Peak Negative-Pulse Grid Voltage	250	volts
Peak Cathode Current	105	mA
Average Cathode Current	30	mA
Plate Dissipation	5.5	watts
MAXIMUM CIRCUIT VALUE		
Grid-Circuit Resistance, for cathode-bias operation	2.2	megohms

Pulse duration must not exceed 15% of a vertical scanning cycle (2.5 milliseconds).
† Under no circumstances should this absolute value be exceeded.

Refer to chart at end of section. **12B8GT**

Refer to type 6BA6. **12BA6**

Refer to chart at end of section. **12BA7**

Refer to chart at end of section. **12BD6**

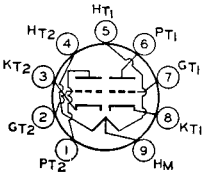
Refer to type 6BE3. **12BE3**

Refer to type 6BE6. **12BE6**

Refer to chart at end of section. **12BF6**

Refer to type 6BF11. **12BF11**

Refer to chart at end of section. **12BH7**



9A

MEDIUM-MU TWIN TRIODE **12BH7A**

Miniature type used as combined vertical-deflection amplifier and vertical oscillator, and as horizontal-deflection oscillator, in television receivers, and in phase-inverter and multivibrator circuits. **Outlines section,** 6E; requires miniature 9-contact socket. Each triode unit is independent of the other except for the common heater.

	Series	Parallel	
Heater Arrangement:			
Heater Voltage (ac/dc)	12.6	6.3	volts
Heater Current	0.3	0.6	ampere
Heater Warm-up Time (Average)	—	11	seconds
Heater-Cathode Voltage:			
Peak value		±200 max	volts
Average value		100 max	volts

	Unit No.1	Unit No.2	
Direct Interelectrode Capacitances (Approx.):			
Grid to Plate	2.6	2.6	pF
Grid to Cathode and Heater	3.2	3.2	pF
Plate to Cathode and Heater	0.5	0.4	pF
Plate of Unit No.1 to Plate of Unit No.2	0.8		pF

Class A_1 Amplifier (Each Unit)

MAXIMUM RATINGS (Design-Center Values)		
Plate Voltage	300	volts
Grid Voltage:		
Negative-bias value	50	volts
Positive-bias value	0	volts
Cathode Current	20	mA
Plate Dissipation:		
Each Plate	3.5	watts
Both plates (Both units operating)	7	watts
CHARACTERISTICS		
Plate Voltage	250	volts
Grid Voltage	−10.5	volts
Amplification Factor	16.5	
Plate Resistance (Approx.)	5300	ohms
Transconductance	3100	μmhos
Plate Current	11.5	mA
Plate Current for grid voltage of −14 volts	4	mA
Grid Voltage (Approx.) for plate current of 50 μA	−25	volts

MAXIMUM CIRCUIT VALUES

Grid-Circuit Resistance:		
For fixed-bias operation	0.25	megohm
For cathode-bias operation	1	megohm

Oscillator (Each Unit)

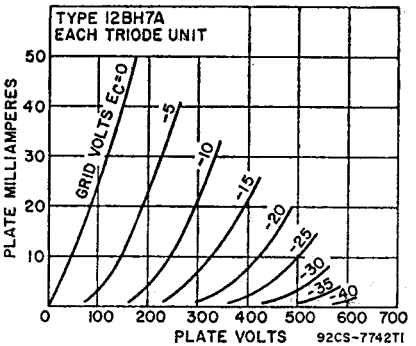
For operation in a 525-line, 30-frame system

MAXIMUM RATINGS (Design-Center Values)	Vertical-Deflection Oscillator	Horizontal-Deflection Oscillator	
DC Plate Voltage	450	450	volts
Peak Negative-Pulse Grid Voltage	400	600	volts
Peak Cathode Current	70	300	mA
Average Cathode Current	20	20	mA
Plate Dissipation:			
Each Plate	3.5	3.5	watts
Both Plates (Both units operating)	7	7	watts
MAXIMUM CIRCUIT VALUES			
Grid-Circuit Resistance	2.2	2.2	megohms

Vertical-Deflection Amplifier (Each Unit)

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

MAXIMUM RATINGS (Design-Center Values)		
DC Plate Voltage	450	volts
Peak Positive-Pulse Plate Voltage# (Absolute maximum)	1500*	volts
Peak Negative-Pulse Grid Voltage	250	volts
Peak Cathode Current	70	mA
Average Cathode Current	20	mA
Plate Dissipation:		
Each Plate	3.5	watts
Both Plates (Both units operating)	7	watts



MAXIMUM CIRCUIT VALUE

Grid-Circuit Resistance for cathode-bias operation	2.2	megohms

Pulse duration must not exceed 15% of a vertical scanning cycle (2.5 milliseconds).
* Under no circumstances should this absolute value be exceeded.

12BK5	Refer to chart at end of section.
12BL6	Refer to chart at end of section.
12BN6	Refer to chart at end of section.
12BQ6GTB/12CU6	Refer to type 6BQ6GTB/6CU6.
12BR3	For replacement use type 12AF3/12BR3/12RK19.
12BR7	Refer to chart at end of section.
12BS3	Refer to chart at end of section. For replacement use type 12BS3A/12DW4A.