ELECTRONIC TUBE REFERENCE

X394

Specialized - Traveling Wave electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
TRAVELINGWAVE

Backward-wave frequency converter covering approximately 2.54–4.05 GHz, combining amplifier and oscillator structures on a common electron beam to produce a 180 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 2540–4050 MHz, combining backward-wave amplifier and oscillator RF structures in one envelope with a common electron beam; 180 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	2540–4050 MHz	—
Input Section Bandwidth	10–40 MHz	—
Noise Figure	20 dB	—
IF Output	180 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	-1450–-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	3200 MHz	—
Typical LO Frequency	3020 MHz	—
Typical Image Frequency	2840 MHz	—
Typical IF Frequency	180 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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