

ELECTRONIC TUBE REFERENCE

F7066

Specialized - Traveling Wave electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TRAVELINGWAVE

Wideband traveling-wave power amplifier with control-electrode modulation, providing approximately 50 watts RF output and about 30 dB 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 F7066 is a low-power continuous-wave traveling-wave amplifier with high gain and a helix slow-wave structure for broadband microwave service.

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
The F [1]	7066	The F-7066 is a 50 mw CW traveling wave amplifier tube having 30 db gain
The F [2]	50	The F-7066 is a 50 mw CW traveling wave amplifier tube having 30 db gain
The F [3]	30	The F-7066 is a 50 mw CW traveling wave amplifier tube having 30 db gain
and [1]	8 MHz	and 8.0 to 12. 0 kmc frequency range. It is constructed in a rugged metal
and [2]	12 MHz	and 8.0 to 12. 0 kmc frequency range. It is constructed in a rugged metal
and [3]	0 MHz	and 8.0 to 12. 0 kmc frequency range. It is constructed in a rugged metal
Heater Voltage	6.3 V	Heater Voltage 6.3 (iS%) volts
Heater Current	850 mA	Heater Current 0.85 ampere
Maximum Anode Voltage (Note [1])	1 V	Maximum Anode Voltage (Note 1) 1600 wvolts
Maximum Anode Voltage (Note [2])	1600 V	Maximum Anode Voltage (Note 1) 1600 wvolts
Maximum Helix Current (Note [1])	2 A	Maximum Helix Current (Note 2) 2 ma
Maximum Helix Current (Note [2])	2 A	Maximum Helix Current (Note 2) 2 ma
Maximum Collector Dissipation {(Beam Power)}	15 W	Maximum Collector Dissipation {(Beam Power) 15 watts
Maximum Control Electrode Voltage (Note [1])	3 V	Maximum Control Electrode Voltage (Note 3) -500 wvolts
Maximum Control Electrode Voltage (Note [2])	-500 V	Maximum Control Electrode Voltage (Note 3) -500 wvolts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Frequency	12 MHz	Maximum Frequency 12.0 kmc
Minimum Frequency	8 MHz	Minimum Frequency 8.0 kmc
Anode Voltage	1500 V	Anode Voltage 1500 wvolts
Anode Current	5 A	Anode Current 5 ma
Helix Current	500 mA	Helix Current 0.5 ma
Control Electrode Voltage (Note [1])	4 V	Control Electrode Voltage (Note 4) -15 wvolts
Control Electrode Voltage (Note [2])	-15 V	Control Electrode Voltage (Note 4) -15 wvolts
Power Output	50 W	Power Output 50 mw, nominal
Gain	30	Gain 30 db, nominal
Beam	1	Beam 1.0
Note	1 V	Note 1: All voltages shown are with respect to cathode. Anode and collector
Note	2 A	Note 2: The helix current should, in general, be minimized and must be less
peak helix current may exceed	2 A	peak helix current may exceed 2 ma, but care should be taken to
Note	3 V	Note 3: The control electrode voltage is adjusted for best transmission for CW
operation (normally about	-15	operation (normally about -15 volts), Beam gate off can be accom-
plished by applying voltage of [1]	-400 V	plished by applying voltage of -400 to -500 volts. Operation in the
plished by applying voltage of [2]	-500 V	plished by applying voltage of -400 to -500 volts. Operation in the
region of control electrode voltage between approximately	-15 V	region of control electrode voltage between approximately -15 volts
Note [1]	4	Note 4: Gated beam operation can also be utilized by applying -400 to -500
Note [2]	-400	Note 4: Gated beam operation can also be utilized by applying -400 to -500
Note [3]	-500	Note 4: Gated beam operation can also be utilized by applying -400 to -500
= > See Table	1.587	= > See Table 1.587 fits solenoid end plate.
FOCUSING., DBASIC POWER REQUIREMENTS ARE [1]	10 W	FOCUSING., DBASIC POWER REQUIREMENTS ARE 10 MA AT 1500 V AND A 50 VOLT BIAS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
FOCUSING., DBASIC POWER REQUIREMENTS ARE [2]	1500 W	FOCUSING., DBASIC POWER REQUIREMENTS ARE 10 MA AT 1500 V AND A 50 VoLT BIAS
FOCUSING., DBASIC POWER REQUIREMENTS ARE [3]	50 W	FOCUSING., DBASIC POWER REQUIREMENTS ARE 10 MA AT 1500 V AND A 50 VoLT BIAS
SUPPLY, AS WELL AS [1]	6.3	SUPPLY, AS WELL AS 6.3 VoLTS AT 1.0 AMPERE FOR THE HEATER.
SUPPLY, AS WELL AS [2]	1	SUPPLY, AS WELL AS 6.3 VoLTS AT 1.0 AMPERE FOR THE HEATER.
k [1]	1	k.1 HeaTer Vortace (6.3 Vouts).
k [2]	6.3	k.1 HeaTer Vortace (6.3 Vouts).
Published value [1]	4.2 V	4.2 SoLENOID VOLTAGE (ADJUST SOLENOID CURRENT TO YIELD 900 GAuss).
Published value [2]	900 V	4.2 SoLENOID VOLTAGE (ADJUST SOLENOID CURRENT TO YIELD 900 GAuss).
Published value	43 V	4,3 ConTROL ELECTRODE VOLTAGE (APPLY BIAS VOLTAGE SPECIFIED ON DATA
AT ALL TIMES MONITOR HELIX CURRENT AND OBSERVE THE	2 A	AT ALL TIMES MONITOR HELIX CURRENT AND OBSERVE THE 2.0 Ma
Published value [1]	5	5. R.F. INPUT SHOULD BE LIMITED TO 10 MW.
Published value [2]	10	5. R.F. INPUT SHOULD BE LIMITED TO 10 MW.
Published value	6 V	6. THE CATHODE VOLTAGE MAY BE OPTIMIZED FOR OPTIMUM POWER OUTPUT AT THE
NEVER OPERATE THE F-TOH6 WITH HELIX CURRENT IN EXCESS off	2 A	NEVER OPERATE THE F-TOH6 WITH HELIX CURRENT IN EXCESS off 2.0 MA,
UNDER MOST CONDITIONS HEL X CURRENT WiLL BE [1]	1 A	UNDER MOST CONDITIONS HEL X CURRENT WiLL BE 1.0 MA or LESS. IT 18
UNDER MOST CONDITIONS HEL X CURRENT WiLL BE [2]	18 A	UNDER MOST CONDITIONS HEL X CURRENT WiLL BE 1.0 MA or LESS. IT 18
BE SURE COAX!	1	BE SURE COAX!1AL CABLES TO BE CONNECTED TO THE TUBE INPUT AND OUTPUT
Published value	3	3 INSUL. la—— ANODE BLACK
[HEATER [1]	0	[HEATER 0-50v
[HEATER [2]	-50	[HEATER 0-50v