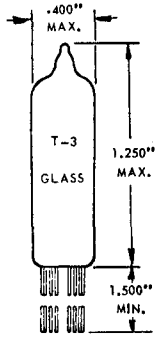
TUNG-SOL

TRIODE

SUBMINIATURE

OUTLINE DRAWING
JEDEC 3-11



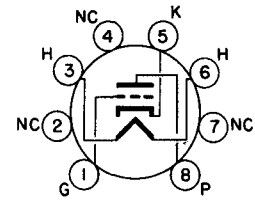
SUBMINIATURE BUTTON
8 FLEXIBLE LEADS
JEDEC E8-10

FOR
GUIDED MISSI LE
SERVICE

COATED UNIPOTENTIAL CATHODE

ANY MOUNTING POSITION

OUTLINE DRAWING
JEDEC 8DK



BOTTOM VIEW

THE 6946 IS GENERAL PURPOSE MEDIUM-MU TRIODE IN THE 8 PIN SUBMINIATURE CONSTRUCTION. IT IS DESIGNED SPECIFICALLY FOR GUIDED MISSILE SERVICE. THIS TYPE IS CHARACTERIZED BY STABLE PERFORMANCE IN OPERATION AT HIGH ALTITUDES AND WHERE SEVERE CONDITIONS OF MECHANICAL SHOCK VIBRATION AND HIGH TEMPERATURES ARE ENCOUNTERED.

DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

GRID TO PLATE	1.0	pf
INPUT	1.6	pf
OUTPUT	0.75	pf

HEATER CHARACTERISTICS AND RATINGS

ABSOLUTE MAXIMUM VALUES – SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	6.3 VOLTS	175	mA
LIMITS OF APPLIED VOLTAGE		5.5 TO 6.9	VOLTS
HEATER-CATHODE VOLTAGE:			
HEATER POSITIVE WITH RESPECT TO CATHODE		200	VOLTS
HEATER NEGATIVE WITH RESPECT TO CATHODE		200	VOLTS

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MAXIMUM RATINGS

ABSOLUTE MAXIMUM VALUES – SEE EIA STANDARD RS-239

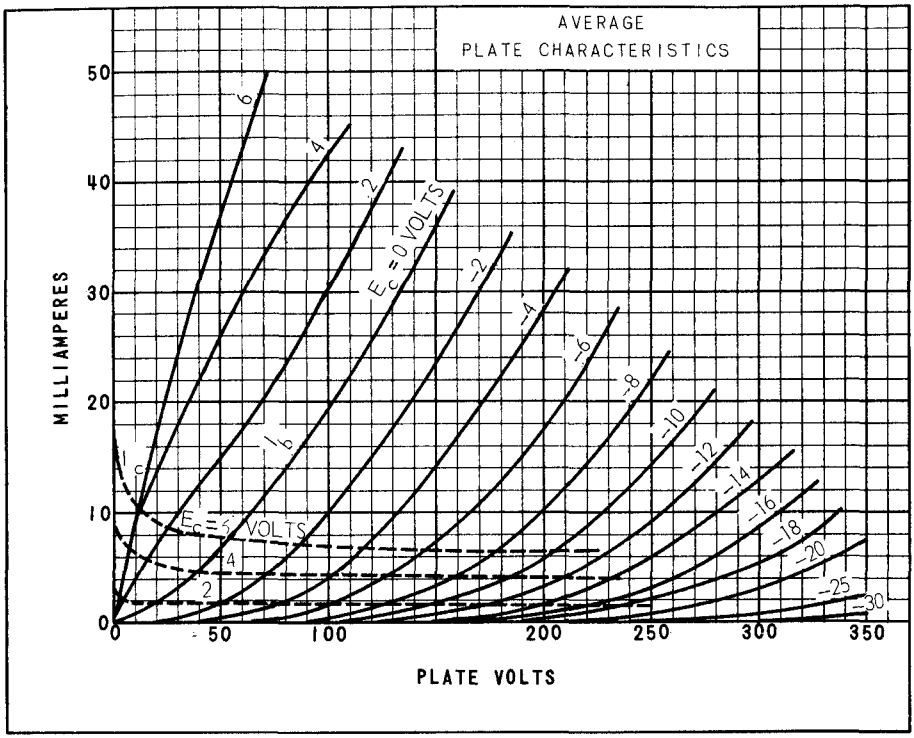
DC PLATE VOLTAGE	250	VOLTS
PEAK-PLATE FORWARD VOLTAGE	360	VOLTS
DC GRID VOLTAGE:		
POSITIVE VALUE	0	VOLTS
NEGATIVE VALUE	55	VOLTS
PLATE DISSIPATION	1.5	WATTS
DC CATHODE CURRENT	15	mA
GRID CIRCUIT RESISTANCE	1.0	MEGOHM
BULB TEMPERATURE	250	°C

