6BS3A

12BS3A, 17BS3A

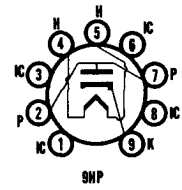
Color Television Type

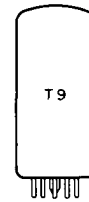
DAMPER

Heater-Cathode Diode

Construction .....Novar T-9
Base .....Button 9 Pin, E9-89
Basing 9HP
Outline
Maximum Diameter .....1.188 In.
Maximum Seated Height .....2.625 In.
Maximum Overall Height .....3.005 In.

The 6BS3A, 12BS3A, and 17BS3A are identical to the 6BS3, 12BS3, and 17BS3 except for base with exhaust tip at bottom and shorter bulb.





6BS8

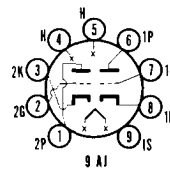
5BS8, 4BS8

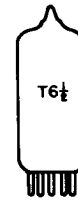
Color Television Type

VHF CASCODE AMPLIFIER

Medium Mu Twin Triode

Construction .....Miniature T-6½
Base .....Button 9 Pin, E9-1
Basing 9AJ
Outline 6-2
Maximum Diameter .....0.875 In.
Maximum Seated Height .....1.938 In.
Maximum Overall Height .....2.188 In.





ELECTRICAL DATA

HEATER OPERATION

	4BS8	5BS8	6BS8
Heater Voltage	4.5	5.6	6.3 Volts
Heater Current	600	450	400 Ma
Heater Warm-up Time	11	11	— Seconds
Maximum Heater-Cathode Voltage			
Heater Negative with Respect to Cathode			
Total DC and Peak			200 Volts
Heater Positive with Respect to Cathode			
DC			100 Volts
Total DC and Peak			200 Volts

DIRECT INTERELECTRODE CAPACITANCES (Shielded)(1)

	Section 1	Section 2
Grid to Plate	1.15	1.15 Pf
Input	2.6	— Pf
Output	1.2	— Pf
Heater to Cathode	2.6	2.6 Pf
Plate to Cathode (Max.)	0.15	0.15 Pf
Coupling		
Plate to Plate (Max.)	0.01	Pf
Plate of Section 2 to Plate and Grid of Section 1 (Max.)	0.024	Pf
Grounded Grid Operation		
Input	5.0	5.0 Pf
Output	2.2	2.2 Pf

RATINGS (Design Center Rating System)

Plate Voltage (Max.)	150 Volts
Plate Dissipation (Each Section) (Max.)	2.0 Watts
DC Cathode Current (Max.)	20 Ma
Grid Circuit Resistance (Each Section) (Max.)	0.5 Megohm

CHARACTERISTICS AND TYPICAL OPERATION
Class A1 Amplifier (Each Section)

Plate Voltage	150 Volts
Cathode Bias Resistor	220 Ohms
Plate Current	10 Ma
Transconductance	7200 μmhos
Amplification Factor	36
Plate Resistance	5000 Ohms
Grid Voltage for Ib = 10 μa (Section 2 only)	–7 Volts

Cascode Amplifier

Plate Supply Voltage	250 Volts
Plate Current	16 Ma
Grid Voltage	–1 Volt
Transconductance	10,000 μmhos
Ec1 for gm = 50 μmhos (Approx.)	–6 Volts

NOTES:

(1) External shield No. 315.
(2) Section 2 (Pins 1, 2, and 3) is intended as the input section of the cascode circuit.

Color Television Type

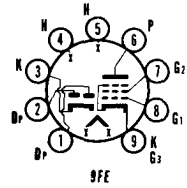
AFC or DETECTOR (D) IF/VIDEO/AGC AMPLIFIER (P)

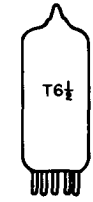
6BT8

5BT8

Double Diode and Sharp Cutoff Pentode

Construction .....Miniature T-6½
Base .....Button 9 Pin, E9-1
Basing 9FE
Outline 6-2
Maximum Diameter .....0.875 In.
Maximum Seated Height .....1.938 In.
Maximum Overall Height .....2.188 In.





ELECTRICAL DATA
HEATER OPERATION

	5BT8	6BT8
Heater Voltage	4.7	6.3 Volts
Heater Current	600	450 Ma
Heater Warm-up Time	11	— Seconds
Maximum Heater-Cathode Voltage		
Heater Negative with Respect to Cathode		
Total DC and Peak		200 Volts
Heater Positive with Respect to Cathode		
DC		100 Volts
Total DC and Peak		200 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Pentode Section	
Grid No. 1 to Plate (Max.)	0.04 Pf
Input	7.0 Pf
Output	2.3 Pf
Diode (Each Section)	
Plate to (h + k)	1.3 Pf
Cathode to (h + p)	3.0 Pf
Coupling	
Pentode Grid No. 1 to Diode Plate	0.005 Pf
Pentode Plate to Diode Plate	0.020 Pf

RATINGS (Design Center Rating System)

Plate Voltage (Max.)	300 Volts
Grid No. 2 Supply Voltage (Max.)	300 Volts
Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)
Positive Grid No. 1 Voltage (Max.)	0 Volt
Plate Dissipation (Max.)	2.0 Watts
Grid No. 2 Input (Max.)	0.5 Watt
Grid No. 1 Circuit Resistance	
Fixed Bias (Max)	0.25 Megohm
Self Bias (Max.)	1.0 Megohm

CHARACTERISTICS AND TYPICAL OPERATION
Pentode

Plate Voltage	200 Volts