

Ferranti

V.H.F. DOUBLE TRIODE

A variable-mu, low noise frame grid double triode with separate cathodes. Designed for use as a Cascode Amplifier.

PHYSICAL DETAILS.

Base	B9A—Noval
Max. Overall Length	56 mm (2 $\frac{1}{2}$ in.)
Max. Seated Height	49 mm (1 $\frac{1}{2}$ in.)
Max. Diameter	22.2 mm ($\frac{7}{8}$ in.)
Mounting Position	Any

BASE CONNECTIONS.

Pin 1—Anode Triode 2	Pin 5—Heater
Pin 2—Grid Triode 2	Pin 6—Anode Triode I
Pin 3—Cathode Triode 2	Pin 7—Grid Triode I
Pin 4—Heater	Pin 8—Cathode Triode I
	Pin 9—Shield

The triode on Pins 6, 7 and 8 should have grounded cathode connection and that on Pins 1, 2 and 3 should have grounded grid connection.

HEATER.

Heater Current	0.3 amp
Heater Voltage	7.6 volts

RATINGS. *

Max. Anode Supply Voltage	550 volts
Max. Anode Voltage	130 volts
Max. Anode Dissipation	1.8 watts
Max. Cathode Current	22 mA
Max. Neg. Grid Voltage	-50 volts
Max. $V_{h-k'}$	80 volts
Max. $V_{h-k''}$ (heater negative)	180 volts
Max. R_{h-k}	20 k Ω
Max. $R_{g'-k'}$	1.0 M Ω
Max. $R_{g''-k''}$	0.5 M Ω

CHARACTERISTICS.*

Anode Voltage	90 volts
Grid Voltage	-1.4 volts
Anode Current	15.0 mA
Amplification Factor	34
Mutual Conductance	12.5 mA/V
Anode Impedance	2.5 k Ω

To avoid exceeding the maximum anode voltage rating when the cascode amplifier is controlled, the grid of the grounded grid section must be connected to a voltage divider.

CAPACITANCES.

	With shield	Unshielded	
$C_{g'-a''}$	< .004	< .004	pF
$C_{a'-a''}$	< .015	< .045	pF

Grounded Cathode Section.

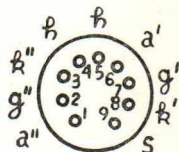
$C_{a'-g'}$	1.9	1.9	pF
$C_{g'-k'+h+s}$	3.5	3.5	pF
$C_{a'-k'+h+s}$	2.3	1.7	pF
$C_{g'-h}$	< 0.3	< 0.3	pF

Grounded Grid Section.

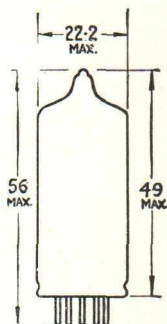
$C_{a''-g''}$	1.9	1.9	pF
$C_{a''-k''}$	0.17	0.18	pF
$C_{k''-g''+h+s}$	6.0	6.0	pF
$C_{a''-g''+h+s}$	4.0	3.4	pF
$C_{h-k''}$	3.0	3.0	pF

*Each section, unless otherwise indicated.

PCC189



Base
Connections
Underside View
of Base



Dimensions shown
are in millimetres

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TYPICAL CHARACTERISTICS

