

BRIMAR

R. E. T. M. A.
REGISTRATION DATA

TYPE 6516 H.F. Pentode

DATE
ISSUED 24. 10. 1956.

This tube is a seven pin miniature indirectly heated R.F. power pentode designed for reliable operation under adverse conditions of shock and vibration. It is suitable for use as an A.F. power amplifier or a driven R.F. power amplifier up to 100 Mc/s. where a low heater dissipation is required. Electrically it is similar to the 6AM5.

Mechanical Data

Coated unipotential cathode	
Outline drawing.....	5 - 2 Bulb..... T - 5 $\frac{1}{2}$
Base.....	E7 - 1 Miniature Button 7 - pin
Maximum diameter.....	3/4"
Maximum overall length.....	2.1/8"
Maximum seated height.....	1.7/8"
Pin connections	Basing..... 6CH
Pin 1 Grid No.1	Pin 5 Plate
Pin 2 Cathode, grid No.3	Pin 6 No connection
Pin 3 Heater	Pin 7 Grid No.2
Pin 4 Heater	

Mounting position	any
Maximum shock (in intermittent service)	500g
Maximum vibration (continuous service)	2 $\frac{1}{2}$ g
Minimum mechanical resonance	100c/s

Electrical DataDirect Inter-electrode Capacitances - with a close fitting external shield

Grid to plate (g_1 to p) max.	0.344pF
Input: g_1 to ($h+k+g_2+g_3$)	4.2544pF
Output: p to ($h+k+g_2+g_3$)	6.544pF

Ratings Design Centre Values except where indicated.

Heater voltage (AC or DC)	6.3 volts
Maximum heater cathode voltage ³²	+150 volts
Maximum plate voltage ³²	300 volts
Maximum plate voltage ($I_p = 0$) ³²	550 volts
Maximum plate dissipation ³²	4.75watts
Maximum grid No.2 voltage ³²	275 volts
Maximum grid No.2 voltage ($I_{g_2} = 0$) ³²	550 volts
Maximum grid No.2 dissipation ³²	0.80watts
Maximum grid No.1 - grid No.2 voltage	300 volts DC
Maximum grid No.1 - cathode voltage	100 volts DC
Maximum mean grid No.1 current	3.3 mA
Maximum cathode current	23 mA

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R.E.T.M.A. REGISTRATION DATA (CONTINUED)

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Maximum grid No.1 - cathode resistance with cathode bias	680 K Ω .
Maximum grid No.1 - cathode resistance with fixed bias	220 K Ω .
Maximum operating frequency	100 Mc/s.
Maximum bulb temperature	180°C

(K = absolute ratings).

Typical Operating Conditions and Characteristics. Class A Amplifier

Heater Voltage.....	6.3 volts
Heater Current.....	0.2 amps
Plate Voltage	250 volts
Grid No.2 voltage.....	250 volts
Grid No.1 voltage.....	-13.5volts
Plate current.....	16 mA
Grid No.2 current.....	2.25mA
Plate resistance (approx.).....	0.15 Megohms
Transconductance.....	2550 μ hos
Optimum plate load.....	16,000 ohms
Power output.....	1.4 watts
Amplification factor (grid No.1 to grid No.2).....	12