RCA-6SQ7

DUPLEX-DIODE HIGH-MU TRIODE
Single-Ended Metal Type

The 6SQ7 is a new metal duplex-diode 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 6SQ7 are similar to those of type 75.

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 - Triode Unit: [o]		
Grid to Plate	1.8	μμf
Grid to Cathode	4.2	μμf
Plate to Cathode	3.4	μμf
MAXIMUM OVERALL LENGTH	2-5/8"	
MAXIMUM DIAMETER	1-5/16"	
BASE	Small Wafer Octal 8-Pin	

[o] With shell connected to cathode.

Triode Unit - Class A Amplifier

OPERATING CONDITIONS and CHARACTERISTICS:		
Heater Voltage*	6.3	Volts
Plate Voltage	250 max.	Volts
Grid Voltage	-2	Volts
Amplification Factor	100	
Plate Resistance	91000	Ohms
Transconductance	1100	Micromhos
Plate Current	0.8	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.

Diode Units - Two

The two diode units are placed around a cathode, the sleeve of which is common to the triode unit. Each diode has its own base pin. Diode biasing of the triode unit is not suitable.

INSTALLATION and APPLICATION

The application and operating conditions for the 6SQ7 are the same as those for the type 75.

Outline Drawing

Same as for 6SJ7

Pin Connections

Pin 1 - Shell	Pin 5 - Diode Plate #1
Pin 2 - Triode Grid	Pin 6 - Triode Plate
Pin 3 - Cathode	Pin 7 - Heater
Pin 4 - Diode Plate #2	Pin 8 - Heater

(Pin numbers are according to RMA system)

Mounting Position

Vertical or Horizontal - No restrictions

from RMA release #144, Oct. 7, 1938

JETEC DATA
JOINT ELECTRON TUBE ENGINEERING COUNCIL
COMMITTEE ON RECEIVING TUBES

JETEC TYPE 6SQ7

DOUBLE DIODE TRIODE

MECHANICAL DATA

Coated unipotential cathode

Outline drawing	8-1	Bulb	MT-8
Base	B8-21 small wafer octal 8-pin		
Maximum diameter	1-5/16"		
Maximum overall length	2-5/8"		
Maximum seated height	2-1/16"		
Pin connections	Basing 8Q		
Pin 1 - Shell		Pin 5 - #1 diode plate	
Pin 2 - Triode grid		Pin 6 - Triode plate	
Pin 3 - Cathode		Pin 7 - Heater	
Pin 4 - #2 diode plate		Pin 8 - Heater	
Mounting position	any		

ELECTRICAL DATA

Direct Interelectrode Capacitances*

Diode input (each unit): (1P or 2P to H+K)	2.6	μμf
Triode grid to #1 diode plate: (G to 1P) max.	0.03	μμf

*Pin 1 connected to pin 3

Ratings

Heater voltage (ac or dc)	6.3	volts
Maximum heater-cathode voltage	90	volts
Maximum plate voltage	300	volts
Maximum positive dc grid voltage	0	volts
Maximum plate dissipation	0.5	watt
Maximum diode current each plate for continuous operation	1.0	ma

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
Plate resistance (approx.)	110,000	85,000	ohms
Transconductance	925	1,175	μmhos
Plate current	0.5	1.1	ma
Amplification factor	100	100	
Average diode current each plate with 10 volts dc applied	2.0	2.0	ma

Continued on Page 2

JOINT ELECTRON DEVICE ENGINEERING COUNCIL

2260 Salmon Tower
11 West Forty-Second Street
New York 36, N. Y.
Telephone: LOngacre 5-0717

Announcement
of
Electron Device Type Reregistration

Release No. 144C (Tentative)*

May 2, 1960

The Joint Electron Device Engineering Council announced the registration of the following electron device designation

6SQ7

on October 7, 1938, Release No. 1938, under the sponsorship of Radio Corporation of America, Harrison, New Jersey.

The sponsor now proposes reregistration based on the following data:

ITEM	AS REGISTERED	AS PROPOSED
Under ELECTRICAL DATA		
Direct Interelectrode Capacitances**		
Diode input (each unit): (1P or 2P to H+K)	2.6	3.3 max. uuf
Triode grid to triode plate	none	1.6 uuf
Triode grid to cathode and heater	none	3.2 uuf
Triode plate to cathode and heater	none	3.0 uuf
Triode grid to #2 diode plate	none	0.04 max. uuf

**Pin 1 connected to pin 3

*Unless valid objection to this reregistration is lodged with the EIA Standards Laboratory prior to June 2, 1960, this reregistration will be made and this information will be considered "FINAL" WITHOUT FURTHER NOTICE!