ELECTRONIC TUBE REFERENCE

CMA1247

Specialized - Traveling Wave electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
TRAVELINGWAVE

Liquid-cooled M-type Carcinotron backward-wave oscillator, electronically tunable across 3.20–4.10 GHz and delivering at least 500 watts.

General characteristics

BASE DESIGNATION	—	**BASE PINS**	—
NOMINAL HEATER	6.3 V / 3.75 A	**PARALLEL HEATER**	— / —
HEATING	Indirect	**SERIES OPERATION**	Not specified
CATHODE ARRANGEMENT	Separate cathodes	**SECTION CONSTRUCTION**	Similar

Section ratings

SECTION1 TravelingWave

MAXIMUM CATHODE CURRENT	600 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 CMA1247 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 500 W output over 3.20–4.10 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	**2 A–5.5 A**	—
Frequency range	**3.2–4.1 GHz**	—

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Minimum RF output power	**500 W**	Frequency=3.2-4.1GHz
Warm-up time minimum	**3 min**	—
Typical heater current	**3.3 A**	—
Typical sole voltage	**-1.1 kV**	—
Typical anode voltage, low-frequency end	**1.49 kV**	—
Typical anode voltage, high-frequency end	**1.5 kV**	—
Typical line voltage, low-frequency end	**3.3 kV**	—
Typical line voltage, high-frequency end	**5.8 kV**	—
Typical line current	**600 mA**	—
Typical RF output power, low-frequency end	**650 W**	—
Typical RF output power, high-frequency end	**1000 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	**90 pF**	—
Anode-to-all-other-electrodes capacitance maximum	**20 pF**	—
Line-to-all-other-electrodes capacitance maximum	**100 pF**	—

Tube Tinker

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

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