



ELECTRONIC TUBE REFERENCE

1W80

Specialized - Traveling Wave electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRAVELINGWAVE

Toshiba 1W80 high-power UHF traveling-wave tube for television broadcast and communications transmission, operating from 590 to 770 MHz with approximately 2 kW saturated RF output at 650 MHz.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6 V / 12.5 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 TravelingWave

No fixed ratings recorded.

Toshiba 1W80 traveling-wave amplifier, 590–770 MHz, periodic permanent-magnet focusing and forced-air cooling. Maximum collector voltage 4–7 kV DC, collector current 2.5 A DC, collector dissipation 14 kW; helix voltage 4–7 kV DC, helix current 75 mA DC, helix dissipation 400 W; accelerating electrode voltage 7 kV DC, current 10 mA DC; collector max 250 °C. Typical at 650 MHz: collector 5.6 kV/2.0 A, helix 5.6 kV/15 mA, accelerating electrode 4.3 kV/1.0 mA, RF drive 0.63 W, RF output 1.26 kW, gain 33 dB, small-signal gain 35 dB, saturated output 2.0 kW, airflow 17 m³/min. Heater 6.0 V/12.5 A DC, warm-up 300 s. No conventional plate/screen voltage scalar promoted because the electrode meanings differ.

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