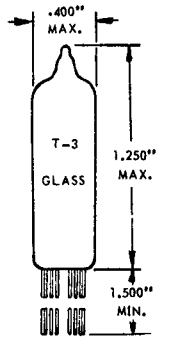
TUNG-SOL

TWIN TRIODE

SUBMINIATURE

OUTLINE DRAWING
JEDEC 3-11



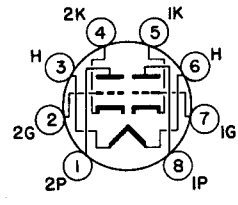
SUBMINIATURE BUTTON
8 FLEXIBLE LEADS
JEDEC E8-10

FOR
GUIDED MISSILE
SERVICE

COATED UNIPOTENTIAL CATHODE

ANY MOUNTING POSITION

BASING DIAGRAM
JEDEC 8DG



BOTTOM VIEW

THE 6947 IS A SUBMINIATURE GENERAL PURPOSE MEDIUM-MU TWIN 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 TEMPERATURE ARE ENCOUNTERED.

DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

GRID TO PLATE-EACH SECTION		1.2	pf
INPUT-EACH SECTION		1.6	pf
OUT			
SECTION 1		0.20	pf
SECTION 2		0.25	pf
GRID TO GRID	MAX.	0.013	pf
PLATE TO PLATE	MAX.	0.45	pf

HEATER CHARACTERISTICS AND RATINGS

ABSOLUTE MAXIMUM VALUES-SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	6.3 VOLTS	350	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

CONTINUED ON FOLLOWING PAGE

CONTINUED FROM PRECEDING PAGE

MAXIMUM RATINGS – EACH SECTION

ABSOLUTE MAXIMUM VALUES – SEE EIA STANDARD RS-239

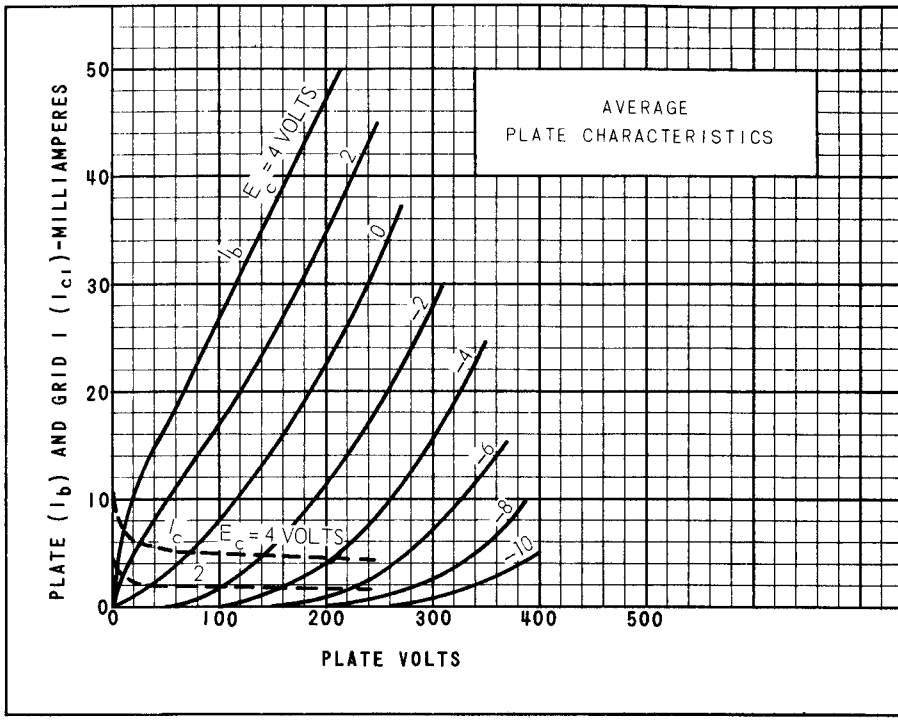
DC PLATE VOLTAGE	250	VOLTS
PEAK – PLATE FORWARD VOLTAGE	360	VOLTS
DC GRID VOLTAGE		
POSITIVE VALUE	0	VOLTS
NEGATIVE VALUE	55	VOLTS
PLATE DISSIPATION	0.75	WATTS
PLATE CURRENT	13	mA
GRID CIRCUIT RESISTANCE	1.0	MEGOHM
BULB TEMPERATURE	250	°C

