

ELECTRONIC TUBE REFERENCE

5686

Power - Beam Single (NOT sweep) (under 10W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

Rugged miniature beam-power amplifier designed for mobile and aircraft equipment, supporting Class-A audio output and Class-C RF service through VHF.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9G	BASE PINS	9
NOMINAL HEATER	6.3 V / 350 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

9G - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – G3	A	G3 – Suppressor Grid	CONNECTED
PIN1 – K	A	K – Cathode	CONNECTED
PIN2 – G1	A	G1 – Control Grid	CONNECTED
PIN3 – G3	A	G3 – Suppressor Grid	CONNECTED
PIN3 – K	A	K – Cathode	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – H	–	H – Heater	CONNECTED
PIN6 – G2	A	G2 – Screen Grid	CONNECTED
PIN7 – P	A	P – Plate (Anode)	CONNECTED
PIN8 – G3	A	G3 – Suppressor Grid	CONNECTED
PIN8 – K	A	K – Cathode	CONNECTED
PIN9 – G2	A	G2 – Screen Grid	CONNECTED

SECTION RATINGS

SECTION1 Beam Power	
PLATE RESISTANCE	45000 Ω
TRANSCONDUCTANCE	0.0031 S
MAXIMUM PLATE VOLTAGE	275 V
MAXIMUM SCREEN VOLTAGE	275 V
MAXIMUM PLATE DISSIPATION	8.25 W
MAXIMUM SCREEN DISSIPATION	3.3 W
MAXIMUM CATHODE CURRENT	44 mA
MAXIMUM HEATER-CATHODE VOLTAGE	90 V
<i>Class-A maximum ratings and typical transconductance promoted.</i>	

Ruggedized miniature pentode power amplifier for mobile/aircraft Class A audio and Class C RF service through VHF.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1960 RCA Industrial and Communications Types

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

1960 RCA INDUSTRIAL AND COMMUNICATIONS TYPES

Section 1 · Beam Power

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Beam-power amplifier	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1961 Tung Sol

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

1961 TUNG SOL

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Nominal
Heater current	350 mA	Nominal
Plate voltage	250 V	Published operating table; OperatingPoint1
Plate voltage	250 V	Published operating table; OperatingPoint1
Screen voltage	250 V	Published operating table; OperatingPoint1
Screen voltage	250 V	Published operating table; OperatingPoint1
Screen voltage	180 V	Published operating table; OperatingPoint1
Screen voltage	250 V	Published operating table; OperatingPoint2
Power output	2.7 W	Published operating table; OperatingPoint1

Characteristic		
Parameter	Published Value	Condition / Note
Plate current	230 mA	Published operating table; OperatingPoint1
Plate current	40 mA	Published operating table; OperatingPoint2
Screen current	15 mA	Published operating table; OperatingPoint1
Screen current	5 mA	Published operating table; OperatingPoint1



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1968 General Electric Co

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

1968 GENERAL ELECTRIC CO

Section 1 · Beam Power

Other		
Parameter	Published Value	Condition / Note
Plate Voltage	250 V	ClassA
Screen Voltage	250 V	ClassA

Characteristic		
Parameter	Published Value	Condition / Note
Plate Current	27 mA	ClassA
Power Output	2.7 W	ClassA



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1971 RCA HB3 Binder 3 of 7

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

1971 RCA HB3 BINDER 3 OF 7

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	—275 V	—
Maximum screen voltage	—275 V	—
Maximum plate dissipation	—8.25 W	—
Maximum screen dissipation	—3.3 W	—
Maximum cathode current	—44 mA	—
AF plate voltage	250 V	ClassA
AF grid No.2 voltage	250 V	ClassA
AF grid No.1 voltage	-12.5 V	ClassA
Zero-signal plate current	27 mA	ClassA
Zero-signal grid No.2 current	3 mA	ClassA
Load resistance	9000 Ω	ClassA
Maximum-signal power output	2.7 W	ClassA
RF plate voltage	250 V	ClassC
RF grid No.2 voltage	180 V	ClassC
RF grid No.2 voltage	250 V	ClassC
RF power output	5 W	ClassC
RF power output	6.5 W	ClassC

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	45000 Ω	—
Transconductance	3100 μS	—
Plate resistance	45000 Ω	ClassA
Transconductance	3100 μS	ClassA