

6AF11

Dual Triode—Sharp-Cutoff Pentode

Dual Triode Has High-Mu Unit & Medium-Mu Unit

DUODECAR TYPE

Electrical:

Heater Characteristics and Ratings:

Voltage (AC or DC)	6.3 ± 0.6	volts
Current at 6.3 volts	1.050	amp

Maximum Heater Cathode Voltage:

Heater negative with respect to cathode:		
Peak	200	volts
Heater positive with respect to cathode:		
Peak	200	volts
DC component	100	volts

Direct Interelectrode Capacitances: (Without external shield)

Triode Unit No. 1

Grid to plate.	1.9	pf
Input: G_{T1} to (K_{T1} , K_{T2} + IS, K_p + G_{3p} + IS, H)	3.0	pf
Output: P_{T1} to (K_{T1} , K_{T2} + IS, K_p + G_{3p} + IS, H)	2.2	pf

Triode Unit No. 2

Grid to plate.	3.6	pf
Input: G_{T2} to (K_{T2} + IS, K_p + G_{3p} + IS, H)	2.4	pf
Output: P_{T2} to (K_{T2} + IS, K_p + G_{3p} + IS, H)	3.8	pf

Pentode Unit

Grid No. 1 to plate	0.12	pf
Input: G_{1p} to (K_{T2} + IS, K_p + G_{3p} + IS, G_{2p} , H)	10.0	pf
Output: P_p to (K_{T2} + IS, K_p + G_{3p} + IS, G_{2p} , H)	4.5	pf
Pentode plate to plate of triode No. 2	0.045 max.	pf
Plate of triode No. 1 to plate of triode No. 2	0.06 max.	pf

Characteristics, Class A₁ Amplifier:

	Triode Units	No. 1	No. 2	
Plate Supply Voltage		200	200	volts
Grid Voltage		-2	-	volts
Cathode Resistor		-	220	ohms
Amplification Factor		68	41	
Plate Resistance (Approx.)		12400	9400	ohms
Transconductance		5500	4400	μ mhos
Plate Current		7	9.2	ma
Grid Voltage for $I_b = 10 \mu a$		-5.5	-	volts
Grid Voltage for $I_b = 100 \mu a$		-	-6.5	volts

Pentode Unit

Plate Supply Voltage	50	200	volts
Grid-No. 2 Supply Voltage	150	150	volts
Grid-No. 1 Voltage	0	-	volts
Cathode Resistor	-	100	ohms
Plate Resistance (Approx.)	-	68000	ohms
Transconductance	-	11000	μmhos
Plate Current	55 ^a	24	ma
Grid-No. 2 Current	18 ^a	4.8	ma
Grid No. 1 Voltage for $I_b = 100 \mu a$	-	-10	volts



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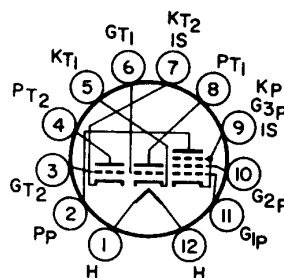
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Mechanical:

Operating Position Any
 Types of Cathodes. Coated Unipotential
 Maximum Overall Length 2.375"
 Seated Length. 1.750" to 2.000"
 Diameter 1.062" to 1.188"
 Dimensional Outline (JEDEC 9-58) See *General Section*
 Bulb T9
 Base Small-Button Duodecar 12-Pin (JEDEC No.E12-70)
 Basing Designation for BOTTOM VIEW 12DP

Pin 1-Heater
 Pin 2-Pentode Plate
 Pin 3-Grid of Triode Unit No.2
 Pin 4-Plate of Triode Unit No.2
 Pin 5-Cathode of Triode Unit No.1
 Pin 6-Grid of Triode Unit No.1
 Pin 7-Cathode of Triode Unit No.2,
 Internal Shield
 Pin 8-Plate of Triode Unit No.1
 Pin 9-Pentode Cathode, Pentode Grid
 No.3, Internal Shield
 Pin 10-Pentode Grid No.2
 Pin 11-Pentode Grid No.1
 Pin 12-Heater



AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

	Triode Units No.1 No.2	
Plate Voltage.	330	330 volts
Grid (Control-Grid) Voltage:		
Positive-bias value.	0	0 volts
Plate Dissipation.	1.1	2 watts

Pentode Unit

Plate Voltage.	330	volts
Grid-No.2 (Screen-Grid) Supply Voltage	330	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	volts
Grid-No.2 Input:		
For grid-No.2 voltages up to 165 volts	1.25	watts
For grid-No.2 voltages between 165 and 330 volts. .See <i>Grid-No.2 Input Rating Chart</i>		
Plate Dissipation	5	watts

Maximum Circuit Values: (Values are for Each Unit)

	Triode Units Pentode Unit	
Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.5	0.25 megohm
For cathode-bias operation	1	1 megohm

^a value measured by recurrent waveform such that maximum ratings of tube are not exceeded.

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