ELECTRONIC TUBE REFERENCE

F2509

Specialized - Traveling Wave electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
TRAVELINGWAVE

Stable permanent-magnet-focused backward-wave oscillator for electronically tunable microwave generation in swept-signal, radar, ECM, frequency-diversity, or local-oscillator applications.

General characteristics

BASE DESIGNATION	–	BASE PINS	–
NOMINAL HEATER	6.3 V / 960 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

Section ratings

SECTION1 TravelingWave	
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM CATHODE CURRENT	15 mA

The F2509 is a highly stable, permanent-magnet-focused backward-wave oscillator for swept-signal, frequency-diversity transmitter, radar, and ECM local-oscillator applications.

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
Frequency Range	**2–4 GHz**	—
Power Output	**100–250 mW**	—
Minimum Output Power	**100 mW**	—
Heater Voltage	**6.3 V**	—
Heater Current Typical	**960 mA**	—
Spurious Output Below Signal Minimum	**40 dB**	—

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Current Maximum	**1.2 A**	—
Anode Voltage Maximum	**250 V**	—
Anode Current Maximum	**1 mA**	—
Cathode Current Maximum	**15 mA**	—
Helix Current Maximum	**3 mA**	—
Collector Voltage Maximum	**150 V**	With respect to helix

CAPACITANCE

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode-to-All-Electrodes Capacitance Maximum	**50 pF**	—
Grid-to-All-Electrodes Capacitance Maximum	**45 pF**	—
Helix-to-All-Other-Electrodes-and-Capsule Capacitance Maximum	**300 pF**	—