



ELECTRONIC TUBE REFERENCE

F7847

Specialized - Traveling Wave electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRAVELINGWAVE

Specialized ITT traveling-wave microwave tube intended for RF amplification; available extracted source information is too limited for more specific characterization.

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

SECTION 1 TravelingWave

No fixed ratings recorded.

Published maximum ratings and characteristics audited; remaining values retained densely in parameter table.

The F7847 is a ten-watt continuous-wave traveling-wave amplifier covering approximately 5 to 6 GHz, using a rugged metal envelope and helix slow-wave structure; cooling may be by water or air depending on the collector jacket.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1962 ITT

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

1962 ITT

Section 1 · TravelingWave

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GAIN AND [1]	5	GAIN AND 5.0 To 6.0 FREQUENCY RANGE. T IS CONSTRUCTED IN A RUGGED
GAIN AND [2]	6	GAIN AND 5.0 To 6.0 FREQUENCY RANGE. T IS CONSTRUCTED IN A RUGGED
BEAM GUN AND OXIDE COATED CATHODE ARE USED. THE TUBE	15	BEAM GUN AND OXIDE COATED CATHODE ARE USED. THE TUBE 15 SUITABLE FOR
HEATER VOLTAGE [1]	6.3 V	HEATER VOLTAGE 6.3 (-5%) Vourts
HEATER VOLTAGE [2]	-5 V	HEATER VOLTAGE 6.3 (-5%) Vourts
HeaTER CURRENT	2 A	HeaTER CURRENT .2 AMPERES
MAX IMUM FREQUENCY	6	MAX IMUM FREQUENCY 6.0
MINIMUM FREQUENCY	5	MINIMUM FREQUENCY 5.0
Max1MuM ANODE VorLTAGe (NoTe [1]	1	Max1MuM ANODE VorLTAGe (NoTe 1) 3000 VoLTs
Max1MuM ANODE VorLTAGe (NoTe [2]	3000	Max1MuM ANODE VorLTAGe (NoTe 1) 3000 VoLTs
Max1MuM HeL1x CurrentT (Note [1]	2 A	Max1MuM HeL1x CurrentT (Note 2) 2 Ma
Max1MuM HeL1x CurrentT (Note [2]	2 A	Max1MuM HeL1x CurrentT (Note 2) 2 Ma
MaxiMuM CoNTROL ELECTRODE VOLTAGE	0 V	MaxiMuM CoNTROL ELECTRODE VOLTAGE 0 Votrs
Type OF CATHODE Ox	1	Type OF CATHODE Ox 1D COATED UNIPOTENTIAL
ANODE VOLTAGE	2800 V	ANODE VOLTAGE 2800 VoLrts
ANODE CURRENT	67 A	ANODE CURRENT 67 Ma
HeELix CURRENT	1 A	HeELix CURRENT 1.0 MA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power OuTPUT	10 W	Power OuTPUT 10 WaTtTs
GAIN [1]	27	GAIN 27 08
GAIN [2]	8	GAIN 27 08
BEAM	1	BEAM 1.0
NoTE	1 V	NoTE 1: ALL VOLTAGES SHOWN ARE WITH RESPECT TO CATHODE. ANODE, COLLECTOR
NOTE	2 A	NOTE 2: THE HELIX CURRENT SHOULD BE MINIMIZED AND MUST BE LESS THAN THE
MAX IMUM RATING. T	1 A	MAX IMUM RATING. T 1S DESIRABLE TO MONITOR THIS CURRENT DURING
OPERATION, THE PEAK HELIX CURRENT MAY EXCEED	2 A	OPERATION, THE PEAK HELIX CURRENT MAY EXCEED 2 MA, BUT CARE SHOULD
Note	3 V	Note 3: THE BEAM VOLTAGE SHOULD BE APPLIED TO THE TUBE ONLY AFTER THE
NoTe	4	NoTe 4: CoOOLING METHOD DEPENDS ON TYPE OF COLLECTOR COOLING JACKET USED.
NoTE	5 V	NoTE 5: GATED BEAM OPERATION CAN BE UTILIZED BY PULSING ANODE VOLTAGE
Published value	6.25	6.250 ~ ; Output

TUBE TINKER

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