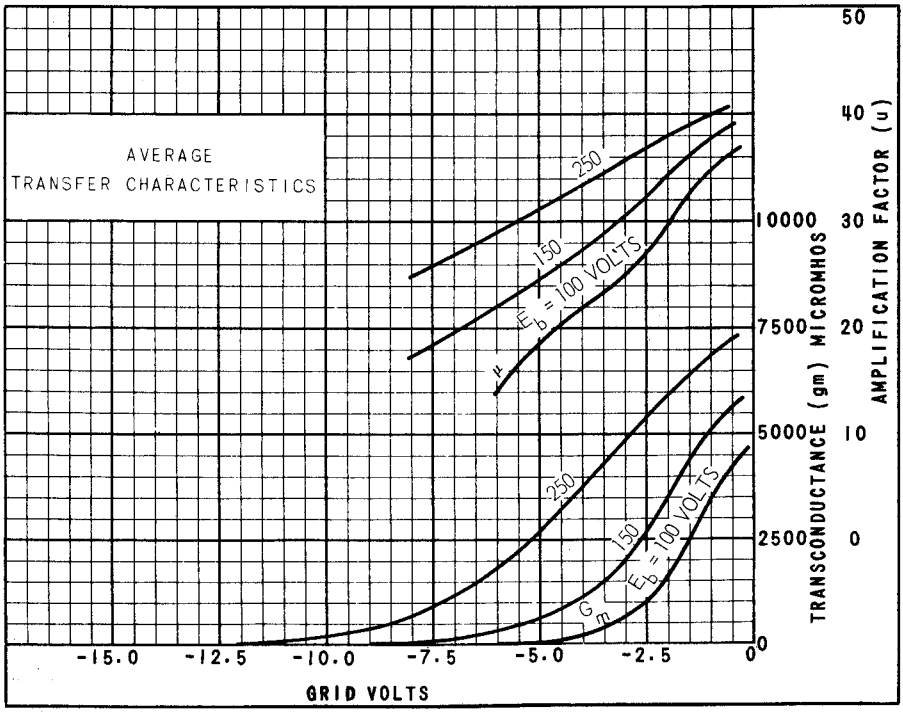
CHARACTERISTICS – EACH SECTION

DC PLATE VOLTAGE	150	VOLTS
CATHODE RESISTOR	270	OHMS
PLATE CURRENT	6.5	mA
AMPLIFICATION FACTOR	35	
TRANSCONDUCTANCE	4,000	μMHOS
GRID VOLTAGE FOR I_b = 50 μADC MAXIMUM	–9.0	VOLTS

SPECIAL TESTS AND RATINGS

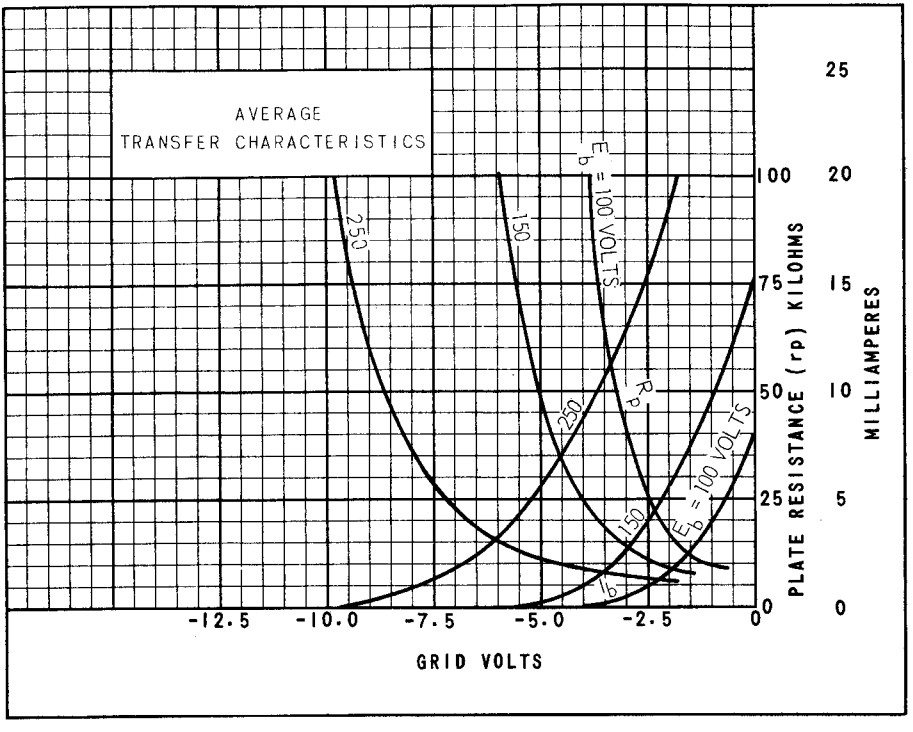
IMPACT ACCELERATION		
FATIGUE		
FAILURE RATE		
ALTITUDE – ABSOLUTE MAXIMUM	80,000	FT.
RADIATION – ABSOLUTE MAXIMUM		
TOTAL DOSAGE – NEUTRONS/SQ.CM	10^{16}	NVT
DOSE RATE – NEUTRONS/SQ. CM./SEC.	10^{12}	NV





TUNG-SOL ELECTRIC INC., ELECTRON TUBE DIVISION, BLOOMFIELD, NEW JERSEY, U.S.A., MARCH 1, 1965 PLATE #6626

6947


AVERAGE
TRANSFER CHARACTERISTICS
E_b = 100 VOLTS
250
150
R_p
I_b
E_b = 100 VOLTS
250
150
-12.5
-10.0
-7.5
-5.0
-2.5
0
GRID VOLTS
100
75
50
25
0
PLATE RESISTANCE (rp) KILOHMS
25
20
15
10
5
0
MILLIAMPERES