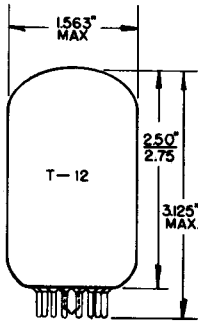


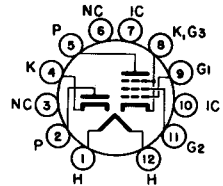
## TUNG-SOL

DIODE - PENTODE  
COMPACTRON

GLASS BULB  
BUTTON 12 PIN BASE E1274  
OUTLINE DRAWING  
JEDEC 12 - 57

FOR  
COMBINED DAMPING  
AND AMPLIFIER SERVICE  
IN TV RECEIVERS

COATED UNIPOTENTIAL CATHODE  
ANY MOUNTING POSITION



BOTTOM VIEW  
BASING DIAGRAM  
JEDEC 12 F5

THE 38HE7 IS A HIGH-PERVEANCE DIODE AND A BEAM-POWER PENTODE IN THE T-12 COMPACTRON CONSTRUCTION. THE DIODE IS DESIGNED FOR SERVICE AS THE DAMPING DIODE AND THE PENTODE AS THE HORIZONTAL-DEFLECTION AMPLIFIER IN TELEVISION RECEIVERS.

**DIRECT INTERELECTRODE CAPACITANCES**  
WITHOUT EXTERNAL SHIELD

DIODE SECTION

CATHODE TO PLATE AND HEATER: K TO (P + H)	8.0	pf
PLATE TO CATHODE AND HEATER: P TO (K + H)	7.0	pf
HEATER TO CATHODE: (H TO K)	1.6	pf

PENTODE SECTION

GRID 1 TO PLATE: (G <sub>1</sub> TO P)	0.38	pf
INPUT: G <sub>1</sub> TO (H + K + G <sub>2</sub> + G <sub>3</sub> )	19	pf
OUTPUT: P TO (H + K + G <sub>2</sub> + G <sub>3</sub> )	8.0	pf

CONTINUED ON FOLLOWING PAGE

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**HEATER CHARACTERISTICS AND RATINGS**

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	37.8	VOLTS	450	MA.
HEATER WARM-UP TIME		APPROX.	11	SECONDS
LIMITS OF SUPPLIED CURRENT			450 ± 30	MA.
HEATER-CATHODE VOLTAGE		DIODE SECTION	PENTODE SECTION	
HEATER POSITIVE WITH RESPECT TO CATHODE				
DC COMPONENT		100	100	VOLTS
TOTAL DC AND PEAK		200	200	VOLTS
HEATER NEGATIVE WITH RESPECT TO CATHODE				
DC COMPONENT		500		
TOTAL DC AND PEAK		4,200	200	VOLTS

**RATINGS**

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

**HORIZONTAL-DEFLECTION AMPLIFIER SERVICE**

DC PLATE-SUPPLY VOLTAGE (BOOST + DC POWER SUPPLY)		500	VOLTS
PEAK POSITIVE PULSE PLATE VOLTAGE		5,000	VOLTS
PEAK NEGATIVE PULSE PLATE VOLTAGE		0	VOLTS
GRID 2 VOLTAGE		150	VOLTS
NEGATIVE DC GRID 1 VOLTAGE		55	VOLTS
PEAK NEGATIVE GRID 1 VOLTAGE		330	VOLTS
PLATE DISSIPATION		10	WATTS
GRID 2 DISSIPATION		3.5	WATTS
GRID 2 DISSIPATION FOR $P_p \leq 9$ WATTS		4.0	WATTS
DC CATHODE CURRENT		230	MA.
GRID 1 CIRCUIT RESISTANCE		1.0	MEG OHMS
	<b>TV DAMPER SERVICE</b>		
PEAK INVERSE PLATE VOLTAGE		4,200	VOLTS
STEADY-STATE PEAK PLATE CURRENT		1,200	MA.
DC OUTPUT CURRENT		200	MA.
BULB TEMPERATURE AT HOTTEST POINT		200	° C

