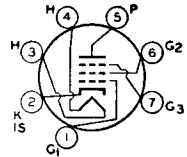


6DT6A

3DT6A, 4DT6A

SHARP-CUTOFF PENTODE

Miniature type used as FM detector in color and black-and-white television receivers. Outlines section, 5C; requires miniature 7-contact socket. Types 3DT6A and 4DT6A are identical with type 6DT6A except for heater ratings.

**7EN**

	3DT6A	4DT6A	6DT6A	volts amperes seconds
Heater Voltage (ac/dc)	3.15	4.2	6.3	
Heater Current	0.6	0.45	0.3	
Heater Warm-up Time (Average)	11	11	—	
Heater-Cathode Voltage:				
Peak value	±200 max	±200 max	±200 max	volts
Average value	100 max	100 max	100 max	volts
Direct Interelectrode Capacitances (Approx.)*				
Grid No.1 to Plate			0.02	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield			5.8	pF
Grid No.3 to Plate			1.7	pF
Grid No.1 to Grid No.3			0.1	pF
Grid No.3 to Cathode, Heater, Grid No.1, Grid No.2, and Internal Shield			6.1	pF

* External shield connected to cathode.

Class A₁ Amplifier**CHARACTERISTICS**

Plate Supply Voltage	150	volts
Grid No.3 (Suppressor Grid)	Connected to cathode at socket	
Grid-No.2 (Screen-Grid) Supply Voltage	100	volts
Cathode-Bias Resistor	560	ohms
Plate Resistance (Approx.)	0.15	megohm
Transconductance, Grid No.1 to Plate	1350	μmhos
Transconductance, Grid No.3 to Plate	515	μmhos
Plate Current	1.55	mA
Grid-No.2 Current	1.8	mA
Grid-No.1 Voltage (Approx.) for plate current of 10 μA	—5.2	volts
Grid-No.3 Voltage (Approx.) for plate current of 10 μA	—4.2	volts

FM Detector**MAXIMUM RATINGS (Design-Maximum Values)**

Plate Voltage	330	volts
Grid-No.3 Voltage	28	volts
Grid-No.2 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	1.7	watts
Grid-No.2 Input:		
For grid-No.2 voltages up to 165 volts	1.1	watts
For grid-No.2 voltages between 165 and 330 volts	See curve page 300	

MAXIMUM CIRCUIT VALUES

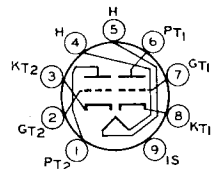
Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.25	megohm
For cathode-bias operation	0.5	megohm

6DT8

12DT8

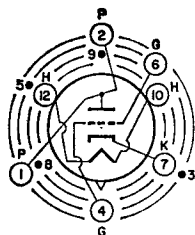
HIGH-MU TWIN TRIODE

Miniature type used in radio and television receiver applications and in push-pull rf amplifiers or as frequency converter in FM tuners. Outlines section, 6B; requires miniature 9-contact socket. Type 12DT8 is identical with type 6DT8 except for the heater ratings. Except for heater and heater-cathode ratings, interelectrode capacitances, and basing arrangement, these types are identical with miniature type 12AT7.

**9AJ**

	6DT8	12DT8	
Heater Voltage (ac/dc)	6.3	12.6	volts
Heater Current	0.3	0.15	ampere
Heater-Cathode Voltage:			
Peak value	±200 max	±200 max	volts
Average value	100 max	100 max	volts
Direct Interelectrode Capacitances (Approx., Each Unit Except as Noted:			
Grid to Plate		1.6*	pF
Grid to Cathode, Heater, and Internal Shield		2.7*	pF
Plate to Cathode, Heater, and Internal Shield		1.6*	pF
Heater to Cathode		3*	pF
Cathode to Grid, Heater, and Internal Shield (Unit No.2)		5.3†	pF
Plate to Grid, Heater, and Internal Shield (Unit No.2)		2.8†	pF

- † With external shield connected to grid of unit under test.
- With external shield connected to ground.
- * With external shield connected to cathode of unit under test.



