

ELECTRONIC TUBE REFERENCE

3BC6

Voltage - Pentode Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Sharp-cutoff miniature RF pentode for Class-A high-frequency amplification, also specified for triode-connected operation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7BD	BASE PINS	7
NOMINAL HEATER	3.15 V / 600 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7BD - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	800000 Ω
TRANSCONDUCTANCE	0.0057 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	150 V
<i>GE essential characteristics: 3BC6 indirectly heated 3.15 V, 0.6 A sharp-cutoff RF pentode for Class A amplifier operation. Maximum plate voltage 300 V and screen voltage 150 V. Published typical pentode condition at anode 250 V, screen 150 V with 180-ohm cathode bias resistor: plate current 7.5 mA, screen current 2.1 mA, transconductance 5700 μmhos (0.0057 S), approximate plate resistance 800 kΩ. Optional triode-connected use ties screen to plate; this is not a separate physical section. Values promoted are characteristics at this operating point, not absolute maximums.</i>	

Sharp-cutoff RF pentode for Class A amplification; also specified in triode connection.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

195X General Electric Essential Characteristics

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

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Screen-grid voltage	150 V	ClassA
Grid No.1 bias	Rk=180 V	ClassA
Plate current	7.5 mA	ClassA
Screen-grid current	2.1 mA	ClassA
Plate resistance	800000 ohm	ClassA
Transconductance	5700 uS	ClassA
Plate voltage	125 V	ClassA
Screen-grid voltage	125 V	ClassA
Grid No.1 bias	Rk=100 V	ClassA
Plate current	8 mA	ClassA
Screen-grid current	2.4 mA	ClassA
Plate resistance	500000 ohm	ClassA
Transconductance	6100 uS	ClassA
Plate voltage	100 V	ClassA
Screen-grid voltage	100 V	ClassA
Grid No.1 bias	Rk=180 V	ClassA
Plate current	4.7 mA	ClassA
Screen-grid current	1.4 mA	ClassA
Plate resistance	600000 ohm	ClassA
Transconductance	4900 uS	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA;TriodeConnection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	9000 ohm	TriodeConnection
Transconductance	4400 uS	TriodeConnection
Amplification factor	40	TriodeConnection