

ELECTRONIC TUBE REFERENCE

F7340

Specialized - Traveling Wave electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TRAVELINGWAVE

Specialized ITT traveling-wave microwave amplifier for broadband high-frequency service; available source data are insufficient for more specific performance claims.

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
<p>No fixed ratings recorded.</p> <p>Published maximum ratings and characteristics audited; remaining values retained densely in parameter table.</p>	

The F7340 is a one-kilowatt pulsed traveling-wave amplifier covering approximately 8 to 9.6 GHz, using a rugged metal envelope, helix slow-wave structure, and forced-air cooling.

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]	7340	The F-7340 is a 1 kilowatt pulse traveling wave amplifier tube having-30 db
The F [2]	1	The F-7340 is a 1 kilowatt pulse traveling wave amplifier tube having-30 db
The F [3]	30	The F-7340 is a 1 kilowatt pulse traveling wave amplifier tube having-30 db
gain and [1]	8000	gain and 8000 to 9600 mc frequency range. It is constructed in a rugged
gain and [2]	9600	gain and 8000 to 9600 mc frequency range. It is constructed in a rugged
ted cathode are used. Duty cycles up to [1]	5	ted cathode are used. Duty cycles up to .005 and pulse lengths up to 10
ted cathode are used. Duty cycles up to [2]	10	ted cathode are used. Duty cycles up to .005 and pulse lengths up to 10
Heater Voltage [1]	6.3 V	Heater Voltage 6.3 (±5%) volts
Heater Voltage [2]	5 V	Heater Voltage 6.3 (±5%) volts
Heater Current	5.2 A	Heater Current 5.2 amperes
Maximum Anode Voltage (Note [1])	1 V	Maximum Anode Voltage (Note 1) 12,000 volts
Maximum Anode Voltage (Note [2])	12000 V	Maximum Anode Voltage (Note 1) 12,000 volts
Maximum Shell Current	1.5 A	Maximum Shell Current 1.5 ampere peak
Maximum Collector Dissipation (Note [1])	2 W	Maximum Collector Dissipation (Note 2) 180 watts average
Maximum Collector Dissipation (Note [2])	180 W	Maximum Collector Dissipation (Note 2) 180 watts average
Maximum R-F Input Power	10 W	Maximum R-F Input Power 10 watts average

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum R-F Output Power	10 W	Maximum R-F Output Power 10 watts average
Maximum Pulse Width	10	Maximum Pulse Width 10 p seconds
Maximum Cathode Current	3 A	Maximum Cathode Current 3.0 amperes peak
Maximum Grid Current	27 A	Maximum Grid Current .27 ampere peak
Maximum Frequency (Note [1])	3	Maximum Frequency (Note 3) 9600 mc
Maximum Frequency (Note [2])	9600	Maximum Frequency (Note 3) 9600 mc
Minimum Frequency (Note [1])	3	Minimum Frequency (Note 3) 8000 mc
Minimum Frequency (Note [2])	8000	Minimum Frequency (Note 3) 8000 mc
at Grid Bias = [1]	-200	at Grid Bias = -200 volts 60 db
at Grid Bias = [2]	60	at Grid Bias = -200 volts 60 db
Control Grid to All Other Elements	9	Control Grid to All Other Elements 9 ppfd
Air Flow on Collector Radiator (Note [1])	2	Air Flow on Collector Radiator (Note 2) 300 cfm
Air Flow on Collector Radiator (Note [2])	300	Air Flow on Collector Radiator (Note 2) 300 cfm
Maximum Glass Temperature	160	Maximum Glass Temperature 160 oc
Center Frequency	9000	Center Frequency 9000 mc
Anode Voltage (Note [1])	1 V	Anode Voltage (Note 1) 9600 volts
Anode Voltage (Note [2])	9600 V	Anode Voltage (Note 1) 9600 volts
Cathode Current	1.8 A	Cathode Current 1.8 amperes peak
Power Output (at center frequency)	1.8 kW	Power Output (at center frequency) 1.8 kw peak
Bandwidth ' [1]	8	Bandwidth ' 8.0to 9.6 kmc
Bandwidth ' [2]	9.6	Bandwidth ' 8.0to 9.6 kmc
Gain (Note [1])	4	Gain (Note 4) 30 db
Gain (Note [2])	30	Gain (Note 4) 30 db
Pulse Width [1]	2	Pulse Width 2.0 1. seconds
Pulse Width [2]	1	Pulse Width 2.0 1. seconds
Grid Bias {for cut-off)	-100	Grid Bias {for cut-off) -100 volts
Grid Voltage during Pulse (Note [1])	6 V	Grid Voltage during Pulse (Note 6) +350 volts
Grid Voltage during Pulse (Note [2])	350 V	Grid Voltage during Pulse (Note 6) +350 volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid Current during Pulse	100 mA	Grid Current during Pulse 0.1 ampere peak
of	10 W	of 10 watts. As the collector power is increased, the air flow re-
quired increases. At the maximum collector power of	150 W	quired increases. At the maximum collector power of 150 watts,
Note Useful gain and power output exists below [1]	8000 W	Note Useful gain and power output exists below 8000 mc and above 9600
Note Useful gain and power output exists below [2]	9600 W	Note Useful gain and power output exists below 8000 mc and above 9600
Note This gain is obtained over the [1]	8 W	Note This gain is obtained over the 8.0 to 9.6 kmc bandwidth at the power
Note This gain is obtained over the [2]	9.6 W	Note This gain is obtained over the 8.0 to 9.6 kmc bandwidth at the power
signal gain will be approximately	10	signal gain will be approximately 10 db higher. Fine grain structure
of small signal gain is normally less than +	3	of small signal gain is normally less than + 3 db.
([1]	1 V	(1) Heater warm up of 2 minutes before applying high voltage is recom-
([2]	2 V	(1) Heater warm up of 2 minutes before applying high voltage is recom-
(	2 V	(2) High voltage must not be applied in the absence of proper grid bias
– [1]	1605	— 1,605 1,575 1.605 — Output
– [2]	1575	— 1,605 1,575 1.605 — Output
– [3]	1.605	— 1,605 1,575 1.605 — Output
Published value	2	2 Heater -Cathode
Published value	6	6 Control Grid
Published value	10	10 Heater

TUBE TINKER

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