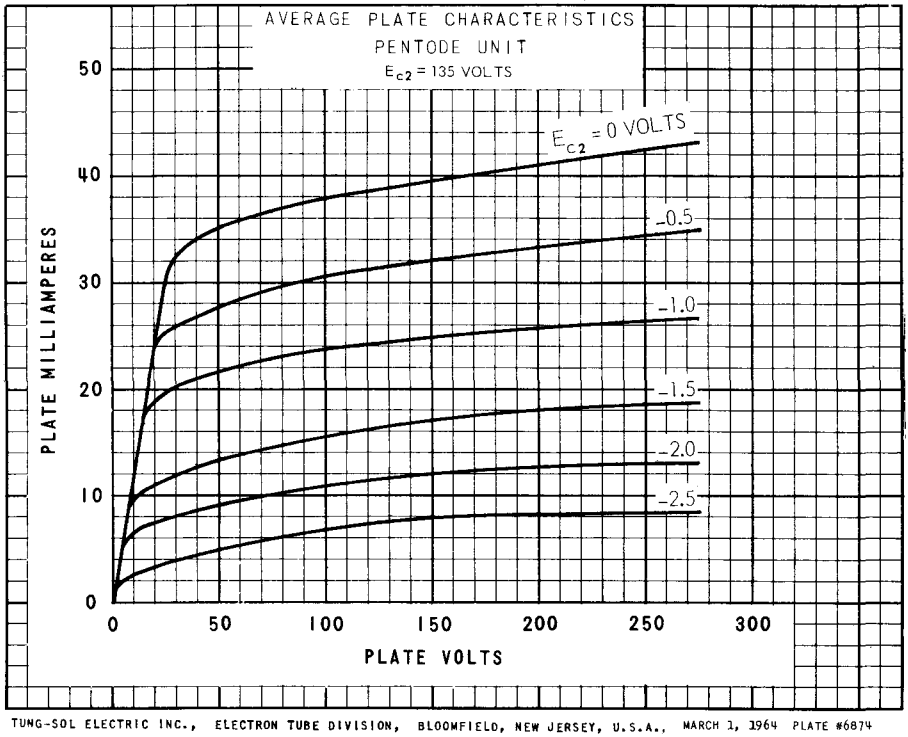
DESIGN MAXIMUM RATINGS-SEE EIA STANDARD RS-239

	TRIODE UNIT	PENTODE UNIT	
PLATE VOLTAGE	300	300	VOLTS
GRID2 SUPPLY VOLTAGE	-	330	VOLTS
GRID2 VOLTAGE		SEE RATING CHART	
PLATE DISSIPATION	1	5	WATTS
GRID 2 DISSIPATION	-	1.5	WATTS
POSITIVE GRID 1 BIAS VOLTAGE	0	0	VOLTS
GRID 1 CIRCUIT RESISTANCE			
FIXED BIAS	0.5	0.25	MEGOHM
CATHODE RESISTOR BIAS	1.0	1.0	MEGOHM

