

GI-46B

TRIODE

The GI-46B triode generates and amplifies RF oscillations in continuous-wave and pulsed operation with anode modulation.

GENERAL

Cathode: indirectly heated, oxide-coated.

Envelope: metal-ceramic with ring leads of cathode, heater and grid.

Cooling: forced air.

Height: at most 113 mm with heat sink, 69 mm with no heat sink.

Diameter: at most 65 mm with heat sink, 55 mm with no heat sink.

Mass: at most 620 g with heat sink, 205 g with no heat sink.

OPERATING ENVIRONMENTAL CONDITIONS	
Vibration loads:	
frequencies, Hz	5-1,000
acceleration, m/s ²	98
Multiple impacts:	
acceleration, m/s ²	1,470
number of impacts	4,000
Ambient temperature, °C	-60 to +100
Relative humidity at +40 °C, %	95-98

BASIC DATA	
Electrical Parameters	
Heater voltage (AC or DC), V	12.6
Heater current, A	2.3-2.6
Anode voltage (DC), kV	2
Mutual conductance (at anode current 80 mA), mA/V	17-26
Inverse grid current (at anode current 80 mA), μA	40
Cathode emission current (at anode pulse voltage 400 V, pulse duration 2-5 μs, frequency 50 Hz, grid pulse voltage 400 V), A, at least	24
Penetration factor (at anode current 80 mA, anode voltage change 200 V), %	0.4-0.8
Output power in CW generation mode (at heater voltage 8.5 V, anode voltage 1.5 kV, anode current 350 mA, wavelength 29 cm), W, at least	120
Warm up time, s, at most	100
Interelectrode capacitance, pF:	
input	14.5-

	18.5
transfer	5.1-6.4

Limit Operating Values	
Heater voltage (AC or DC), V:	
maximum	13.9
minimum	7.7
Anode voltage (DC), kV	1.9
Peak anode voltage, kV	15
Dissipation, W:	
anode	350
grid	20
Anode current (DC component), mA	350
Peak anode current, A	15
Maximum 1/duty factor	500
Maximum pulse duration, μ s	15
Maximum resistance in grid circuit, kH	10
Temperature, °C:	
anode lead	200
grid lead	200
cathode lead	120

STANDARD OPERATING CONDITIONS	
CW Operation	
Heater voltage, V	7.65-9.35
Anode voltage, kV	1.5
Anode current, mA	350
Wavelength, cm	28
Output power, W:	
in self-excited oscillator mode	120
in amplifier mode	150

Pulsed Operation	
Heater voltage, V	12.6
Peak anode voltage, kV	10
Peak anode current, A	12
Pulse duration, μ s	10
Peak output power, kW	30
1/duty factor	1,000
Wavelength, cm	28
Air flow rate for envelope cooling, m ³ /h	24