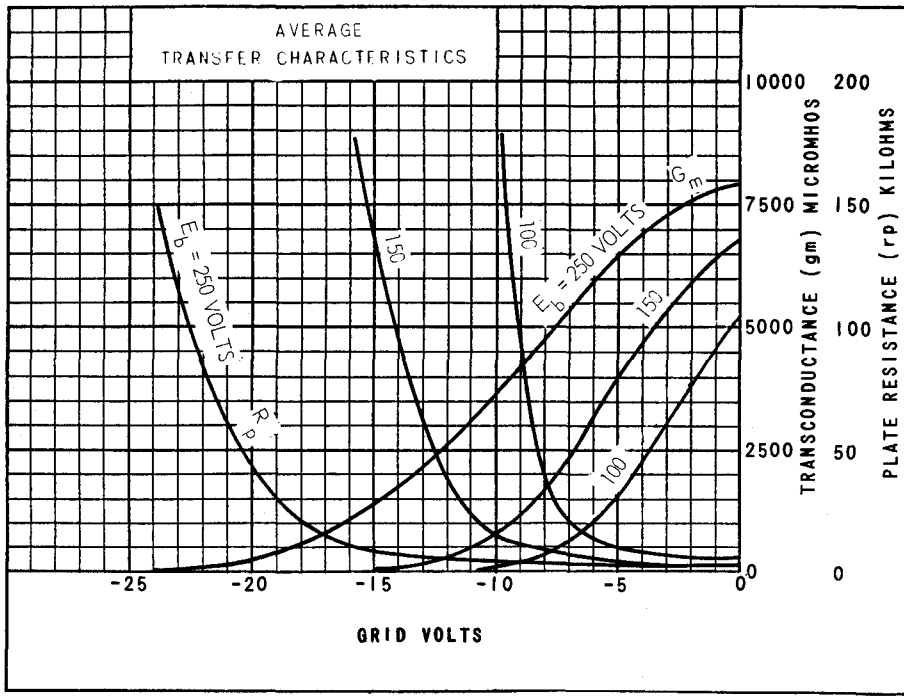
CHARACTERISTICS

DC PLATE VOLTAGE	100	VOLTS
CATHODE RESISTOR	270	OHMS
DC PLATE CURRENT	9.0	mA
AMPLIFICATION FACTOR	16.5	
TRANSCONDUCTANCE	3,800	μMHOS
DC GRID VOLTAGE FOR I_b = 150 μADC MAX.	−11.5	VOLTS
DC GRID VOLTAGE FOR I_b = 5 μADC MIN.	−8.5	VOLTS

SPECIAL TESTS AND RATINGS

IMPACT ACCELERATION		
FATIGUE		
FAILURE RATE		
ALTITUDE-ABSOLUTE MAXIMUM	80,000	FT.
RADIATION-ABSOLUTE MAXIMUM		
TOTAL DOSAGE-NEUTRONS/SQ. CM	10^{16}	NVT
DOSE RATE- NEUTRONS/SQ. CM/SEC	10^{12}	NV





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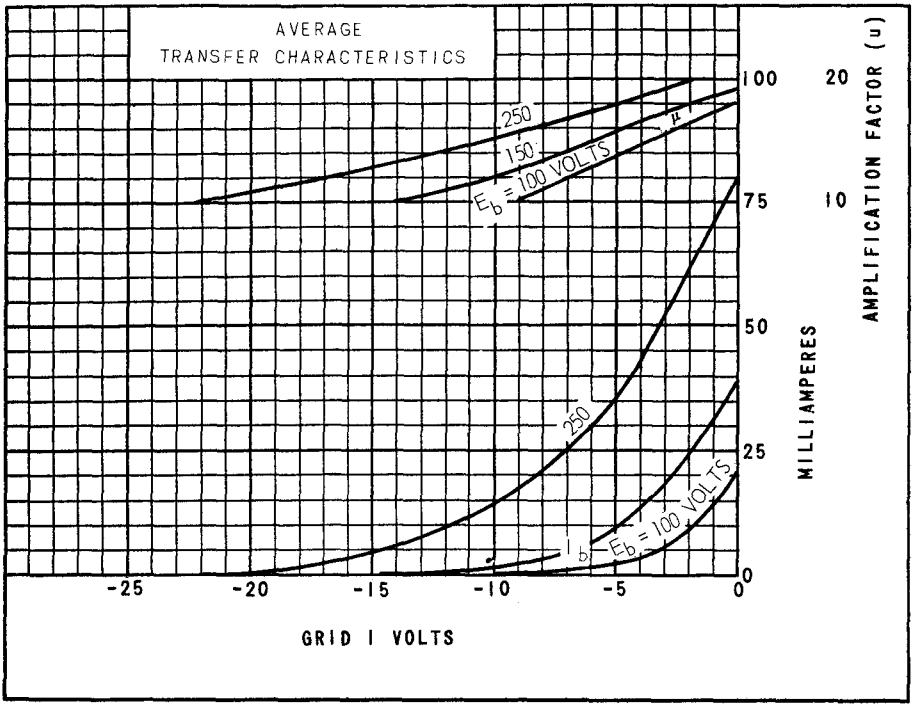
6946


AVERAGE
TRANSFER CHARACTERISTICS
250
150
E_b = 100 VOLTS
μ
250
I_b
E_b = 100 VOLTS
100
75
50
25
0
20
10
MILLIAMPERES
AMPLIFICATION FACTOR (u)
-25
-20
-15
-10
-5
0
GRID I VOLTS