



ELECTRONIC TUBE REFERENCE

CAT20

Power - Triode (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Very-high-power water-cooled Marconi transmitting triode for professional RF service. Approximately 75 kW plate dissipation and 20 kV plate capability support tens of kilowatts of Class C output in major HF transmitters.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	31.5 V / 230 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
TRANSCONDUCTANCE	0.024 S
AMPLIFICATION FACTOR	35
MAXIMUM PLATE VOLTAGE	20000 V
MAXIMUM PLATE DISSIPATION	75000 W
MAXIMUM GRID DISSIPATION	3000 W
MAXIMUM CATHODE CURRENT	30 A

Water-cooled transmitting triode for HF amplification and Class-B modulation.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1955 Marconi

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1955 MARCONI

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament Voltage	31.5 V	—
Filament Current	230 A	—
Amplification Factor	35	—
Transconductance	24000 μ S	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Anode Voltage	20000 V	—
Maximum Anode Dissipation	75000 W	—
Maximum Grid Dissipation	3000 W	—
Maximum/Peak Cathode Current	30 A	—
Frequency at Full Ratings	20 MHz	—
Typical RF Output Power	52 kW	Class C

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode-Grid Capacitance	40 pF	—
Anode-Cathode Capacitance	3 pF	—
Grid-Cathode Capacitance	54 pF	—

CONSTRUCTION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cooling	Water plus seal air	—