

# N78



## N78 OUTPUT PENTODE

### DESCRIPTION

Type N78 is a high slope indirectly heated pentode mounted on the B7G miniature base, and is primarily intended for use as an audio power amplifier.

### RATINGS

Heater Voltage	...	...	...	...	...	6.3	volts
Heater Current	...	...	...	...	...	0.64	approx. amp
						<b>Pentode connected</b>	<b>Triode connected</b>
Anode Voltage	...	...	...	...	...	250	max. volts
Screen Voltage	...	...	...	...	...	250	max. volts
Anode Dissipation	...	...	...	...	...	9	max. watts
Screen Dissipation	...	...	...	...	...	3	max. watts
Peak Heater/Cathode Voltage	...	...	...	...	...	150	max. volts
Amplification Factor*	...	...	...	...	...	420	
Impedance*	...	...	...	...	...	40,000	ohms
Mutual Conductance*	...	...	...	...	...	10.5	mA/V

\* measured at  $V_a = V_{g_2} = 250$ ;  $V_{g_1} = -5$

### Capacitances :

Anode to All other Electrodes	...	...	...	...	...	10.5	approx. pF
Control Grid to All other Electrodes	...	...	...	...	...	11.5	" "
Anode to Control Grid	...	...	...	...	...	0.3	" "

### OPERATING CONDITIONS

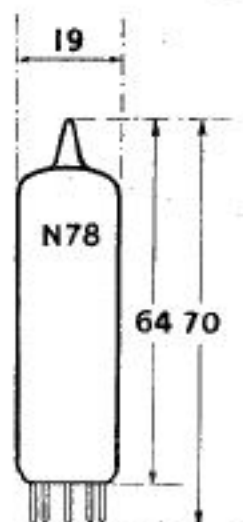
#### Single Valve, Class A, Pentode connection.

Anode Voltage	...	...	...	...	...	250	volts
Screen Voltage	...	...	...	...	...	250	volts
Control Grid Voltage	...	...	...	...	...	-5	approx. volts
Anode Current (no signal)	...	...	...	...	...	35	mA
Screen Current (no signal)	...	...	...	...	...	5.5	mA
Anode Load	...	...	...	...	...	7,000	ohms
Input Signal Voltage	...	...	...	...	...	5.0	peak volts
Power Output	...	...	...	...	...	4	watts
Distortion	...	...	...	...	...	9.2	%
Cathode Bias Resistor	...	...	...	...	...	120	ohms

The external grid circuit resistance should be kept as low as possible and should not exceed 250,000 ohms with auto bias or 100,000 ohms with fixed bias.

### DIMENSIONS

270K + 20%



### BASE

#### B7G

- Pin 1: Control Grid
- 2: Cathode and Suppressor
- 3: Heater
- 4: Heater
- 5: Anode
- 6: IC
- 7: Screen Grid



View looking on underside of base.

