

ELECTRONIC TUBE REFERENCE

TH580

Power - Tetrode (NOT beam) (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TETRODE

Coaxial power tetrode designed for oscillator and RF power-amplifier service, including Class-C telegraphy applications in professional transmitters.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	12 V / 330 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Tetrode	
TRANSCONDUCTANCE	0.06 S
AMPLIFICATION FACTOR	3
MAXIMUM PLATE VOLTAGE	11300 V
MAXIMUM PLATE DISSIPATION	100000 W
Published ratings/characteristics audited; detailed numeric data retained in parameter table.	

The TH580 is a coaxial power tetrode for oscillator and radio-frequency power-amplifier service, including class-C telegraphy applications.

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 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
to dissipate	100 kW	to dissipate 100 kW. This power can be transfered to a
secondary circuit at a temperature of about	100	secondary circuit at a temperature of about 100 °C,
Heatervoltage cciiivivenennnn, [1]	12 V	Heatervoltage cciiivivenennnn, 12.0 +2% V
Heatervoltage cciiivivenennnn, [2]	2 V	Heatervoltage cciiivivenennnn, 12.0 +2% V
Heater current,average c [1]	0 mA	Heater current,average c.00... . 330 A
Heater current,average c [2]	330 A	Heater current,average c.00... . 330 A
Surge current, maximum	1000 A	Surge current, maximum 1000 A
Input, cathodegrounded	460	Input, cathodegrounded 460 pF
Output, cathodegrounded	60	Output, cathodegrounded 60 pF
Input,glgrounded	190	Input,glgrounded 190 pF
Output,glgrounded	60	Output,glgrounded 60 pF
Transconductance (for [1])	5 A	Transconductance (for 5 A anode current) 60 mA/V
Transconductance (for [2])	60 A	Transconductance (for 5 A anode current) 60 mA/V
Envelope and terminals maximum temperature	200	Envelope and terminals maximum temperature . .. 200 °c
R.F. Connector (Filament - Cathode - grid g1 - grid g2 SE	34556	R.F. Connector (Filament - Cathode - grid g1 - grid g2 SE 34556

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DCanodevoltage coevunonero	12 V	DCanodevoltage coevunonero 12
DCgridn° [1]	2 V	DCgridn°2Voltage cooevennnnn- 1500
DCgridn° [2]	1500 V	DCgridn°2Voltage cooevennnnn- 1500
Gridbiasvoltage	-1000 V	Gridbiasvoltage —1000
Peak cathodecurrent [1]	0 mA	Peak cathodecurrent 0o 90
Peak cathodecurrent [2]	90 A	Peak cathodecurrent 0o 90
Anode dissipation i	100 W	Anode dissipation i 100
Grid n®	2 W	Grid n® 2 dissipation i.
Gridn° [1]	1 W	Gridn° 1dissipation ciiineaenn 700
Gridn° [2]	700 W	Gridn° 1dissipation ciiineaenn 700
FreqUenCY vovoennvonnnstannssns	100	FreqUenCY vovoennvonnnstannssns 100
DC anode voltage e	11.3 V	DC anode voltage e 11.3
DCgrid n® [1]	2 V	DCgrid n® 2 voltage onnvornnnns 740
DCgrid n® [2]	740 V	DCgrid n® 2 voltage onnvornnnns 740
Gridbiasvoltage c.ccevinnnnn	-470 V	Gridbiasvoltage c.ccevinnnnn —470
RF grid.n° Toltage covevcennennonn	610 V	RF grid.n° Toltage covevcennennonn 610
DCanodecurrent couvrrvneeencens	11.3 A	DCanodecurrent couvrrvneeencens 11.3
DC grid n° [1]	2 A	DC grid n° 2 current, approximate 1.6
DC grid n° [2]	1.6 A	DC grid n° 2 current, approximate 1.6
DC grid n° [1]	1 A	DC grid n° 1 current, approximate 0.5
DC grid n° [2]	500 mA	DC grid n° 1 current, approximate 0.5
DCanodevoltage cvoriesinennenn	12 V	DCanodevoltage cvoriesinennenn 12
Peak cathodecurrent cccnenn	90 A	Peak cathodecurrent cccnenn 90
Grid n°	2 W	Grid n° 2dissipation s
Grid n°	1 W	Grid n° 1 dissipation
DCgridn® [1]	2 V	DCgridn®2voltage ocuoecnenn. 780

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DCgridn® [2]	780 V	DCgridn® 2voltage ocuoecnnnn. 780
RFgridn° [1]	1 V	RFgridn° 1voltage c.-. R +400
RFgridn° [2]	400 V	RFgridn° 1voltage c.-. R +400
DC grid n°	2 A	DC grid n° 2 current, approximate
Published value	2	2 - Grid bias
Published value	3 V	3 - Anode voltage
Published value	4 V	4- Screen voltage
Published value [1]	1 A	1 -Overcurrents due to improper utilisation condition : The protection can be achieved by 3 relays in series,
Published value [2]	3 A	1 -Overcurrents due to improper utilisation condition : The protection can be achieved by 3 relays in series,
to [1]	1 A	to 1. 5 max. is attained, max. being the normal current used in the considered operating conditions. When
to [2]	5 A	to 1. 5 max. is attained, max. being the normal current used in the considered operating conditions. When
Published value [1]	2 A	2 - Overcurrent due to stray oscillations or electrode arcing : The protection can be made by the use of 3 ' rapid
Published value [2]	3 A	2 - Overcurrent due to stray oscillations or electrode arcing : The protection can be made by the use of 3 ' rapid
cut-off security devices (grid, screen, anode) acting for a current equal to	5 A	cut-off security devices (grid, screen, anode) acting for a current equal to 5 max, max. being the normal
current used in the considered operating conditions, Each of these [1]	3 A	current used in the considered operating conditions, Each of these 3 systems, acting on the 2 others should
current used in the considered operating conditions, Each of these [2]	2 A	current used in the considered operating conditions, Each of these 3 systems, acting on the 2 others should
Published value	186	186 Grid G2