TUNG-SOL

HEPTODE PENTAGRID CONVERTER

PHYSICAL SPECIFICATIONS

EMITTER COATED UNIPOT. CATHODE	PIN CONNECTIONS	
BASE SMALL WAFER OCTAL 8-PIN	PIN 1 SHELL, GRID 5	PIN 7 HEATER
PHENOLIC	PIN 2 HEATER	PIN 8 SIGNAL GRID (G3)
BULB MT-8 METAL	PIN 3 PLATE	
MAXIMUM DIAMETER 1 5/16"	PIN 4 SCR. (G2 & G4)	MOUNTING POS. ANY
MAXIMUM OVERALL LENGTH 2 5/8"	PIN 5 OSC. GRID (G1)	
MAXIMUM SEATED HEIGHT 2 1/16"	PIN 6 CATHODE	

RATINGS

INTERPRETED ACCORDING TO RMA STANDARD NB-210

HEATER OR FILAMENT VOLTAGE (AC OR DC)	12.6	VOLTS
HEATER OR FILAMENT CURRENT	0.15	AMP.
MAXIMUM PLATE VOLTAGE	300	VOLTS
MAXIMUM SCREEN VOLTAGE	100	VOLTS
MAXIMUM SCREEN SUPPLY VOLTAGE	300	VOLTS
MAXIMUM PLATE DISSIPATION	1.0	WATT
MAXIMUM SCREEN DISSIPATION	1.0	WATT
MAXIMUM TOTAL PLATE AND SCREEN DISSIPATION		WATTS
MAXIMUM TOTAL CATHODE CURRENT	14	MA.
MINIMUM EXTERNAL SIGNAL GRID BIAS VOLTAGE[A]	0	VOLTS
MAXIMUM ANODE-GRID VOLTAGE		VOLTS
MAXIMUM ANODE-GRID SUPPLY VOLTAGE		VOLTS
MAXIMUM ANODE-GRID DISSIPATION		WATT

[A] WITH SELF-EXCITED OSCILLATOR

CAPACITANCES

SIGNAL GRID TO MIXER PLATE (G3 TO P)[B]	0.13	μμf (MAX.)
K TO ALL OTHER ELECTRODES EXCEPT G1	5.0	μμf
SIGNAL GRID TO OSC. GRID (G3 TO G1)[B]	0.15	μμf (MAX.)
OSC. GRID TO MIXER PLATE (G1 TO P)[B]	0.06	μμf (MAX.)
SIGNAL INPUT (G3 TO ALL OTHER ELECTRODES)[B]	9.5	μμf
OSC. INPUT (G1 TO ALL OTHER ELECTRODES)[B]	7.0	μμf
G1 TO ALL OTHER ELECTRODES EXCEPT K	4.4	μμf
MIXER OUTPUT (P TO ALL OTHER ELECTRODES)[B]	12	μμf
G1 TO K	2.6	μμf

[B] WITH SHIELD NO. 308 CONNECTED TO CATHODE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CONVERTER SERVICE - SEPARATE EXCITATION

CHARACTERISTICS SHOWN ARE OBTAINED IN THE STANDARD RMA CONVERSION TRANSCONDUCTANCE TEST SET AND CORRESPOND VERY CLOSELY TO THOSE OBTAINED WITH ZERO BIAS IN A SELF-EXCITED OSCILLATOR CIRCUIT.

HEATER OR FILAMENT VOLTAGE	12.6	12.6	12.6	VOLTS
HEATER OR FILAMENT CURRENT	0.15	0.15	0.15	AMP.
PLATE VOLTAGE	28	100	250	VOLTS
SCREEN VOLTAGE	28	100	100	VOLTS
SIGNAL GRID BIAS	-1	-2	-2	VOLTS
ANODE-GRID VOLTAGE	0	0	0	VOLTS
PLATE CURRENT	0.5	3.3	3.5	MA.
SCREEN CURRENT	1.8	8.5	8.5	MA.
ANODE-GRID CURRENT				MA.
OSCILLATOR-GRID CURRENT	0.1	0.5	0.5	MA.
TOTAL CATHODE CURRENT	2.4	12.3	12.5	MA.
OSCILLATOR-GRID RESISTOR	20 000	20 000	20 000	OHMS
PLATE RESISTANCE (APPROX.)	---	0.5	1.0	MEGOHM
CONVERSION TRANSCONDUCTANCE				
SIGNAL GRID BIAS = -1	250	---	---	μMHOS
SIGNAL GRID BIAS = -2	---	425	450	μMHOS
SIGNAL GRID BIAS = -6	8	310	325	μMHOS
SIGNAL GRID BIAS = -10	---	75	80	μMHOS
SIGNAL GRID BIAS = -35	---	2	2	μMHOS APPROX.

NOTE: WITH G2 & G4 CONNECTED TO PLATE (100 VOLTS), AND SIGNAL APPLIED TO G1 (0 VOLTS BIAS): THE TRANSCONDUCTANCE IS 4500 μMHOS, THE PLATE CURRENT IS 27 MA., AND THE AMPLIFICATION IS 13. G3 IS CONNECTED TO GROUND DURING THIS TEST.

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PLATE 1711

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