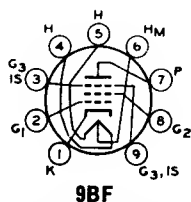


Total Harmonic Distortion	8	per cent
Maximum-Signal Power Output	1.3	watts
MAXIMUM CIRCUIT VALUES		
Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.1	megohm
For cathode-bias operation	0.5	megohm

Refer to chart at end of section.	12FX8 12FX8A
Refer to chart at end of section.	12GA6
For replacement use type 12BQ6GTB/12CU6.	12GB3
For replacement use type 12GW6/12DQ6B.	12GB6 12GB7
Refer to chart at end of section.	12GC6
Refer to type 6GE5.	12GE5
Refer to chart at end of section.	12GJ5
Refer to type 6GJ5A.	12GJ5A
Refer to chart at end of section.	12GN7
Refer to chart at end of section.	12GN7A
For replacement use type 12HG7/12GN7A.	
Refer to chart at end of section.	12GT5 12GT5A
Refer to type 6GW6/6DQ6B.	12GW6/12DQ6B
Refer to chart at end of section.	12H6
Refer to type 38HE7.	12HE7
For replacement use type 12HG7/12GN7A.	12HG7

**9BF****SHARP-CUTOFF PENTODE****12HG7/
12GN7A**

Miniature types with frame grid used as video amplifier in color and black-and-white television receivers. Outlines section, 6E; require 9-contact miniature socket.

Heater Arrangement:	Series	Parallel	
Heater Voltage (ac/dc)	12.6	6.3	volts
Heater Current	0.26	0.52	ampere

Heater-Cathode Voltage:

Peak value	±200 max	volts
Average value	100 max	volts
Direct Interelectrode Capacitances:		
Grid No.1 to Plate	0.15 max	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	14 max	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	4.4 max	pF

Class A₁ Amplifier**MAXIMUM RATINGS (Design-Maximum Values)**

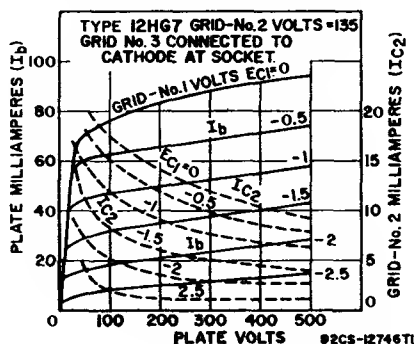
Plate Voltage	400	volts
Grid-No.2 (Screen-Grid) Supply Voltage	330	volts
Grid-No.2 Voltage	See curve page 300	
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	volts
Plate Dissipation	10	watts
Grid-No.2 Input:		
For Grid-No.2 voltages up to 165 volts	1	watt
For Grid-No.2 voltages between 165 and 330 volts	See curve page 300	

CHARACTERISTICS

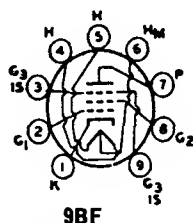
Plate Supply Voltage	300	volts
Grid No.3 (Suppressor Grid)	Connected to cathode at socket	
Grid-No.2 Supply Voltage	135	volts
Grid No.1	Connected to negative end of cathode resistor	
Cathode Resistor	47	ohms
Plate Resistance (Approx.)	60000	ohms
Transconductance	32000	μmhos
Plate Current	31	mA
Grid-No.2 Current	4.8	mA
Grid-No.1 Voltage (Approx.) for plate current of 100 μA	-4.5	volts

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.1	megohm
For cathode-bias operation	0.25	megohm

**12HL7****SHARP-CUTOFF PENTODE**

Miniature type with frame grid used as a video output amplifier in color television receivers. Outlines section, 6E; requires miniature 9-contact socket.



Heater Arrangement	Series	Parallel	
Heater Voltage	12.6	6.3	volts
Heater Current	0.3	0.6	ampere