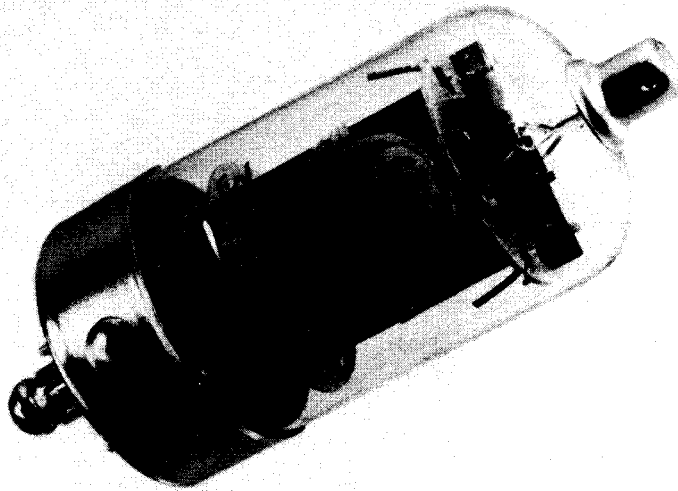




**3B/240M**



## GROUNDING-GRID TRIODE

### GENERAL INFORMATION

This valve has been designed for use mainly as a grounded-grid amplifier at frequencies up to 200 Mc/s. Another version is available with a heater rated at 19 volts, 0.37 amperes and is coded 3B/241M.

**CATHODE:** Indirectly-heated, oxide-coated.

**AIR FLOW:** If the plate dissipation is less than 15 watts, forced air cooling is not required. For a plate dissipation between 15 and 24 watts, 5 cu. ft. per minute is adequate if the moving air is confined to the proximity of the valve envelope, the lower 1-3/8 in. of which should be enclosed. The air jet should be introduced into this enclosure and the air stream allowed to escape up the side of the valve envelope around the circumference of a 1-3/8 in. dia. hole in the upper surface, through which the valve protrudes.  
Maximum bulb temperature 200°C.

**MOUNTING POSITION:** Vertical with base end downwards.

**WEIGHT:** 1.2 oz.      **BASE:** B8G.

### CHARACTERISTICS

Heater Voltage .. ..	6.3 volts	Grid-Cathode Capacity ..	14.5 pF	←
Heater Current .. ..	1.1 amperes	Plate-Cathode Capacity ..	0.15 pF	
Amplification Factor* ..	90	Plate-Grid Capacity ..	5.4 pF	←
Mutual Conductance* ..	27 mA/Volt			

\*At Plate Voltage = 300 volts; Grid Voltage = -1 volt.



# 3B/240M



## MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

The maximum frequency of operation for these ratings is 200 Mc/s.

### CLASS B AUDIO AMPLIFIER OR MODULATOR (Forced Air Cooling)

(Values are for one valve unless otherwise stated)

D.C. Plate Voltage	.. .. .	325 volts	max.
D.C. Plate Current	.. .. .	110 milliamperes	..
Plate Dissipation	.. .. .	24 watts	..
D.C. Grid Current	.. .. .	45 milliamperes	..
Grid Dissipation	.. .. .	0.6 watts	..

#### Typical Operation:

D.C. Plate Voltage	.. .. .	325 volts
D.C. Grid Voltage	.. .. .	-3 volts
D.C. Plate Current — Zero Signal	.. .. .	20 milliamperes
D.C. Plate Current — Max. Signal	.. .. .	110 milliamperes
Peak A.F. Grid-to-grid Voltage	.. .. .	22.5 volts
D.C. Grid Current	.. .. .	45 milliamperes
Load Resistance, Plate-to-plate	.. .. .	2500 ohms
Power Output (two valves)	.. .. .	37 watts

### CLASS C GROUNDED-GRID R.F. AMPLIFIER

Plate and Drive Subject to Modulation (Natural Cooling†)

(Carrier conditions per valve for use with modulation up to 100%)

D.C. Plate Voltage	.. .. .	275 volts	max.
D.C. Plate Current	.. .. .	80 milliamperes	..
Plate Dissipation	.. .. .	10 watts	..
D.C. Grid Current	.. .. .	35 milliamperes	..
Grid Dissipation	.. .. .	0.4 watts	..