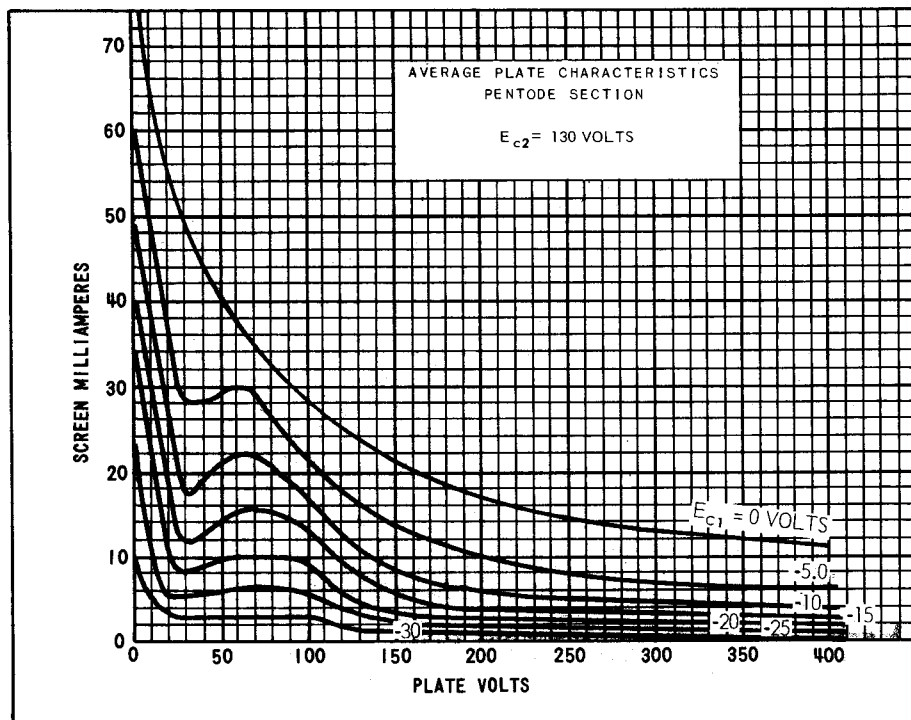
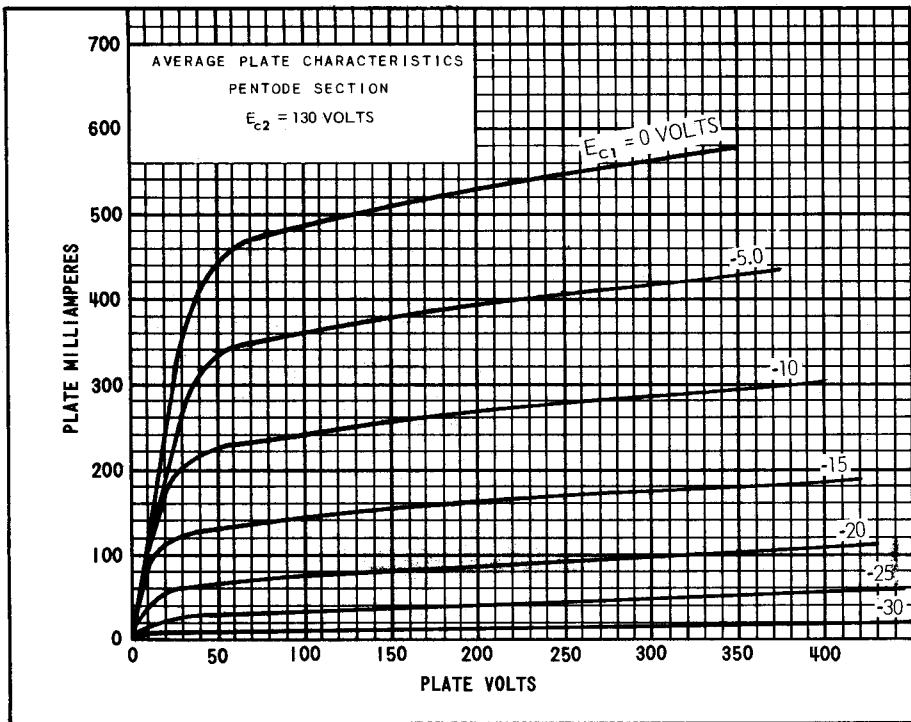
**CHARACTERISTICS AND TYPICAL OPERATION****PENTODE SECTION**

