



ELECTRONIC TUBE REFERENCE

6952

Power - Beam (NOT sweep) (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

Very-high-power transmitting beam tube designed for short-pulse RF service, with manufacturer data citing megawatt-class peak output around 425 MHz.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	30 V / 530 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Beam Power	
AMPLIFICATION FACTOR	7
MAXIMUM PLATE VOLTAGE	30000 V
MAXIMUM SCREEN VOLTAGE	2200 V
MAXIMUM PLATE DISSIPATION	8000 W
<i>Published maximum ratings and characteristics promoted directly from the supplied datasheet; additional operating data retained in parameters.</i>	

High-power beam-power tube for RF, pulse, or transmitting service. The supplied datasheet was reviewed for heater/filament data, maximum ratings, operating conditions, capacitances, pulse/RF data, and thermal limits.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

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Section 1 · Beam Power

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
2 MEGAWATTS PEAK POWER OUTPUT IN	2000000 W	Published datasheet value
SHORT-PULSE SERVICE AT 425 Mc	425 MHz	Pulse
filament voltage	30 s	Published datasheet value
voltages are appl ied	90 s	Published datasheet value
Mu-Factor, Grid No.2 to Grid No 1 – published value 1	1	Published datasheet value
Mu-Factor, Grid No.2 to Grid No 1 – published value 2	7	Published datasheet value
Grid No.1 to grid No.2 and cathode	500 pF	Published datasheet value
Plate to cathode and grid No.2	30 pF	Published datasheet value
Through grid-No.1 block – published value 1	0.5	Published datasheet value
Through grid-No.1 block – published value 2	0.8	Published datasheet value
Through grid-No.1 block – published value 3	6	Published datasheet value
Through grid-No.2 block – published value 1	0.5	Published datasheet value
Through grid-No.2 block – published value 2	0.8	Published datasheet value
Through grid-No.2 block – published value 3	8	Published datasheet value
Through filament block – published value 1	1	Published datasheet value

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Through filament block – published value 2	1.2	Published datasheet value
Through filament block – published value 3	20	Published datasheet value
Through grid–No.1 block – published value 1	1	Published datasheet value
Through grid–No.1 block – published value 2	1.2	Published datasheet value
Through grid–No.1 block – published value 3	14	Published datasheet value
Through grid–No.2 block – published value 1	1	Published datasheet value
Through grid–No.2 block – published value 2	1.2	Published datasheet value
Through grid–No.2 block – published value 3	20	Published datasheet value
Through grid–No.1 block – published value 1	1	Published datasheet value
Through grid–No.1 block – published value 2	1.2	Published datasheet value
Through grid–No.1 block – published value 3	12	Published datasheet value
Through grid–No.2 block – published value 1	1	Published datasheet value
Through grid–No.2 block – published value 2	1.2	Published datasheet value
Through grid–No.2 block – published value 3	18	Published datasheet value
Resistance at 25o C – published value 1	25 Mohm	Published datasheet value
Resistance at 25o C – published value 2	10 Mohm	Published datasheet value
Plate Voltage° – published value 1	50000	Published datasheet value
Plate Voltage° – published value 2	19000	Published datasheet value
Grid-No.2 Voltage _f – published value 1	1800	Published datasheet value
Grid-No.2 Voltage _f – published value 2	1700	Published datasheet value

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.1 Voltageh – published value 1	325	Published datasheet value
Grid-No.1 Voltageh – published value 2	250	Published datasheet value
Peak Plate Current – published value 1	75 A	Published datasheet value
Peak Plate Current – published value 2	25 A	Published datasheet value
Peak Grid-No.2 Current – published value 1	8 A	Published datasheet value
Peak Grid-No.2 Current – published value 2	1 A	Published datasheet value
Grid-No.1 Current – published value 1	10 A	Published datasheet value
Grid-No.1 Current – published value 2	500 mA	Published datasheet value
DC Plate Current – published value 1	300 mA	Published datasheet value
DC Plate Current – published value 2	450 mA	Published datasheet value
DC Grid-No.2 Current – published value 1	30 mA	Published datasheet value
DC Grid-No.2 Current – published value 2	20 mA	Published datasheet value
DC Grid-No,1 Current – published value 1	40 mA	Published datasheet value
DC Grid-No,1 Current – published value 2	10 mA	Published datasheet value
Useful Peak Power Output	225000 W	Published datasheet value
spike when measured at the peak-value level should not exceed 10f of	10	Published datasheet value
exceed its peak value by more than 250 volts, and the duration of any	250	Published datasheet value
Filament Current – published value 1	460 A	Published datasheet value
Filament Current – published value 2	530 A	Published datasheet value

