

ELECTRONIC TUBE REFERENCE

LD550B

Specialized - Traveling Wave electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
TRAVELINGWAVE

Traveling-wave power amplifier for roughly 7.2-8.5 GHz service, providing about 10 watts typical saturated output and high small-signal gain.

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

The LD550B is a continuous-wave traveling-wave amplifier covering approximately 7.2 to 8.5 GHz, using depressed-collector operation for improved efficiency in microwave systems.

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]	7.2	frequency range 7.2 kMc to 8.5 kMc. The nominal gain is 40db at 1
frequency range [2]	8.5	frequency range 7.2 kMc to 8.5 kMc. The nominal gain is 40db at 1
frequency range [3]	40	frequency range 7.2 kMc to 8.5 kMc. The nominal gain is 40db at 1
frequency range [4]	1	frequency range 7.2 kMc to 8.5 kMc. The nominal gain is 40db at 1
watt output level with a typical saturation output power of	10 W	watt output level with a typical saturation output power of 10 watts,
permanent magnet focusing mount, type LD	550	permanent magnet focusing mount, type LD-550B Mount, incorporated with
Published value	1	1. PPM Focused and Field Replaceable.
Published value	2	2. Depressed Collector Operation for Improved Efficiency.
Collector Voltage (Eb) [1]	1600 V	Collector Voltage (Eb) 1600 Vdc 3000 Vdc
Collector Voltage (Eb) [2]	3000 V	Collector Voltage (Eb) 1600 Vdc 3000 Vdc
Collector Current (Ib) . 00000 e	34 A	Collector Current (Ib) . 00000 e 34 mA dc
Helix Voltage (Bw) [1]	2700 V	Helix Voltage (Bw) . 2700 Vdc 34,00 Vdc
Helix Voltage (Bw) [2]	3400 V	Helix Voltage (Bw) . 2700 Vdc 34,00 Vdc
Accelerating Anode Voltage	3400 V	Accelerating Anode Voltage 3400 Vdc
Accelerating Anode Current	1 A	Accelerating Anode Current 1.0 mA dc
Focusing flectrode Voltage ~	-20 V	Focusing flectrode Voltage ~-20 Vdc
Collector Dissipation	56 W	Collector Dissipation 56 W

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Collector Seal Temperature	130	Collector Seal Temperature 130 °C -
Mount Ambient Temperature Range [1]	-10	Mount Ambient Temperature Range -10 °cC +55 °C
Mount Ambient Temperature Range [2]	55	Mount Ambient Temperature Range -10 °cC +55 °C
Cathode Heating Time	90	Cathode Heating Time 90 sec,
Cold input and output match over [1]	7.2	Cold input and output match over 7.2 to 7.65, 7.65 to &.1 and 8.1 to
Cold input and output match over [2]	7.65	Cold input and output match over 7.2 to 7.65, 7.65 to &.1 and 8.1 to
Cold input and output match over [3]	7.65	Cold input and output match over 7.2 to 7.65, 7.65 to &.1 and 8.1 to
Cold input and output match over [4]	1	Cold input and output match over 7.2 to 7.65, 7.65 to &.1 and 8.1 to
Cold input and output match over [5]	8.1	Cold input and output match over 7.2 to 7.65, 7.65 to &.1 and 8.1 to
Heater Current at [1]	6.3 A	Heater Current at 6.3 Volts cereses 0.6 A
Heater Current at [2]	600 mA	Heater Current at 6.3 Volts cereses 0.6 A
Frequency [1]	7.8	Frequency 7.8 kMc 8.5 kMc
Frequency [2]	8.5	Frequency 7.8 kMc 8.5 kMc
RF Output Power [1]	8.5 W	RF Output Power : 8.5W 7.5 W L.5W
RF Output Power [2]	7.5 W	RF Output Power : 8.5W 7.5 W L.5W
RF Output Power [3]	5 W	RF Output Power : 8.5W 7.5 W L.5W
(	0.5	(0.5 mW input level)
RF Saturated Output Power [1]	14 W	RF Saturated Output Power 14,.0 W 12,0 W 10.0 W
RF Saturated Output Power [2]	120 W	RF Saturated Output Power 14,.0 W 12,0 W 10.0 W
RF Saturated Output Power [3]	10 W	RF Saturated Output Power 14,.0 W 12,0 W 10.0 W
Small Signal Gain Li, db	43	Small Signal Gain Li, db 43 db L0 db
(	0.1	(0.1 mW input level)
helix current due to other magnetic materials less than	100 mA	helix current due to other magnetic materials less than 0.1 mA.
Published value	5 V	5. Applications of Voltage
Published value	5.1 V	5.1 Apply the heater voltage and allow a minimum warm-up period

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Published value	5.2 V	5.2 Set the focusing electrode, collector and helix voltages
Published value	5.3 V	5.3 Switch on all voltages. Accelerating anode voltage should be
Published value	5.4 A	5.4, Adjust tube position carefully to optimize current transmission
Published value	5.5	5.5 Apply the specified rf drive and adjust accelerating anode
Published value	5.6 V	5.6 Adjust the helix voltage for optimum operation. The helix
voltage should never be made to exceed	3400 V	voltage should never be made to exceed 3400 volts or fall
below	2700 V	below 2700 volts. If the helix voltage is above or below
The collector voltage should never be depressed below	1600 V	The collector voltage should never be depressed below 1600 volts
Published value	5.7 V	5.7 Readjust tube position and adjust the focusing electrode voltage

TUBE TINKER

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

[Catalog](#) [Tube types](#) [Full books](#) [Blog](#) [Feedback & corrections](#)

© 2026 Tube Tinker