#### Typical Operation:

D.C. Plate Voltage	.. .. .	275 volts
D.C. Grid Voltage	.. .. .	-9.5 volts
D.C. Plate Current	.. .. .	80 milliamperes
Peak R.F. Cathode Drive Voltage	.. .. .	20.5 volts
D.C. Grid Current*	.. .. .	35 milliamperes
Cathode Driving Power (approx.)	.. .. .	2.0 watts
Power Output	.. .. .	13 watts

### CLASS C GROUNDED-GRID R.F. AMPLIFIER

Plate and Drive Subject to Modulation (Forced Air Cooling)

(Carrier conditions per valve for use with modulation up to 100%)

D.C. Plate Voltage	.. .. .	300 volts	max.
D.C. Plate Current	.. .. .	90 milliamperes	..
Plate Dissipation	.. .. .	16 watts	..
D.C. Grid Current	.. .. .	35 milliamperes	..
Grid Dissipation	.. .. .	0.4 watts	..





# 3B/240M

### Maximum Ratings and Typical Operating Conditions (Cont'd.)

#### Typical Operation:

D.C. Plate Voltage	.. .. .	300 volts
D.C. Grid Voltage	.. .. .	-10 volts
D.C. Plate Current	.. .. .	90 milliamperes
Peak R.F. Cathode Drive Voltage	.. .. .	23 volts
D.C. Grid Current*	.. .. .	35 milliamperes
Cathode Drive Power (approx.)	.. .. .	2.5 watts
Power Output	.. .. .	16 watts

#### CLASS C GROUNDED-GRID R.F. AMPLIFIER, UN-MODULATED (Natural Cooling†)

D.C. Plate Voltage	.. .. .	300 volts	max.
D.C. Plate Current	.. .. .	90 milliamperes	..
Plate Dissipation	.. .. .	15 watts	..
D.C. Grid Current	.. .. .	40 milliamperes	..
Grid Dissipation	.. .. .	0.6 watts	..

#### Typical Operation:

D.C. Plate Voltage	.. .. .	300 volts
D.C. Grid Voltage	.. .. .	-10 volts
D.C. Plate Current	.. .. .	90 milliamperes
Peak R.F. Cathode Drive Voltage	.. .. .	23 volts
D.C. Grid Current*	.. .. .	35 milliamperes
Cathode Drive Power (approx.)	.. .. .	2.5 watts
Power Output	.. .. .	16 watts

#### CLASS C GROUNDED-GRID R.F. AMPLIFIER, UNMODULATED (Forced Air Cooling)

D.C. Plate Voltage	.. .. .	375 volts	max.
D.C. Plate Current	.. .. .	110 milliamperes	..
Plate Dissipation	.. .. .	24 watts	..
D.C. Grid Current	.. .. .	40 milliamperes	..
Grid Dissipation	.. .. .	0.6 watts	..

#### Typical Operation:

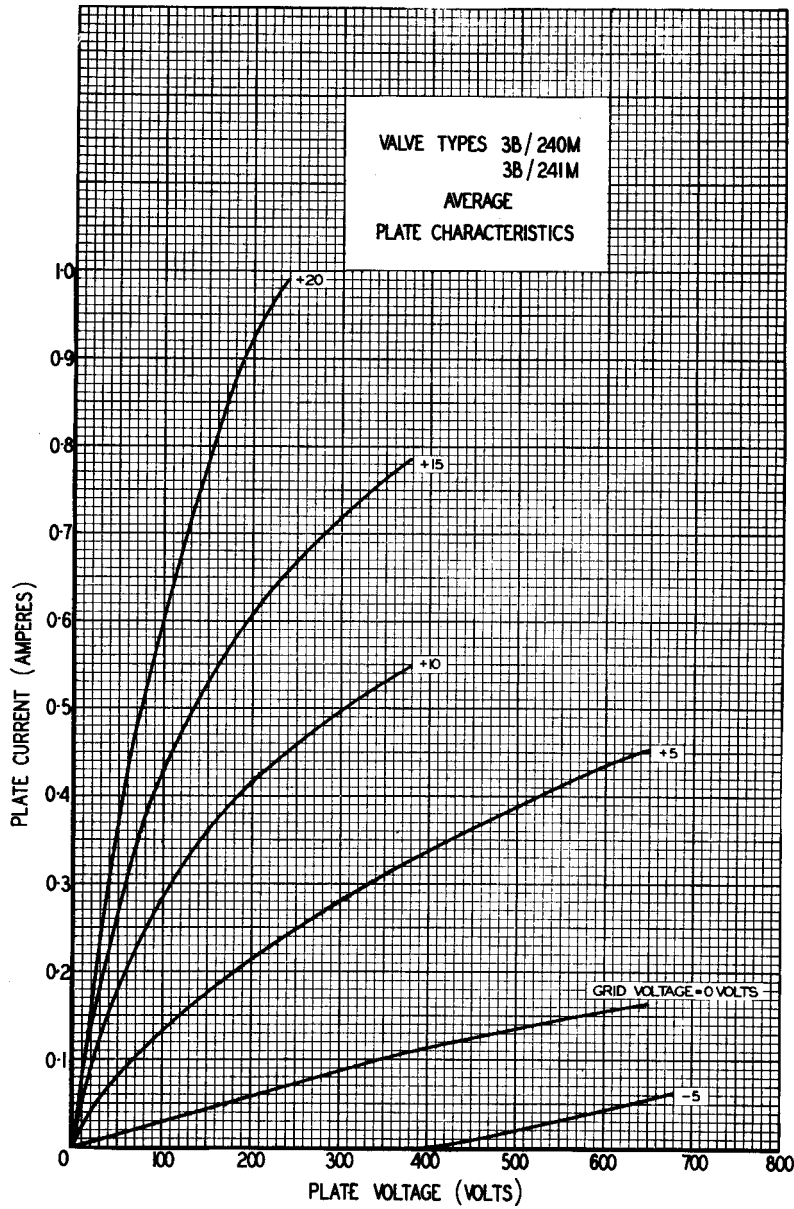
D.C. Plate Voltage	.. .. .	375 volts
D.C. Grid Voltage	.. .. .	-12 volts
D.C. Plate Current	.. .. .	110 milliamperes
Peak R.F. Cathode Drive Voltage	.. .. .	23 volts
D.C. Grid Current*	.. .. .	35 milliamperes
Cathode Drive Power (approx.)	.. .. .	3.0 watts
Power Output	.. .. .	24 watts