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input Strap-Resonant Frequency – published value 1	222 MHz	Published datasheet value
Input Strap-Resonant Frequency – published value 2	250 MHz	Published datasheet value
Output Strap-Resonant Frequency – published value 1	230 MHz	Published datasheet value
Output Strap-Resonant Frequency – published value 2	250 MHz	Published datasheet value
Grid No.1 to plate	0.15 pF	Published datasheet value
Grid No.2 to cathode – published value 1	10000 pF	Published datasheet value
Grid No.2 to cathode – published value 2	18000 pF	Published datasheet value
~ AL filament vot loge of 0.95 volt antl ac filament excitation at 60 cps – published value 1	0.95	Published datasheet value
~ AL filament vot loge of 0.95 volt antl ac filament excitation at 60 cps – published value 2	60	Published datasheet value
minimum plate l iquid column resistance should be 10 megohms	10 Mohm	Published datasheet value
with at least 60–mesh screen is recommended in the coolant	60	Published datasheet value
having a 10–to–20–gal lon–per–hour capacity wi l l ordinarily be	20	Published datasheet value
DC PLATE 8 COOLANT	8	Published datasheet value
DC GRID-N42 6 COOLANT – published value 1	6	Published datasheet value
DC GRID-N42 6 COOLANT – published value 2	8	Published datasheet value
ICp=GRID–N–^2 AMPERES	2 A	Published datasheet value
GRID–Ns2 VOLTS=1000	1000	Published datasheet value

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID-N-'1 VOLTS	1	Published datasheet value
GRID-Ns2 VOLTS=1800	1800	Published datasheet value

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to plate	0.15 mA	Published datasheet value
(Including bypass capacitors)	18 A	Published datasheet value
Ceramic-Insulator Temperature	150 mA	Published datasheet value
Metal -Surface Temperature	100 mA	Published datasheet value
Plate Voltages – published value 1	55 A	Published datasheet value
Plate Voltages – published value 2	30 A	Published datasheet value
Grid-No.2 Voltagef~g – published value 1	2.2 A	Published datasheet value
Grid-No.2 Voltagef~g – published value 2	2.2 A	Published datasheet value
Grid-No.1 Voltage – published value 1	400 mA	Published datasheet value
Grid-No.1 Voltage – published value 2	400 mA	Published datasheet value
Peak Plate Current – published value 1	80 mA	Published datasheet value
Peak Plate Current – published value 2	30 mA	Published datasheet value
Peak Grid-No.2 Current – published value 1	15 mA	Published datasheet value
Peak Grid-No.2 Current – published value 2	3 mA	Published datasheet value
Grid-No.i Current – published value 1	15 mA	Published datasheet value
Grid-No.i Current – published value 2	3 mA	Published datasheet value
DC Plate Current – published value 1	0.32 mA	Published datasheet value
DC Plate Current – published value 2	0.5 mA	Published datasheet value

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid-No.2 Current – published value 1	0.06 mA	Published datasheet value
DC Grid-No.2 Current – published value 2	0.06 mA	Published datasheet value
Plate Input (Average) – published value 1	16 A	Published datasheet value
Plate Input (Average) – published value 2	9 A	Published datasheet value
Plate Dissipation (Average) – published value 1	8 A	Published datasheet value
Plate Dissipation (Average) – published value 2	5 A	Published datasheet value
A negative do voltage of 300 volts maximum may De applied to grid Mo.2	300 mA	Published datasheet value