

ELECTRONIC TUBE REFERENCE

LD590

Specialized - Traveling Wave electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TRAVELINGWAVE

3.6-4.2 GHz traveling-wave amplifier providing about 28 dB small-signal gain and approximately 3 watts saturated RF output.

GENERAL CHARACTERISTICS

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

SECTION RATINGS

SECTION1 TravelingWave
No fixed ratings recorded.
Published maximum ratings and characteristics audited; remaining numeric data retained densely in parameter table.

The LD590 is a low-noise traveling-wave tube covering approximately 3.6 to 4.2 GHz for microwave amplification, with natural cooling and milliwatt-level saturated output.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 NEC

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

1971 NEC

Section 1 · TravelingWave

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
frequency range [1]	3600 MHz	frequency range 3,600 to 4,200 Mc/s. The nominal noise figure is 6.5db
frequency range [2]	4200 MHz	frequency range 3,600 to 4,200 Mc/s. The nominal noise figure is 6.5db
frequency range [3]	6.5 MHz	frequency range 3,600 to 4,200 Mc/s. The nominal noise figure is 6.5db
and the nominal gain at small signal level is	28	and the nominal gain at small signal level is 28db with a typical saturat-
ed power output of	3 W	ed power output of 3mW.
Frequency RENEE eevesvcevecsrececseccionssss [1]	3600	Frequency RENEE eevesvcevecsrececseccionssss 3,600 to 4,200 Me/s
Frequency RENEE eevesvcevecsrececseccionssss [2]	4200	Frequency RENEE eevesvcevecsrececseccionssss 3,600 to 4,200 Me/s
Small Signal Gain PP s [1]	0	Small Signal Gain PP s 00 Pt PO PO RORISOIEDS 25db Min.
Small Signal Gain PP s [2]	25	Small Signal Gain PP s 00 Pt PO PO RORISOIEDS 25db Min.
Heater Voltage ceerecsssnscccecscoassanc	6 V	Heater Voltage ceerecsssnscccecscoassanc 6.0 v
Heater Current .cveveceacocoecoencoconcs	454	Heater Current .cveveceacocoecoencoconcs 0,454
Grid Voltage seevesesococssssoocacrasoncas	0 V	Grid Voltage seevesesococssssoocacrasoncas 0V
Anode [1]	1 V	Anode 1 Voltage seeeeeccvenscvsocnssnnns 20 v
Anode [2]	20 V	Anode 1 Voltage seeeeeccvenscvsocnssnnns 20 v

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode [1]	3	Anode 3 Voltage 380 v
Anode [2]	380	Anode 3 Voltage 380 v
Anode [1]	1 A	Anode 1, 2 & 3 Currents 0 wA
Anode [2]	2 A	Anode 1, 2 & 3 Currents 0 wA
Anode [3]	3 A	Anode 1, 2 & 3 Currents 0 wA
Anode [4]	0 mA	Anode 1, 2 & 3 Currents 0 wA
Helix Voltage G PP ORIt sseRs s be	540 V	Helix Voltage G PP ORIt sseRs s be 540 v
Helix Current	2900000 A	Helix Current 2900000 s0 PRIt RROePR O
Collector Voltage et N [1]	0 V	Collector Voltage et N OP Psssen s 0t 800 v
Collector Voltage et N [2]	0 V	Collector Voltage et N OP Psssen s 0t 800 v
Collector Voltage et N [3]	800 V	Collector Voltage et N OP Psssen s 0t 800 v
Coliector Current .iseeee sovcosococenes	200 A	Coliector Current .iseeee sovcosococenes 200 na
Small Slgnal Gain eseqetcevsecvssnnressae	28	Small Signal Gain eseqetcevsecvssnnressae 28 db
Saturated Power Output seeevveecsensecses	3 W	Saturated Power Output seeevveecsensecses 3 MW
Published value [1]	2	2 ANODE 3 _ < *
Published value [2]	3	2 ANODE 3 _ < *
ANODE [1]	2	ANODE 2 == 3I5DIA. MAX :&
ANODE [2]	3	ANODE 2 == 3I5DIA. MAX :&
Published value	5	5 ANODE -
Published value	6	6 GRID
Published value	7	7 HEATER % CATHODE BI
Published value	8	8 HEATER \)

TUBE TINKER

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