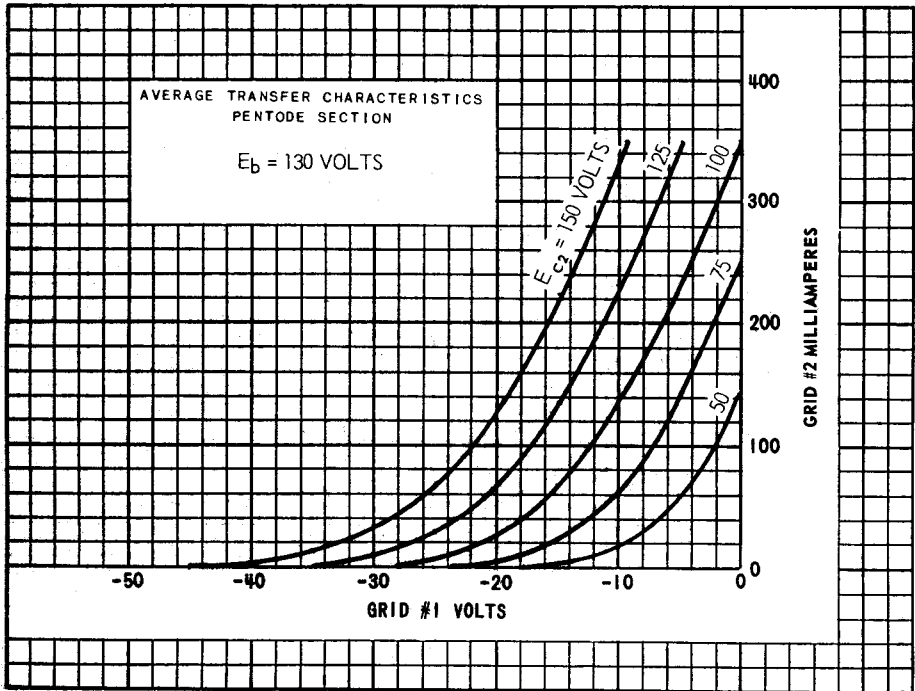
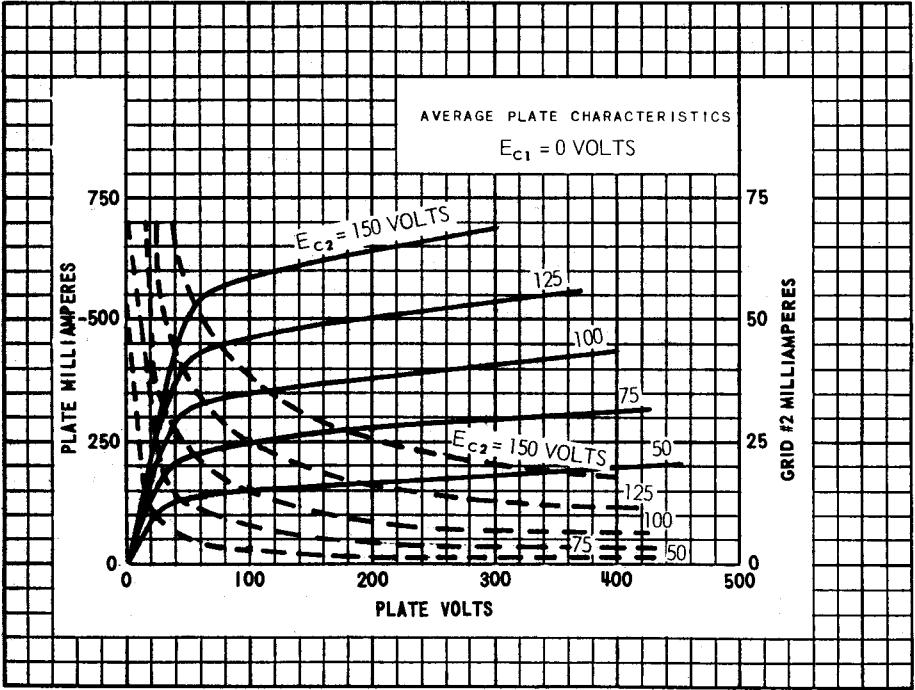
PLATE VOLTAGE	5,000	50	130	VOLTS
GRID 2 VOLTAGE	130	130	130	VOLTS
GRID 1 VOLTAGE	-	0 A	-22	VOLTS
PLATE CURRENT	-	450	60	MA.
GRID 2 CURRENT	-	40	2.8	MA.
TRANSCONDUCTANCE	-	-	8,800	MICROMHOS
TRIODE AMPLIFICATION FACTOR - GRID 2 TIED TO PLATE	-	-	4.2	
GRID 1 VOLTAGE FOR $I_b = 1.0$ MA. APPROX.	-80	-	-39	VOLTS

