

Medium-Mu Triode— Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

Especially Useful as Combined Triode Oscillator and Pentode Mixer in VHF TV Tuners

ELECTRICAL

Heater Characteristics and Ratings

Voltage (AC or DC)	6.3 ^a	6.3 ± 0.6	V
Current	0.450 ± 0.030	0.450 ^b	A
Warm-up time (average)	11	-	s
Peak heater-cathode voltage (Each unit)			
Heater negative with respect to cathode. . .		200 max	V
Heater positive with respect to cathode. . .		200 ^c max	V

Direct Interelectrode Capacitances (Approx.)

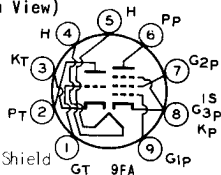
	Without External Shield	With External Shield ^d	
Triode Unit			
Grid to plate	1.8	1.8	pF
Input: G _T to (K _T , K _p + G _{3p} + IS, H). . . .	2.8	2.8	pF
Output: P _T to (K _T , K _p + G _{3p} + IS, H). . . .	1.5	2.0	pF
Pentode Unit			
Grid No.1 to plate.	0.02	0.01	pF
Input: G _{1p} to (K _p + G _{3p} + IS, G _{2p} , H). . . .	4.6	4.6	pF
Output: P _p to (K _p + G _{3p} + IS, G _{2p} , H). . . .	2.4	3.2	pF
Triode Cathode to Heater.	2.4	2.4 ^e	pF
Pentode Cathode to Heater.	2.4	2.4 ^e	pF
Pentode Grid No.1 to Triode Plate.	0.2 max	0.2 max	pF
Pentode Plate to Triode Plate.	0.1 max	0.02 max	pF

MECHANICAL

Operating Position	Any
Type of Cathode.	Coated Unipotential
Maximum Overall Length	2.187 in
Maximum Seated Length.	1.937 in
Maximum Diameter	0.875 in
Length, Base Seat to Bulb Top.	1.469 to 1.656 in Excluding tip
Dimensional Outline (JEDEC 6-2).	See General Section
Envelope	JEDEC T6-1/2
Base	Small-Button Noval 9-Pin (JEDEC E9-1)

TERMINAL DIAGRAM (Bottom View)

- Pin 1—Triode Grid
- Pin 2—Triode Plate
- Pin 3—Triode Cathode
- Pin 4—Heater
- Pin 5—Heater
- Pin 6—Pentode Plate
- Pin 7—Pentode Grid No.2
- Pin 8—Pentode Cathode, Grid No.3, Internal Shield
- Pin 9—Pentode Grid No.1



← Indicates a change.



RADIO CORPORATION OF AMERICA
Electronic Components and Devices
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DATA
2-67

6BR8A

CHARACTERISTICS, CLASS A₁ AMPLIFIER

	Triode Unit	Pentode Unit	
Plate Voltage.	125	125	V
Grid No.2 Voltage.	-	110	V
Grid No.1 Voltage.	-1	-1	V
Amplification Factor	40	-	
Plate Resistance (Approx.)	-	0.2	MΩ
Transconductance	7500	5000	μmho
Plate Current.	13.5	9.5	mA
Grid-No.2 Current.	-	3.5	mA
Grid-No.1 Voltage (Approx.).	-9	-9	V

for plate $\mu A = 20$

CLASS A₁ AMPLIFIER

Design Maximum Ratings

	Triode Unit	Pentode Unit	
Plate Voltage.	330	330	V
Grid-No.2 (Screen-Grid) Supply Voltage	-	330	V
Grid-No.2 Voltage.	-	See Grid-No.2	
<i>Input Rating Chart at front of Receiving Tube Section</i>			
Grid-No.1 (Control-Grid) Voltage	0	0	V
Positive-bias value			
Grid-No.2 Input			
For grid-No.2 voltages up to 165 volts	-	0.55	W
For grid-No.2 voltages between 165 and 330 volts	-	See Grid-No.2	
<i>Input Rating Chart at front of Receiving Tube Section</i>			
Plate Dissipation.	2.5	3	W

^a At heater amperes = 0.450.

^b At heater volts = 6.3.

^c The dc component must not exceed 100 volts.

^d With external shield JEDEC No.315 connected to Pin 4, except as noted.

^e With external shield JEDEC No.315 connected to Pin 6.

Curves shown under Type 6U8A also apply to the 6BR8A.

→ Indicates a change.

