

ELECTRONIC TUBE REFERENCE

8CB11

Voltage Dual Pentode electronic tube

CONSOLIDATED TECHNICAL DATA
2 SECTIONS
CONSTRUCTION
PENTODE-PENTODE

Color-television Compactron with two sharp-cutoff pentodes for IF amplification, also usable as bandpass, burst, and low-level video amplifiers.

GENERAL CHARACTERISTICS

BASE DESIGNATION	12DM	BASE PINS	12
NOMINAL HEATER	8.4 V / 600 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

12DM - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1	–	H – Heater	CONNECTED
PIN2	B	P – Plate (Anode)	CONNECTED
PIN3	B	G2 – Screen Grid	CONNECTED
PIN4	B	G3 – Suppressor Grid	CONNECTED
PIN5	B	G1 – Control Grid	CONNECTED
PIN6	B	K – Cathode	CONNECTED
PIN7	A	G3 – Suppressor Grid	CONNECTED
PIN7	–	IS – Internal Screen	CONNECTED
PIN8	A	P – Plate (Anode)	CONNECTED
PIN9	A	G2 – Screen Grid	CONNECTED
PIN10	A	G1 – Control Grid	CONNECTED
PIN11	A	K – Cathode	CONNECTED
PIN12	–	H – Heater	CONNECTED

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	200000 Ω
TRANSCONDUCTANCE	0.013 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	3.1 W
MAXIMUM SCREEN DISSIPATION	0.66 W
Representative row for two identical sharp-cutoff pentode sections; ratings and average characteristics are published per section.	

SECTION2 Pentode	
PLATE RESISTANCE	200000 Ω
TRANSCONDUCTANCE	0.013 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	3.1 W
MAXIMUM SCREEN DISSIPATION	0.66 W
Second physical sharp-cutoff pentode section; added to align rows with SectionCount.	

The 8CB11 is a Compactron containing two sharp-cutoff pentodes, intended primarily for intermediate-frequency amplifier service in color television receivers and also useful as bandpass, burst, and low-level video amplifiers.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
COLOR TV TYPE TRANSCONDUCTANCE	13000 μ S	—
Cathode - Coated Unipotential (19 0 2p) MAXIMUM + s eeeeeeneenns	0.004 pF	GENERAL
Heater Voltage ACor DCx 8 4 Volts (191 to 2p) maximum	0.001 pF	GENERAL
Heater Current 0 6+	40 mA	GENERAL
Heater Warm-up Time average 11 Seconds (291 to 1p) maximum	0.002 pF	GENERAL
Section 1 Section 2 191 to 2g1) maximum	0.001 pF	Direct Interelectrode Capacitances approximate Grid-Number 1
Input 1gtto(h+1k+ 192 +1g3+293 +i s)	12 pF	Input 1gtto(h+1k+ 192 +1g3+293 +i s) 12 pf MECHANICAL
Grid-Number 1 to Plate (2g1to2p)	0.02 pF	Input 1gtto(h+1k+ 192 +1g3+293 +i s) 12 pf MECHANICAL
Output 2pto (h +2k +2g2 + 293 + 1g3 + i s)	2.8 pF	Input 1gtto(h+1k+ 192 +1g3+293 +i s) 12 pf MECHANICAL
Plate Voltage o oo et s	330 V	1270 MAXIMUM RATINGS
Screen Supply Voltage oot e	330 V	1270 MAXIMUM RATINGS
Positive DC Grid-Number 1 Voltage	0 V	1270 MAXIMUM RATINGS
Plate Dissipation	3.1 W	1270 MAXIMUM RATINGS
Screen Dissipation	0.66 W	1270 MAXIMUM RATINGS
DC Component	100 V	1270 MAXIMUM RATINGS
Total DC and Peak	200 V	1270 MAXIMUM RATINGS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
With Cathode Bias vvvvier ettt eeeen	0.25 MOhm	1270 MAXIMUM RATINGS
PlateVoltageTypical	125 V	EachSection
ScreenVoltageTypical	125 V	EachSection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-Number 1 to Plate (lgitolp)	0.028 pF	Direct Interelectrode Capacitances approximate Grid-Number 1
Plate Voltage	125 V	AVERAGE CHARACTERISTICS Each Section
Screen Voltage	125 V	AVERAGE CHARACTERISTICS Each Section
Cathode-Bias Resistor	56 Ohm	AVERAGE CHARACTERISTICS Each Section
Plate Resistance approximate	0.2 MOhm	AVERAGE CHARACTERISTICS Each Section
Transconductance	13000 uS	AVERAGE CHARACTERISTICS Each Section
Plate Current	11 mA	AVERAGE CHARACTERISTICS Each Section
Screen Current	3.8 mA	AVERAGE CHARACTERISTICS Each Section
b 20 Microamperes	-3 V	AVERAGE CHARACTERISTICS Each Section
Heater voltage for a bogey tube at If	600 mA	AVERAGE CHARACTERISTICS Each Section
The time required for the voltage across the heater to reach	80 %	AVERAGE CHARACTERISTICS Each Section
30 Eco	125 V	AVERAGE CHARACTERISTICS Each Section
Ec3	0 V	AVERAGE CHARACTERISTICS Each Section
25 b Ec1	0 V	AVERAGE CHARACTERISTICS Each Section
PlateCurrentTypical	11 mA	EachSection
ScreenCurrentTypical	3.8 mA	EachSection