ELECTRONIC TUBE REFERENCE

X400

Specialized - Traveling Wave electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
TRAVELINGWAVE

Backward-wave converter covering 8–12.7 GHz, combining amplifier and oscillator structures on one electron beam to produce a 480 MHz intermediate-frequency output.

General characteristics

BASE DESIGNATION	—	**BASE PINS**	—
NOMINAL HEATER	6.3 V / 1.9 A	**PARALLEL HEATER**	— / —
HEATING	Indirect	**SERIES OPERATION**	Not specified
CATHODE ARRANGEMENT	Separate cathodes	**SECTION CONSTRUCTION**	Similar

Section ratings

SECTION1 TravelingWave

No fixed ratings recorded.

Specialized microwave/image-intensifier device. Published beam, cathode, anode, helix, collector, RF, gain/noise, and optical ratings are preserved in TUBE_SECTION_PARAMETER rather than forced into unrelated promoted plate/screen fields.

Backward-wave converter tube covering 8000–12700 MHz, combining backward-wave amplifier and oscillator RF structures in one envelope with a common electron beam; 480 MHz IF.

SOURCE OPERATING CONDITIONS

1962 ITT

SOURCE PDF

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

1962 ITT

Section 1 · TravelingWave

CHARACTERISTIC		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Operating Frequency Range	**8000–12700 MHz**	—
Input Section Bandwidth	**25–127 MHz**	—
Noise Figure	**20 dB**	—
IF Output	**480 MHz**	—
Image Rejection	**35 dB**	—

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Conversion Gain	**0 dB**	—
Heater Voltage Maximum	**6.5 V**	—
Heater Current Maximum	**2 A**	—
Cathode Voltage Range	**-1500–-250 V**	—
Cathode Current Maximum	**8 mA**	—
Collector Voltage Maximum	**250 V**	—
Amplifier Helix Current Maximum	**0.5 mA**	—
Oscillator Helix Current Maximum	**0.3 mA**	—
Collector Current Maximum	**8 mA**	—
Typical RF Frequency	**10000 MHz**	—
Typical LO Frequency	**9520 MHz**	—
Typical Image Frequency	**9040 MHz**	—
Typical IF Frequency	**480 MHz**	—
Typical Heater Voltage	**6.3 V**	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Heater Current	**1.9 A**	—

Tube Tinker

An independent reference for electronic tubes, vacuum tubes, and their source documents.

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