\* Subject to wide variation depending upon the impedance of the load circuit.

† Free circulation must be provided for valve operated under these conditions.



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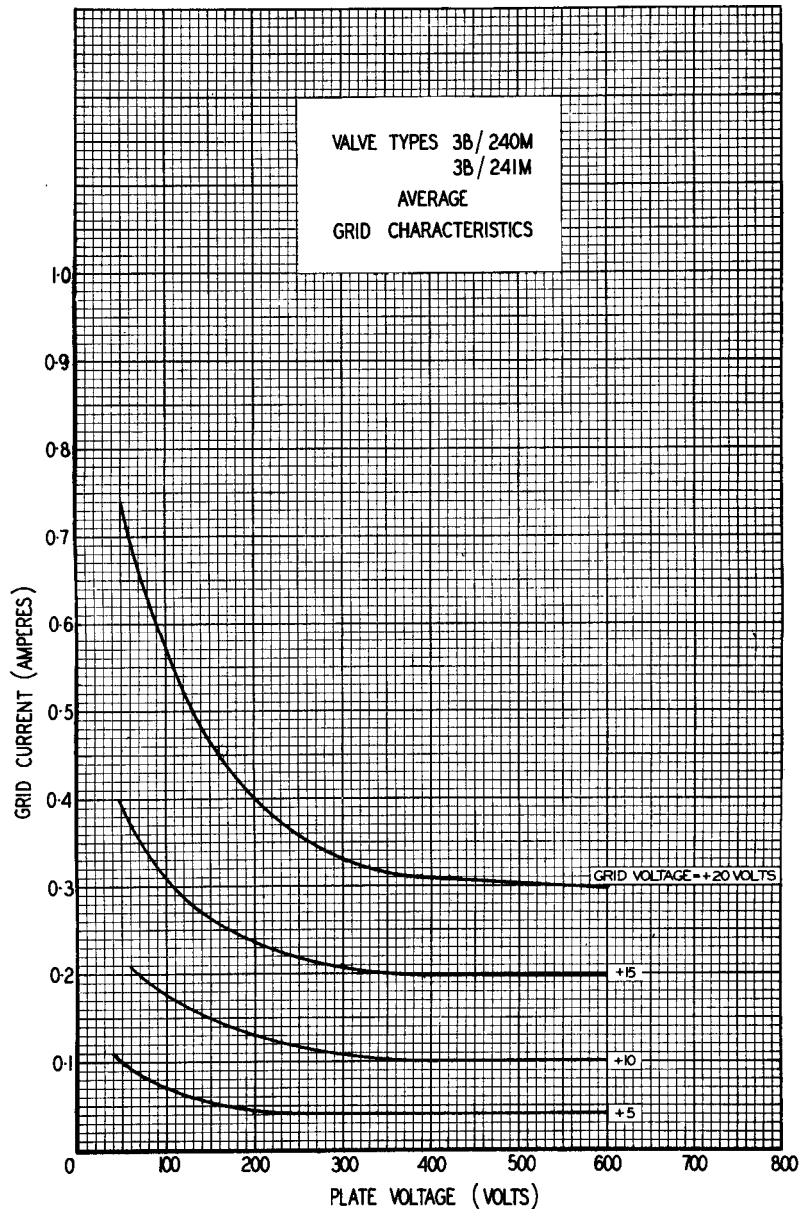
Standard Telephones and Cables Pty. Ltd.