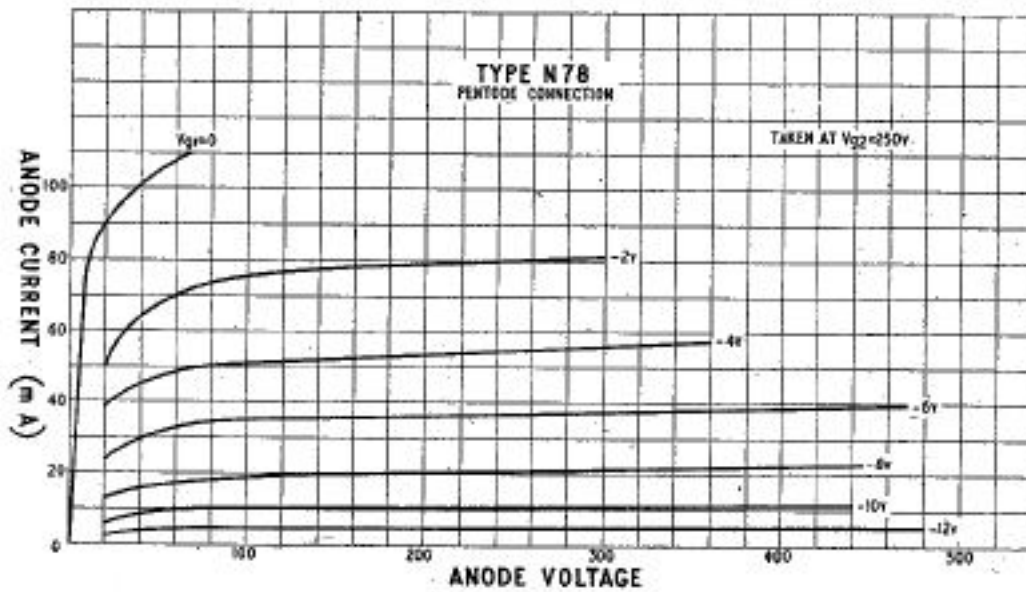
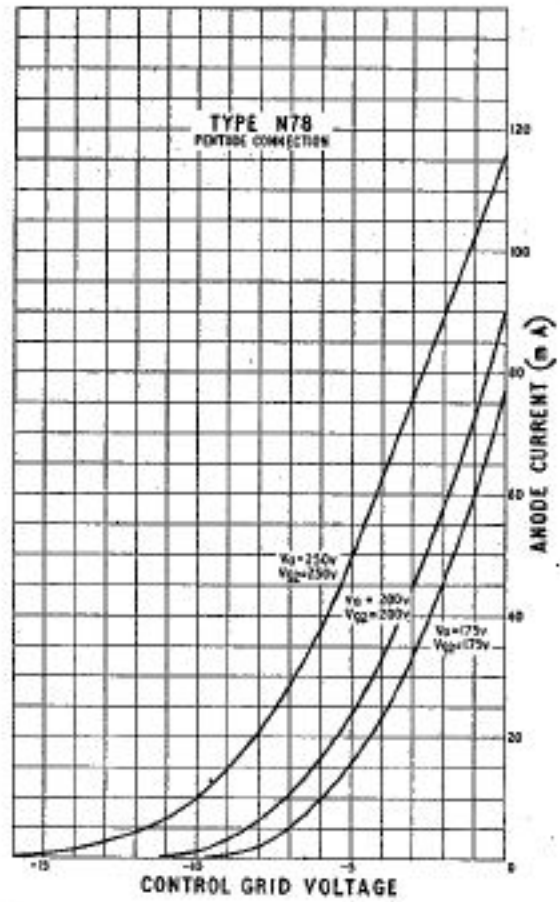
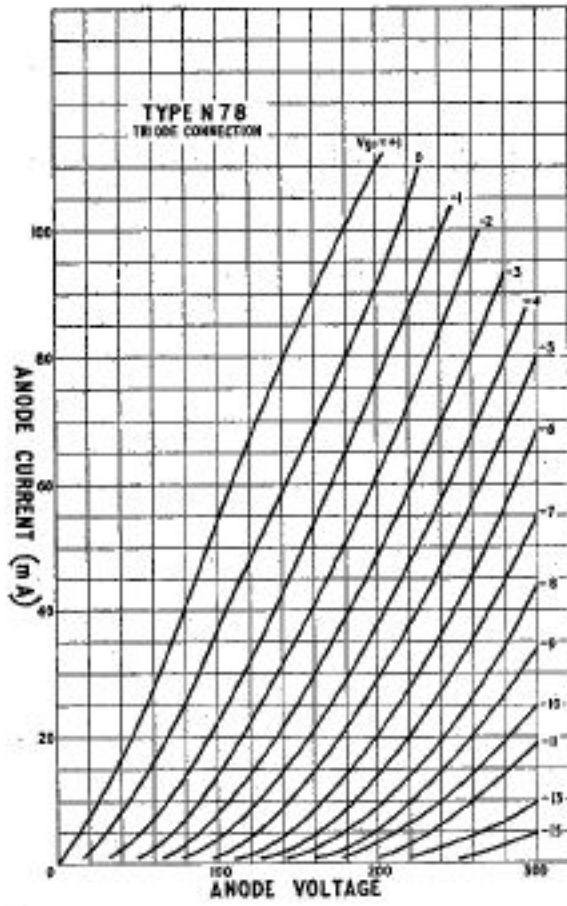
IC indicates that this pin must not be used for any external connection.

All dimensions are in mm. and are the maximum except where otherwise stated.

### VENTILATION

It is recommended that free air circulation be employed whenever possible. Where a retaining device in the form of a metal canister is employed the surfaces should be blackened.

# TYPE N78



CHARACTERISTIC CURVES OF AVERAGE VALVE.