

Medium-Mu Triode— Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

For Video and Bandpass Amplifier Applications in TV Receivers

Electrical:

Heater Characteristics and Ratings:

Voltage (AC or DC)	6.3 ± 0.6 ^a	volts
Current at heater volts = 6.3	0.600 ^b	amp
Warm-up time (Average)	11	sec
Peak heater-cathode voltage (Each unit):		
Heater negative with respect to cathode	200 max.	volts
Heater positive with respect to cathode	200 ^c max.	volts

Direct Interelectrode Capacitances:

	Without External Shield	With External Shield ^d	
Triode Unit:			
G _T to P _T	2.8	2.8	pf
Input: G _T to (K _T , K _P +G _{3P} +IS, H)	2.8	3.0	pf
Output: P _T to (K _T , K _P +G _{3P} +IS, H)	1.6	2.4	pf

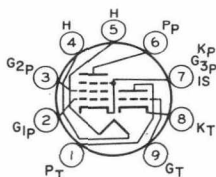
Pentode Unit:

G _{1P} to P _P	0.030 max.	0.026 max.	pf
Input: G _{1P} to (K _P +G _{3P} +IS, G _{2P} , H)	7.5	7.5	pf
Output: P _P to (K _P +G _{3P} +IS, G _{2P} , H)	2.4	3.0	pf

Mechanical:

Operating Position	Any
Type of Cathodes	Coated Unipotential
Maximum Overall Length	2-3/16"
Maximum Seated Length	1-15/16"
Length, Base Seat to Bulb Top (Excluding tip)	1-9/16" ± 3/32"
Diameter	0.750" to 0.875"
Dimensional Outline	See General Section
Bulb	.T6-1/2
Base	Small-Button Noval 9-Pin (JEDEC No. E9-1)
Basing Designation for BOTTOM VIEW	9AE

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



6HL8

Characteristics:

	Triode Unit	Pentode Unit	
Plate Voltage.	125	125	volts
Grid-No.2 Voltage.	-	125	volts
Grid-No.1 Voltage.	-1	-1	volt
Amplification Factor	40	-	
Plate Resistance (Approx.)	5000	150000	ohms
Transconductance	7000	10000	μ mhos
Plate Current.	12.5	12	ma
Grid-No.2 Current.	-	4.5	ma
Grid-No.1 Voltage (Approx.) for plate $\mu a = 20$	-	-7	volts

AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

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

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:			
For fixed-bias operation	1 max.	0.25 max.	megohm
For self-bias operation.	1 max.	1 max.	megohm

^a For parallel heater operation.

^b For series heater operation current must be limited to 0.600 ± 0.040 amperes.

^c The dc component must not exceed 100 volts.

^d With external shield, JEDEC No.315, connected to cathode of unit under test.