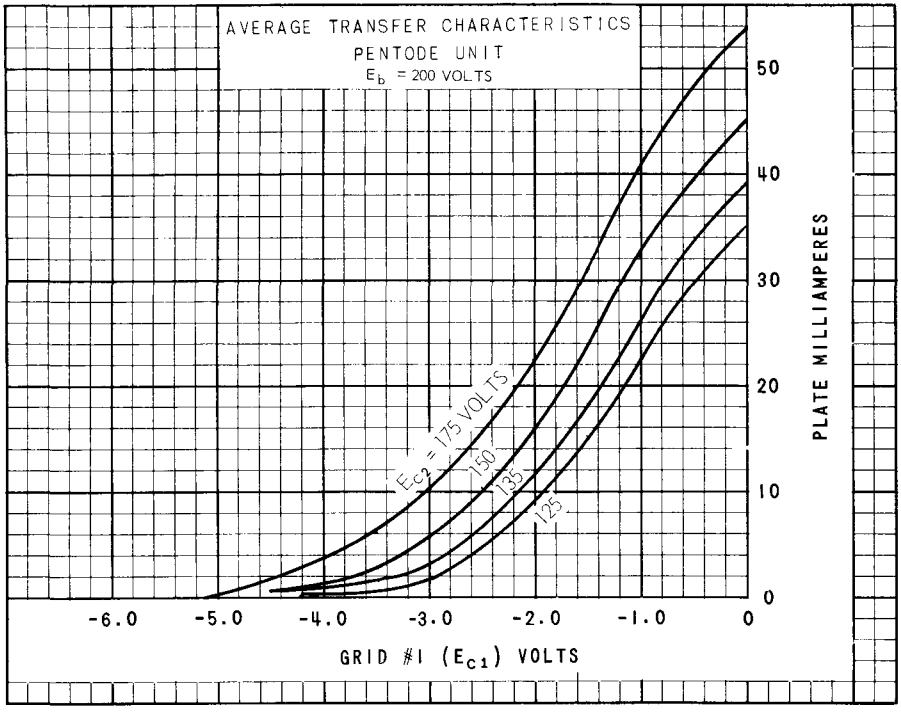
CHARACTERISTICS AND TYPICAL OPERATION

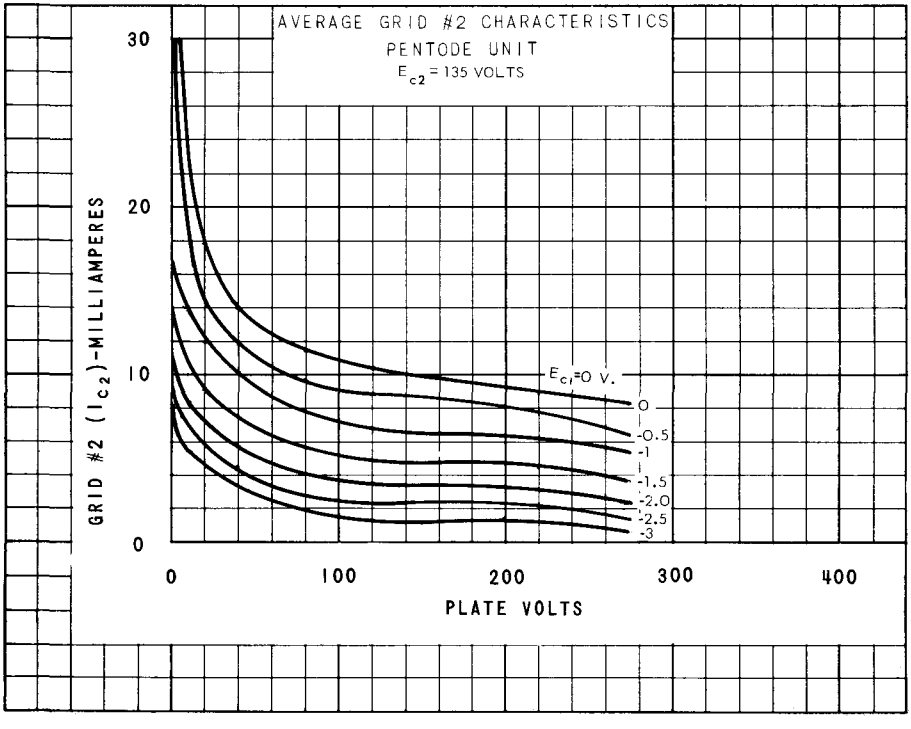
TRIODE UNIT:				
PLATE VOLTAGE		135	200	VOLTS
GRID VOLTAGE		-2	-2	VOLTS
PLATE CURRENT		1	3.5	MA.
TRANSCONDUCTANCE		1,550	3,700	μMHOS
AMPLIFICATION FACTOR		60	70	
PLATE RESISTANCE		39,000	19,000	OHMS
GRID 1 VOLTAGE FOR $I_b = 10\ \mu A$		-4.8	-7	VOLTS
PENTODE UNIT:				
PLATE VOLTAGE	30	135	200	VOLTS
GRID 2 VOLTAGE	135	135	135	VOLTS
GRID1 VOLTAGE	0	-1.5	-1.5	VOLTS
PLATE CURRENT	32	17	18	MA.
GRID 2 CURRENT	14	4.2	4	MA.
TRANCONDUCTANCE	-	12,600	14,000	μMHOS
PLATE RESISTANCE	-	66,000	70,000	OHMS
GRID 1 VOLTAGE FOR $I_b = 10\ \mu A$	-	-5	-5	VOLTS

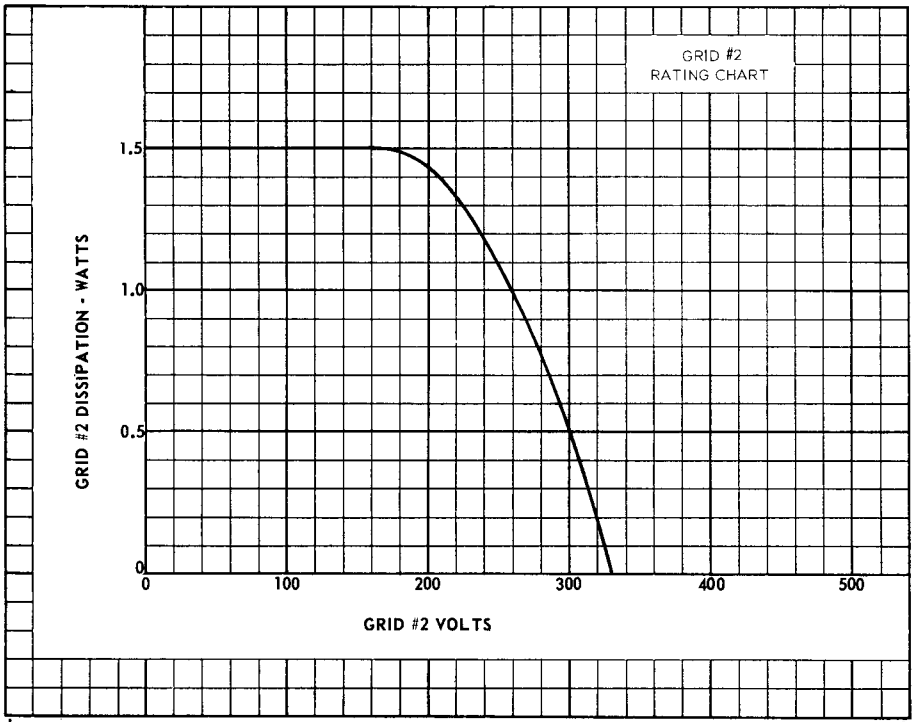




PRINTED IN U.S.A.


AVERAGE TRANSFER CHARACTERISTICS
PENTODE UNIT
E_b = 200 VOLTS
E_{c2} = 175 VOLTS
150
135
125
50
40
30
20
10
0
PLATE MILLIAMPERES
-6.0
-5.0
-4.0
-3.0
-2.0
-1.0
0
GRID #1 (E_{c1}) VOLTS


AVERAGE GRID #2 CHARACTERISTICS
PENTODE UNIT
E_{c2} = 135 VOLTS
30
20
10
0
GRID #2 (I_{c2})-MILLIAMPERES
E_{c1}=0 V.
0
-0.5
-1
-1.5
-2.0
-2.5
-3
0
100
200
300
400
PLATE VOLTS



PRINTED IN U.S.A.