

ELECTRONIC TUBE REFERENCE

MCV1479

Specialized - Magnetron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
MAGNETRON

Mechanically or frequency-tunable high-power pulsed magnetron designed for radar and related microwave service across its specified tuning range.

GENERAL CHARACTERISTICS

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

SECTION RATINGS

SECTION1 Magnetron
No fixed ratings recorded.
Published electrical data audited and retained in parameter table.

The MCV1479 is a liquid-cooled coaxial magnetron for high-power microwave service, incorporating integral magnetic focusing and offering improved performance compared with conventional magnetrons.

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 · Magnetron

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
output power of at least	200 kW	output power of at least 200 kW over the frequency range
The MCV	1479	The MCV.1479 is ideal for frequency adjustable
Frequencyttt [1]	8.5 GHz	Frequencyttt 8.5 - 9.6 GHz
Frequencyttt [2]	9.6 GHz	Frequencyttt 8.5 - 9.6 GHz
Heater voltage (warm-up)	9 V	Heater voltage (warm-up) - 9 - Vv
Heatercurrent (for VF=	9 A	Heatercurrent (for VF=9 V)
Peak RFoutputpowerc0o0	200 kW	Peak RFoutputpowerc0o0.... 200 - - kW
Averageanodecurrent	27.5 A	Averageanodecurrent, - 27.5 - mA
Peak anodevoltage [1]	20 V	Peak anodevoltage 20 - 24 kV
Peak anodevoltage [2]	24 V	Peak anodevoltage 20 - 24 kV
Stability, missingpulses{ [1]	1	Stability, missingpulses{1) - - 1 %
Stability, missingpulses{ [2]	1	Stability, missingpulses{1) - - 1 %
Temperature coefficient	0.25 MHz	Temperature coefficient - 0.25 MHz/°C
Warm-up voltagettt anannan [1]	8 V	Warm-up voltagettt anannan 8 15 \'
Warm-up voltagettt anannan [2]	15 V	Warm-up voltagettt anannan 8 15 \'

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater surge CUFTBNT oo v v vt i i ot e i i s e s iaann e e	15	Heater surge CUFTBNT oo v v vt i i ot e i i s e s iaann e e - 15 A
Peak anode CUMTEBNT . v v v v v it vt e v e e e it e [1]	17	Peak anode CUMTEBNT . v v v v v it vt e v e e e it e 17 30 A
Peak anode CUMTEBNT . v v v v v it vt e v e e e it e [2]	30	Peak anode CUMTEBNT . v v v v v it vt e v e e e it e 17 30 A
Peak anode POWERt e e	660 kW	Peak anode POWERt e e . 660 kW
RF output pressurization ([1]	1	RF output pressurization (1) i, - 3.0 bar
RF output pressurization ([2]	3	RF output pressurization (1) i, - 3.0 bar
Anode temperature ([1]	2	Anode temperature (2) vviee e e e —40 +125 °C
Anode temperature ([2]	-40	Anode temperature (2) vviee e e e —40 +125 °C
Anode temperature ([3]	125	Anode temperature (2) vviee e e e —40 +125 °C
Cathode connection temperature ([1]	2	Cathode connection temperature (2} —40 +165 °C
Cathode connection temperature ([2]	-40	Cathode connection temperature (2} —40 +165 °C
Cathode connection temperature ([3]	165	Cathode connection temperature (2} —40 +165 °C
Pulse duration . . .o vttt it e e e e	2.5	Pulse duration . . .o vttt it e e e e - 2.5 us
(frequency	9 GHz	(frequency 9 GHz)
Pulse duration . . i v vttt et e et e	0.5	Pulse duration . . i v vttt et e et e 0.5 us
Peak anode voltaget	22 V	Peak anode voltaget 22 kV
Peak anode current i ittt ii i e	27.5 A	Peak anode current i ittt ii i e 27.5 A
Heatervoltage ittt nneanennnnnon	0 V	Heatervoltage ittt nneanennnnnon 0 \
Peak RF powerttt iininnrinnensanas	225 kW	Peak RF powerttt iininnrinnensanas 225 kW

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
The heater should be protected against arcing by a capacitor of at least	0.004 pF	The heater should be protected against arcing by a capacitor of at least 0.004 uF, connected in parallel on
The MCV	1479	The MCV.1479 magnetron may be operated without breakdown in output at normal atmospheric pressure
peak output power less than	100 kW	- peak output power less than 100 kW.
Cathode (;Ufpuf A ' _ [1]	38	Cathode (;Ufpuf A ' _38.)—1
Cathode (;Ufpuf A ' _ [2]	-1	Cathode (;Ufpuf A ' _38.)—1

TUBE TINKER

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