ELECTRONIC TUBE REFERENCE

CMA1257

Specialized - Traveling Wave electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
TRAVELINGWAVE

Compact liquid-cooled M-type Carcinotron covering 7.2–8.7 GHz, electronically tunable with integral permanent-magnet focusing and at least 160 watts RF output.

General characteristics

BASE DESIGNATION	—	**BASE PINS**	—
NOMINAL HEATER	6.3 V / 2.25 A	**PARALLEL HEATER**	— / —
HEATING	Indirect	**SERIES OPERATION**	Not specified
CATHODE ARRANGEMENT	Separate cathodes	**SECTION CONSTRUCTION**	Similar

Section ratings

SECTION1 TravelingWave

MAXIMUM CATHODE CURRENT	300 mA

Crossed-field backward-wave oscillator section. Fixed schema has no line/sole/beam-voltage promoted fields; line current is stored in MaxCathodeCurrent as the published electron-stream current, with complete specialized values in parameters.

The Thomson-CSF CMA1257 is a rugged, compact M-type Carcinotron: an electronically tunable cross-field backward-wave oscillator with integral permanent-magnet focusing, liquid cooling, and at least 160 W output over 7.20–8.70 GHz.

SOURCE OPERATING CONDITIONS

1972 Thomson CSF

SOURCE PDF

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

1972 THOMSON CSF

Section 1 · TravelingWave

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6.3 V	—
Heater current	1.5 A–3 A	—
Frequency range	7.2–8.7 GHz	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Minimum RF output power	160 W	Frequency=7.2-8.7GHz
Warm-up time minimum	3 min	—
Typical heater current	1.7 A	—
Typical sole voltage	-1.2 kV	—
Typical anode voltage, low-frequency end	1.36 kV	—
Typical anode voltage, high-frequency end	1.34 kV	—
Typical line voltage, low-frequency end	2.7 kV	—
Typical line voltage, high-frequency end	4.26 kV	—
Typical line current	300 mA	—
Typical RF output power, low-frequency end	205 W	—
Typical RF output power, high-frequency end	235 W	—
Heater voltage limit minimum	6 V	—
Heater voltage limit maximum	6.6 V	—

CAPACITANCE		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Sole-to-all-other-electrodes capacitance maximum	**35 pF**	—
Anode-to-all-other-electrodes capacitance maximum	**10 pF**	—
Line-to-all-other-electrodes capacitance maximum	**35 pF**	—

Tube Tinker

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