INDEX = LARGE LUG
• = SHORT PIN
12EA

MEDIUM-MU TRIODE

6DV4

2DV4

Nuvistor type used at frequencies up to 1000 MHz in uhf oscillator stages of color and black-and-white television receivers. Outlines section, 1; requires nuvistor socket. Type 2DV4 is identical with type 6DV4 except for heater ratings.

	2DV4	6DV4	
Heater Voltage (ac/dc)	2.1	6.3	volts
Heater Current	0.45	0.135	ampere
Heater Warm-up Time (Average)	8	—	seconds
Peak Heater-Cathode Voltage	±100 max	±100 max	volts
Direct Interelectrode Capacitance (Approx.):			
Grid to Plate		1.8	pF
Grid to Cathode, Heater, and Shell		4.4	pF
Plate to Cathode, Heater, and Shell		1.9	pF
Plate to Cathode		0.25	pF
Heater to Cathode		1.4	pF
Grid to Cathode		3.7	pF

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

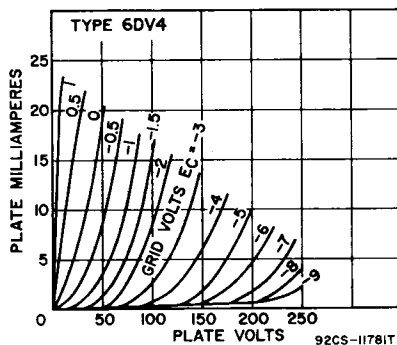
Plate Supply Voltage	300	volts
Plate Voltage	125	volts
Grid Voltage:		
Negative-bias value	55	volts
Peak positive value	2	volts
Plate Dissipation	1	watt
Cathode Current	15	mA

CHARACTERISTICS

Plate Supply Voltage	75	volts
Cathode-Bias Resistor	100	ohms
Amplification Factor	35	
Plate Resistance (Approx.)	3100	ohms
Transconductance	11500	μmhos
Plate Current	10.5	mA
Grid Voltage (Approx.) for plate current of 10 μA	—7	volts

TYPICAL OPERATION AS OSCILLATOR AT 950 MHz

Plate Voltage	60	volts
Grid Voltage	—2	volts
Grid Resistor	5600	ohms
Plate Current	8	mA
Grid Current	350	μA

**MAXIMUM CIRCUIT VALUES**

Grid-Circuit Resistance:*

For fixed-bias operation	0.1	megohm
For cathode-bias operation	0.2	megohm

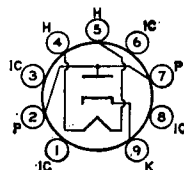
* For operation at metal-shell temperatures up to 135°C.

6DW4
6DW4A

Refer to chart at end of section.

6DW4B**HALF-WAVE
VACUUM RECTIFIER**

Novar types used as damper tubes in horizontal-deflection circuits of color and black-and-white television receivers. Outlines section, 11D and 30B, respectively; require novar 9-contact socket. Socket terminals 1, 3, 6, and 8 should not be used as tie points; it is recommended that socket clips for these pins be removed to reduce the possibility of arc-over and to minimize leakage. These tubes, like other power-handling tubes, should be adequately ventilated.

**9HP**

Heater Voltage (ac/dc)	6.3	volts
Heater Current	1.2	amperes
Direct Interelectrode Capacitances (Approx.):		
Plate to Cathode and Heater	6.5	pF
Cathode to Plate and Heater	9	pF
Heater to Cathode	2.8	pF

Damper Service

For operation in a 525-line, 30-frame system

MAXIMUM RATINGS (Design-Maximum Values)

Peak Inverse Plate Voltage#	5500	volts
Peak Plate Current	1300	mA
Average Plate Current	250	mA
Plate Dissipation	8.5	watts
Heater-Cathode Voltage:		
Peak value	+300 —5000	volts
Average value	+100 —900	volts

CHARACTERISTIC, Instantaneous Value

Tube Voltage Drop for plate current of 350 mA

25

volts

Pulse duration must not exceed 15% of a horizontal scanning cycle (10 microseconds).

6DW5

Refer to chart at end of section.

6DX8

Refer to chart at end of section.