

ELECTRONIC TUBE REFERENCE

CO10

Specialized - Microwave Tube electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
MICROWAVE

Water-cooled millimeter-wave Carcinotron backward-wave oscillator electronically tunable around 285-305 GHz with permanent-magnet focusing and milliwatt-level output.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	-6 V / 2.1 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Microwave	
MAXIMUM PLATE VOLTAGE	3000 V
MAXIMUM CATHODE CURRENT	80 mA
Backward-wave oscillator electron-stream section; line/Wehnelt values have no direct fixed promoted fields.	

Water-cooled carcinotron backward-wave oscillator centered near 300 GHz with electronic tuning.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1958 Compagnie General

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

1958 COMPAGNIE GENERAL

Section 1 · Microwave

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
CenterFrequency	300 GHz	—
RelativeOscillationBandwidthMinimum	7 %	—
RelativeOscillationBandwidthMaximum	10 %	—
AverageCWPow	5 mW	—

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1972 Thomson CSF

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

1972 THOMSON CSF

Section 1 · Microwave

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Frequency range minimum	285 GHz	—
Frequency range maximum	305 GHz	—
Heater current minimum	1.8 A	—
Heater current maximum	2.4 A	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Minimum RF output power	10 mW	Frequency=285-305GHz

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak-point RF output power minimum	60 mW	Frequency=290-310GHz;AtLeastOnePoint
Warm-up time minimum	4 min	—
Maximum heater surge current	25 A	—
Maximum anode voltage	3000 V	—
Maximum anode current	10 mA	—
Maximum line voltage	7000 V	—
Maximum line current	80 mA	—
Maximum Wehnelt current	5 mA	—
Typical line current	60 mA	—
Typical heater voltage	-7.5 V	—
Typical heater current	2.1 A	—
Typical Wehnelt voltage	-50 V	—