TUNG-SOL

PENTAGRID CONVERTER

COATED FILAMENT
1.4 VOLTS 0.05 AMPERE
DC

GLASS BULB

ANY MOUNTING POSITION

IA7G
SKIRTED MINIATURE
CAP

IA7GT
SKIRTED MINIATURE
CAP

BOTTOM VIEW
SMALL 8 PIN OCTAL
BASE

BOTTOM VIEW
SMALL WAFER 8 PIN OCTAL
BASE WITH METAL SHELL

THE IA7G AND IA7GT ARE FILAMENT TYPE PENTAGRID CONVERTERS DESIGNED FOR SERVICE AS COMBINED OSCILLATORS AND MIXERS IN PORTABLE BATTERY OPERATED EQUIPMENT. THEY FEATURE HIGH EFFICIENCY FILAMENTS AND PROVIDE REASONABLE CONVERSION GAINS WITH LOW BATTERY VOLTAGES AND LOW ELECTRON CURRENTS.

RATINGS

INTERPRETED ACCORDING TO MIL STANDARD MB-210

MAXIMUM PLATE VOLTAGE 110 VOLTS
MAXIMUM SCREEN (G3 AND G5) VOLTAGE 60 VOLTS
MAXIMUM SCREEN SUPPLY VOLTAGE 110 VOLTS
MAXIMUM ANODE-GRID (G2) VOLTAGE 110 VOLTS
MAXIMUM TOTAL ZERO-SIGNAL CATHODE CURRENT 4.0 MA.

CONTINUED ON NEXT PAGE
DIRECT INTERELECTRODE CAPACITANCES
WITH EXTERNAL SHIELD CONNECTED TO NEGATIVE FILAMENT TERMINAL

GRID #4 TO PLATE 0.5 MAX. μf
GRID #4 TO GRID #2 0.4 MAX. μf
GRID #4 TO GRID #1 0.2 MAX. μf
GRID #1 TO GRID #2 0.9 μf
GRID #4 TO ALL OTHER ELECTRODES (R-F INPUT) 7.0 μf
GRID #2 TO ALL OTHER ELECTRODES EXCEPT GRID #1 (OSCILLATOR OUTPUT) 4.4 μf
GRID #1 TO ALL OTHER ELECTRODES EXCEPT GRID #2 (OSCILLATOR INPUT) 3.4 μf
PLATE TO ALL OTHER ELECTRODES (MIXER OUTPUT) 10 μf

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS
CONVERTER SERVICE

PLATE VOLTAGE 90 VOLTS
SCREEN (G2 AND G5) VOLTAGE A 45 VOLTS
ANODE-GRID (G3) VOLTAGE 90 VOLTS
CONTROL-GRID (G4) VOLTAGE B 0 VOLTS
OSCILLATOR-GRID (G1) RESISTOR 200 000 OHMS
PLATE RESISTANCE 0.5 MEGOHM
CONVERSION TRANSCONDUCTANCE 250 μMHOUS
CONVERSION TRANSCONDUCTANCE WITH GRID #4 BIAS OF -3 VOLTS 5.0 APPROX. MHOUS
PLATE CURRENT 0.6 MA.
SCREEN (G3 AND G5) CURRENT 0.7 MA.
ANODE-GRID (G2) CURRENT 1.2 MA.
OSCILLATOR-GRID (G1) CURRENT 0.035 MA.
TOTAL CATHODE CURRENT 2.5 MA.

THE TRANSCONDUCTANCE OF THE OSCILLATOR PORTION (NOT OSCILLATING) IS 550 MEGOHMS UNDER THE FOLLOWING CONDITIONS: PLATE VOLTS, 90; SCREEN VOLTS, 45; CONTROL-GRID VOLTS, 0; ANODE-GRID VOLTS, 90; AND OSCILLATOR-GRID VOLTS, 0.

A OBTAINED PREFERABLY BY USING A PROPERLY BY-PASSED 45 000 TO 75 000 OHM VOLTAGE-DROPPING RESISTOR IN SERIES WITH THE 90 VOLT SUPPLY.

B A RESISTANCE OF AT LEAST 3.0 MEGOHM SHOULD BE USED IN THE GRID RETURN TO NEGATIVE FILAMENT PIN.