February 1, 1960

SHARP-CUTOFF TRIODE TYPES 2FH5, 3FH5 AND 6FH5

The 2FH5, 3FH5 and 6FH5 are sharp-cutoff, seven-pin miniature triode types designed particularly for service in V.H.F. television tuners as grounded cathode r-f amplifiers.

The 2FH5, and 3FH5 have been designed for use in receivers which employ series connected heaters, especially in television receivers where the picture-tube heater is in series with other heaters. When each is employed in this type of circuit with other tubes similarly designed having the same heater current rating, heater voltage surges across individual tubes are minimized inasmuch as heater warm-up characteristic is controlled.

MECHANICAL:

Cathode	Coated Unipotential
Bulb	T-5-1/2
Base	Miniature 7-Pin (JEDEC E7-1)
Outline	5-2
Basing	7FP
Mounting Position	Any

ELECTRICAL:

Heater Characteristics:	2FH5	3FH5	6FH5	
Voltage (ac or dc)	2.35	3.0	6.3	Volts
Current	0.60	0.45	0.20	Ampere
Warm-up Time▲	11	11	- -	Seconds

Direct Interelectrode Capacitance:	Unshielded	Shielded★	
Grid 1 to Plate	0.6	0.6	max. μμf
Input	3.2	3.2	μμf
Output	3.2	4.0	μμf

RATINGS

Design Maximum Values

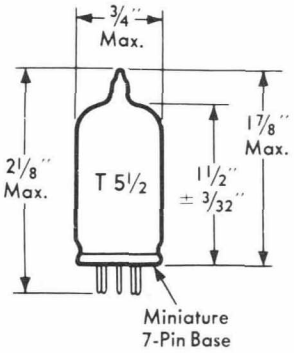
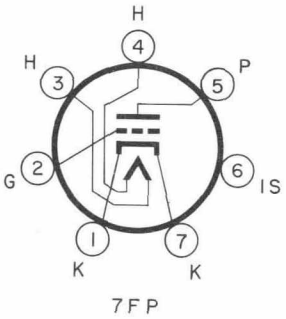
Plate Voltage	150	max.	Volts
Plate Dissipation	2.2	max.	Watts
Grid 1 Voltage:			
Positive Value	0	max.	Volts
Cathode Current	22	max.	Ma.
Grid Circuit Resistance	1.0	max.	Megohm

Heater Ratings: Allowable Heater Voltage	2FH5	3FH5	6FH5		
Maximum	- -	- -	6.9	max.	Volts
Minimum	- -	- -	5.7	min.	Volts
Allowable Heater Current					
Maximum	640	480	- -	max.	Ma.
Minimum	560	420	- -	min.	Ma.
Heater-Cathode Voltage:					
Heater Negative with Respect to Cathode: DC	100	100	100	max.	Volts
Heater Positive with Respect to Cathode: DC	100	100	100	max.	Volts

CHARACTERISTICS & TYPICAL OPERATION:

Plate Voltage	135	Volts
Grid 1 Voltage	−1	Volts
Plate Resistance	5600	Ohms
Transconductance	9000	μmhos
Grid 1 Cutoff Bias #	−5.5	Volts
Plate Current	11.0	Ma.
Amplification Factor	50	

▲ Heater Warm-up Time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying four times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three times rated heater voltage divided by rated heater current.

For Plate current of 100 microamperes.

★ With JEDEC shield No. 316 connected to Pin 1.