RCA-6SF5

HIGH-MU TRIODE
Single-Ended Metal Type

The 6SF5 is a new metal high-mu triode featuring single-ended construction with interlead shielding between grid and heater within the base. The shielding reduces the hum voltage picked up by the grid lead from the heater leads, and permits operation with a satisfactory hum level. The electrical characteristics of the 6SF5 are similar to those of type 6F5.

From a circuit standpoint, the single-ended construction offers distinct advantages in comparison with corresponding types previously available, as follows: (1) elimination of loose or broken grid leads, (2) wiring can be completed below the set panel, (3) neater appearance of the chassis, (4) lowered cost, and (5) simplification of tube renewal.

TENTATIVE CHARACTERISTICS and RATINGS

HEATER VOLTAGE (A.C. or D.C.)	6.3	Volts
HEATER CURRENT	0.3	Ampere
DIRECT INTERELECTRODE CAPACITANCES: [o]		
Grid to Plate	2.6	μμf
Grid to Cathode	4.2	μμf
Plate to Cathode	3.8	μμf
MAXIMUM OVERALL LENGTH	2-5/8"	
MAXIMUM DIAMETER	1-5/16"	
BASE	Small Wafer Octal 6-Pin	

[o] With shell connected to cathode.

Amplifier - Class A

OPERATING CONDITIONS and CHARACTERISTICS:		
Heater Voltage*	6.3	Volts
Plate Voltage	250 max.	Volts
Grid Voltage	-2	Volts
Amplification Factor	100	
Plate Resistance	66000	Ohms
Transconductance	1500	Micromhos
Plate Current	0.9	Milliampere

* In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.

INSTALLATION and APPLICATION

The 6SF5 is recommended for use in resistance-coupled circuits. Operating conditions are the same as those for type 6F5.

Outline Drawing

Same as for 6SJ7

Pin Connections

Pin 1 - Shell	Pin 5 - Plate
Pin 2 - Cathode	Pin 7 - Heater
Pin 3 - Grid	Pin 8 - Heater

(Pin numbers are according to RMA system)

Mounting Position

Vertical or Horizontal - No restrictions

September 19, 1938

from RMA release #144, Oct. 7, 1938

JETEC DATA
JOINT ELECTRON TUBE ENGINEERING COUNCIL
COMMITTEE ON RECEIVING TUBES

JETEC TYPE 6SF5

TRIODE

MECHANICAL DATA

Coated unipotential cathode

Outline drawing	8-1
Bulb	MT-8
Base	B6-23, small wafer octal 6-pin
Maximum diameter	1-5/16"
Maximum overall length	2-5/8"
Maximum seated height	2-1/16"
Pin connections	Basing 6AB

Pin 1 - Shell
Pin 2 - Cathode
Pin 3 - Grid
Pin 5 - Plate
Pin 7 - Heater
Pin 8 - Heater

Mounting position . . . . . any

ELECTRICAL DATA

Ratings

Heater voltage	6.3	volts
Maximum plate voltage	300	volts
Maximum heater-cathode voltage	90	volts

Typical Operating Conditions and Characteristics, Class A1 Amplifier

Heater voltage	6.3	6.3	volts
Heater current	300	300	ma
Plate voltage	100	250	volts
Grid voltage	-1	-2	volts
Amplification factor	100	100	
Plate resistance	85,000	66,000	ohms
Transconductance	1150	1500	μmhos
Plate current	0.4	0.9	ma

Typical Operating Conditions and Characteristics, Resistance Coupled Amplifier

Heater voltage	6.3	6.3	6.3	6.3	volts
Plate supply voltage	100	100	300	300	volts
Control grid voltage	0	0	0	0	volts
Plate load resistor	0.25	0.25	0.25	0.25	megohm
Control grid resistor	10	10	10	10	megohm
Input condenser	.01	.005	.01	.005	μμf
Output condenser	.01	.005	.01	.005	μμf
Grid resistor of following stage	0.5	1.0	0.5	1.0	megohm
Signal source impedance	0	0	0	0	ohms
Distortion	5	5	5	5	%
Output voltage (r.m.s.)	7	8.5	44	50	volts
Voltage gain	48	52	66	71	

Refer to "Interpretation of Receiving Tube Ratings"