

6FM8

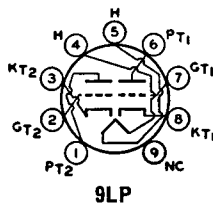
Refer to chart at end of section.

6FQ5ARefer to chart at end of section.
For replacement use type 6GK5/6FQ5A.**6FQ7**

Refer to chart at end of section.

**6FQ7/
6CG7****MEDIUM-MU TWIN TRIODE****8FQ7/8CG7, 12FQ7**

Miniature type used as combined vertical- and horizontal-deflection oscillator in color and black-and-white television receivers. Outlines section, 6E; requires miniature 9-contact socket. Types 8FQ7/8CG7 and 12FQ7 are identical with type 6FQ7/6CG7 except for heater ratings. For typical operation as a resistance-coupled amplifier, refer to Resistance-Coupled Amplifier section.



	6FQ7/6CG7	8FQ7/8CG7	12FQ7	
Heater Voltage (ac/dc)	6.3	8.4	12.6	volts
Heater Current	0.6	0.45	0.3	ampere
Heater Warm-up Time (Average)	11	—	—	seconds
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.):				
		Unit No.1	Unit No.2	
Grid to Plate		3.6	3.8	pF
Grid to Cathode and Heater		2.4	2.4	pF
Plate to Cathode and Heater		0.34	0.26	pF
Plate of Unit No.1 to Plate of Unit No.2			1	pF

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage		330	volts
Grid Voltage, Positive-bias value		0	volts
Cathode Current		22	mA
Plate Dissipation:			
For either plate		4	watts
For both plates with both units operating		5.7	watts

CHARACTERISTICS

Plate Voltage	90	250	volts
Grid Voltage	0	-8	volts
Amplification Factor	20	20	
Plate Resistance (Approx.)	6700	7700	ohms
Transconductance	3000	2600	μmhos
Plate Current	10	9	mA
Grid Voltage (Approx.) for plate current of 10 μA	-7	-18	volts
Plate Current for grid voltage of -12.5 volts	—	1.3	mA

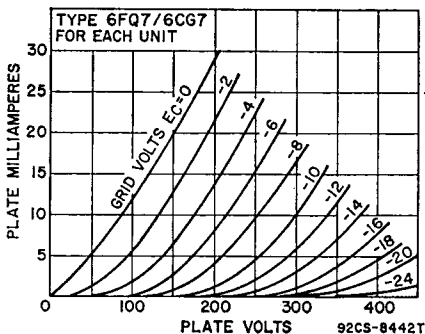
MAXIMUM CIRCUIT VALUE

Grid Circuit Resistance, for fixed-bias operation		1	megohm
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Oscillator

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

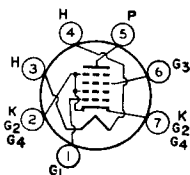
	Vertical-Deflection Oscillator	Horizontal-Deflection Oscillator	
MAXIMUM RATINGS (Design-Maximum Values)			
DC Plate Voltage	330	330	volts
Peak Negative-Pulse Grid Voltage	440	660	volts
Peak Cathode Current	77	330	mA
Average Cathode Current	22	22	mA
Plate Dissipation:			
For either plate	4	4	watts
For both plates with both units operating	5.7	5.7	watts
MAXIMUM CIRCUIT VALUES			
Grid-Circuit Resistance	2.2	2.2	megohms



BEAM HEXODE

6FS5

2FS5, 3FS5



7GA

Miniature type used as rf-amplifier tube in vhf television receivers. In this tube, grid No.1 is the control grid, grid No.2 is a focusing grid, grid No.3 is the screen grid, and grid No.4 is the suppressor grid. Grid No.2 is internally connected to the cathode and grid No.4 aligned with grid No.3. **Outlines section, 5C**; requires miniature 7-contact socket. Types 2FS5 and 3FS5 are identical with type 6FS5 except for heater ratings.

	2FS5	3FS5	6FS5	
Heater Voltage (ac/dc)	2.4	2.9	6.3	volts
Heater Current	0.6	0.45	0.2	ampere
Heater Warm-up Time (Average)	11	11	—	seconds
Heater-Cathode Voltage:				
Peak value	±200 max	±200 max	±200 max	volts
Average value	100 max	100 max	100 max	volts
Direct Interelectrode Capacitances:				
			Shielded Unshielded*	
Grid No.1 to Plate		0.03	0.016	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Grid No.4		4.8	4.8	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Grid No.4		2	2.8	pF

* With external shield connected to pin 7.

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage	300	volts
Grid-No.3 (Screen-Grid) Voltage	150	volts
Grid-No.1 (Control-Grid) Voltage:		
Negative-bias value	50	volts
Positive-bias value	0	volts
Cathode Current	20	mA
Plate Dissipation	3.25	watts
Grid-No.3 Input	0.15	watt

CHARACTERISTICS

Plate Voltage	275	volts
Grid-No.3 Voltage	135	volts
Grid-No.1 Voltage	-0.2	volt
Plate Resistance (Approx.)	0.24	megohm
Transconductance	10000	μmhos
Plate Current	9	mA
Grid-No.3 Current	0.17	mA
Grid-No.1 Voltage (Approx.) for transconductance of 100 μmhos	-5	volts

MAXIMUM CIRCUIT VALUE

Grid-No.1-Circuit Resistance, for fixed-bias operation	0.5	megohm
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Refer to chart at end of section.

6FV6