

ELECTRONIC TUBE REFERENCE

LD637

Specialized - Traveling Wave electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TRAVELINGWAVE

1.7-2.3 GHz traveling-wave power amplifier providing about 30 dB small-signal gain and approximately 20 watts saturated RF output.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / —	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

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

The LD637 is a coaxial continuous-wave traveling-wave amplifier covering approximately 1.7 to 2.3 GHz, using permanent-magnet focusing and depressed-collector operation.

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
operation over the frequency range of [1]	1.7	operation over the frequency range of 1.7 to 2.3 kMc. This tube
operation over the frequency range of [2]	2.3	operation over the frequency range of 1.7 to 2.3 kMc. This tube
type has an average small signal gain of	30	type has an average small signal gain of 30 db and a saturated
output power of about	20 W	output power of about 20 gatts. The construction of the tube is of
Accelerating Voltage	2700 V	Accelerating Voltage ... 2700V Dimensions See Outline
Current P9 [1]	9 A	Current P99 @ 008 S0 e Ve lmA weight L LB B B B AR BN 11 lbs
Current P9 [2]	8 A	Current P99 @ 008 S0 e Ve lmA weight L LB B B B AR BN 11 lbs
Current P9 [3]	11 A	Current P99 @ 008 S0 e Ve lmA weight L LB B B B AR BN 11 lbs
Helix Voltage eesveeaess	3000 V	Helix Voltage eesveeaess 3000 V Mounting
Collector Voltage, min. s	1900 V	Collector Voltage, min. s 1900V Cathode ,.... Oxide cosated,
Collector current ceeseccaccs	60	Collector current ceeseccaccs 60 mA Connections
Collector Dissipation ..ecce	120 W	Collector Dissipation ..ecce. 120 w RF Input and Output ...
Focusing Electrode Voltage .. ~	70 V	Focusing Electrode Voltage .. ~70 V
Ambient Temperature scsssses	55	Ambient Temperature scsssses 55°C Cooling

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ambient Temperature, min, [1]	-559	Ambient Temperature, min, ... -559C Forced air (18 CFM)
Ambient Temperature, min, [2]	18	Ambient Temperature, min, ... -559C Forced air (18 CFM)
Collector Seal Temperature	180	Collector Seal Temperature .. 180°C
Heater Voltage = [1]	6.3 V	Heater Voltage = 6.3V; Heater Current at 6.3V = 1,04
Heater Voltage = [2]	6.3 V	Heater Voltage = 6.3V; Heater Current at 6.3V = 1,04
Heater Voltage = [3]	104 V	Heater Voltage = 6.3V; Heater Current at 6.3V = 1,04
Frequency	1.7	Frequency 1.7
Accelerating Anode Voltage [1]	2500 V	Accelerating Anode Voltage 2500 2500 2500
Accelerating Anode Voltage [2]	2500 V	Accelerating Anode Voltage 2500 2500 2500
Accelerating Anode Voltage [3]	2500 V	Accelerating Anode Voltage 2500 2500 2500
Helix Voltage [1]	2700 V	Helix Voltage 2700 2550 2400 v
Helix Voltage [2]	2550 V	Helix Voltage 2700 2550 2400 v
Helix Voltage [3]	2400 V	Helix Voltage 2700 2550 2400 v
Helix Current [1]	500 mA	Helix Current 0.5 0.5 0.5 mA
Helix Current [2]	500 mA	Helix Current 0.5 0.5 0.5 mA
Helix Current [3]	500 mA	Helix Current 0.5 0.5 0.5 mA
Collector Voltege [1]	2000	Collector Voltege 2000 2000 2000 v
Collector Voltege [2]	2000	Collector Voltege 2000 2000 2000 v
Collector Voltege [3]	2000	Collector Voltege 2000 2000 2000 v
Collector Current [1]	55 A	Collector Current 55 55 55 mA
Collector Current [2]	55 A	Collector Current 55 55 55 mA
Collector Current [3]	55 A	Collector Current 55 55 55 mA
RF Output ([1]	10	RF Output (10mW input level) 9.5 10 7.5 W
RF Output ([2]	9.5	RF Output (10mW input level) 9.5 10 7.5 W
RF Output ([3]	10	RF Output (10mW input level) 9.5 10 7.5 W
RF Output ([4]	7.5	RF Output (10mW input level) 9.5 10 7.5 W
RF Saturated Output [1]	19.5	RF Saturated Output 19.5 20 17.5 W

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
RF Saturated Output [2]	20	RF Saturated Output 19.5 20 17.5 W
RF Saturated Output [3]	17.5	RF Saturated Output 19.5 20 17.5 W
Small Signal Gain [1]	31	Small Signal Gain 31 32 31 db
Small Signal Gain [2]	32	Small Signal Gain 31 32 31 db
Small Signal Gain [3]	31	Small Signal Gain 31 32 31 db