



7B8-LM

PENTAGRID CONVERTER Single-Ended Metal Type (TENTATIVE DATA)

HEATER VOLTAGE (A.C. or D.C.)	6.3 [□]	Volts
HEATER CURRENT	0.3 ^{□□}	Ampere
DIRECT INTERELECTRODE CAPACITANCES: [○]		
Grid #4 to Plate	0.3 max.	μf
Grid #4 to Grid #2	0.2	μf
Grid #4 to Grid #1	0.15	μf
Grid #1 to Grid #2	0.8	μf
Grid #4 to All Other Electrodes = R-F Input	10	μf
Grid #2 to All Other Electrodes except Grid #1 = Osc. Output	3	μf
Grid #1 to All Other Electrodes except Grid #2 = Osc. Input	4.8	μf
Plate to All Other Electrodes = Mixer Output	12	μf
MAXIMUM OVERALL LENGTH	2-5/8"	
MAXIMUM DIAMETER	1-1/4"	
BULB		
BASE		
BASING DESIGNATION		
	Metal Shell, MT-8	
	Small Wafer Octalox 8-Pin	
	8X	

- [□] Nominal value is 7 volts.
^{□□} Nominal value is 0.32 ampere.
[○] With shell connected to cathode.

Converter Service

PLATE VOLTAGE	250 max.*	Volts
SCREEN (Grids #3 & #5) VOLTAGE	100 max.*	Volts
ANODE-GRID (Grid #2) VOLTAGE	200 max.*	Volts
ANODE-GRID (Grid #2) VOLTAGE SUPPLY ^{○○}	250 max.*	Volts
TOTAL CATHODE CURRENT	14 max.*	Milliamperes
TYPICAL OPERATION:		
Heater Voltage #	6.3	Volts
Plate Voltage	100	Volts
Screen Voltage	50	Volts
Anode-Grid Voltage	100	Volts
Control-Grid Voltage	-1.5 min.*	Volts
Oscillator-Grid (Grid #1) Resistor	50000	Ohms
Plate Resistance (Approx.)	0.6	Megohm
Conversion Transconductance	360	Micromhos
Grid Bias (Grid #4) for Conversion		
Transconductance = 3 micromhos	-20	Volts
Grid Bias (Grid #4) for Conversion		
Transconductance = 6 micromhos	-	Volts
Plate Current	1.1	Milliamperes
Screen Current	1.3	Milliamperes
Anode-Grid Current	2	Milliamperes
Oscillator-Grid Current	0.25	Milliamperes

* Design value for 117-volt line.

^{○○} Anode-grid supply voltages in excess of 200 volts require the use of a 20000-ohm voltage-dropping resistor by-passed by 0.1 μf condenser.

● This is an Anode-Grid Supply voltage applied through 20000-ohm voltage-dropping resistor.

In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.

Pin Connections

Pin 1 - Heater	Pin 6 - Grid #4
Pin 2 - Plate	Pin 7 - Cathode
Pin 3 - Grid #2	Pin 8 - Heater
Pin 4 - Grid #1	Plug - Shell
Pin 5 - Grids #3 & #5	

(Pin numbers are according to RMA system)

Operating Position

Any