SYDNEY

JUNE, 1954



3B/240M

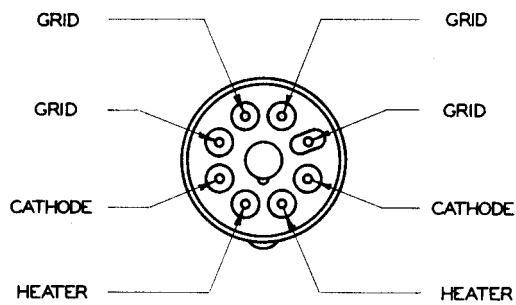
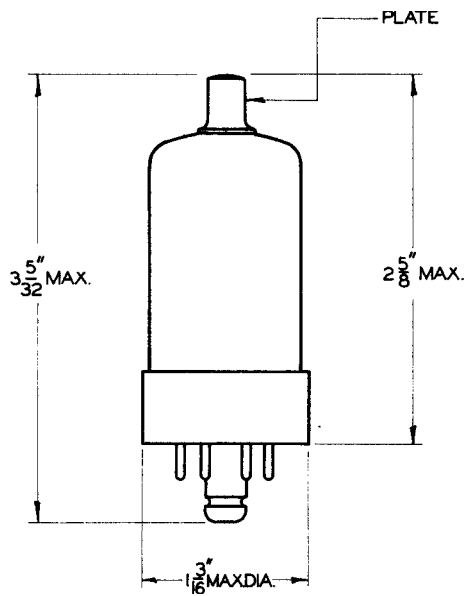


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Standard Telephones and Cables Pty. Ltd.

SYDNEY

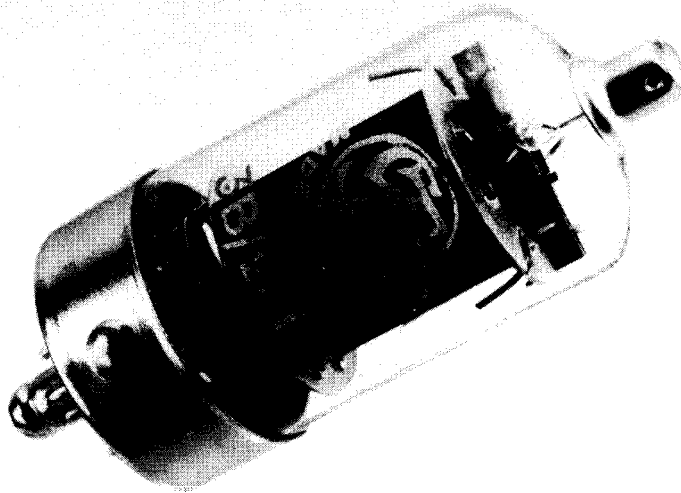
3B/240M



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ASSOCIATE



3B/241M



## GROUNDING-GRID TRIODE

### GENERAL INFORMATION

This valve has been designed for use mainly as a grounded-grid amplifier at frequencies up to 200 Mc/s. Another version is available with a heater rated at 6.3 volts, 1.1 amperes and is coded 3B/240M.

**CATHODE:** Indirectly-heated, oxide-coated.

**AIR FLOW:** If the plate dissipation is less than 15 watts, forced air cooling is not required. For a plate dissipation between 15 and 24 watts, 5 cu. ft. per minute is adequate if the moving air is confined to the proximity of the valve envelope, the lower 1-3/8 in. of which should be enclosed. The air jet should be introduced into this enclosure and the air stream allowed to escape up the side of the valve envelope around the circumference of a 1-3/8 in. dia. hole in the upper surface, through which the valve protrudes.

Maximum bulb temperature 200°C.

**MOUNTING POSITION:** Vertical with base end downwards.

**WEIGHT:** 1.2 oz.      **BASE:** B8G.

### CHARACTERISTICS

Heater Voltage .. .. 19 volts      Heater Current .. .. 0.37 amperes

For Maximum Ratings, Typical Operation and Characteristic Curves, refer to 3B/240M, which is electrically identical except for the heater rating.