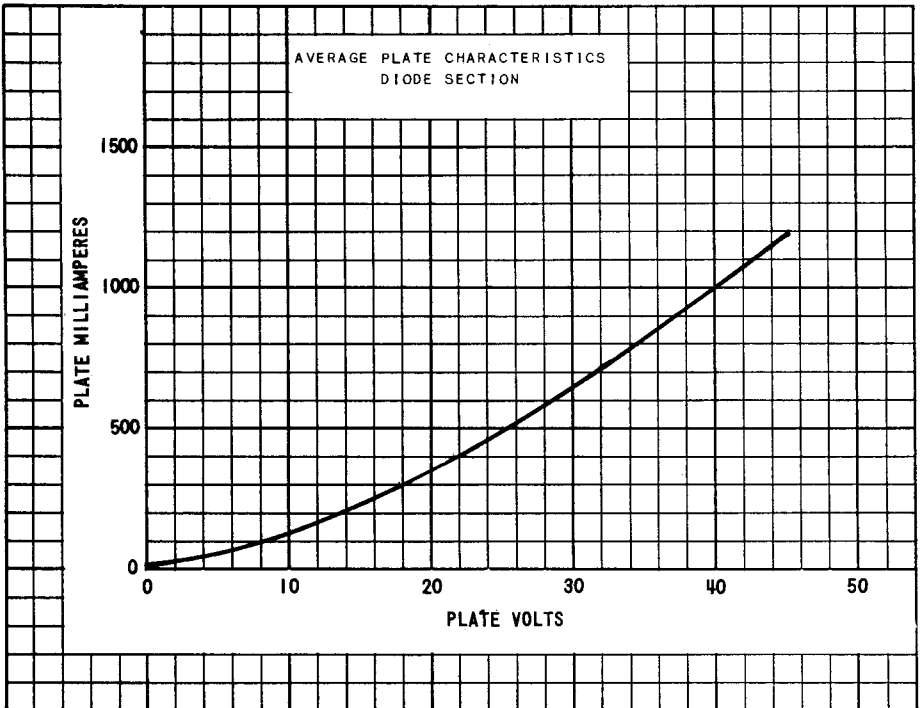
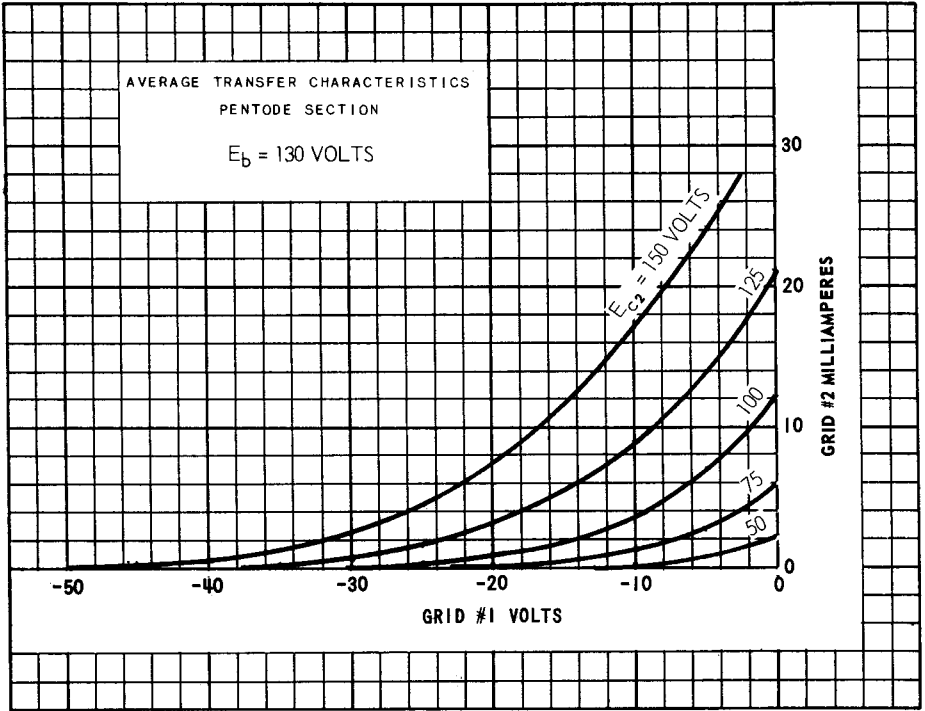
**DIODE SECTION**

TUBE VOLTAGE DROP FOR $I_b = 350$ MADC		21	VOLTS
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A - APPLIED FOR SHORT INTERVAL ( 2 SECONDS MAX. ) SO AS NOT TO DAMAGE TUBE.







DESIGNED BY U. S. A.