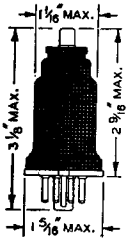
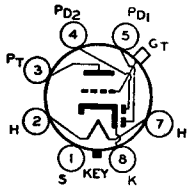


RCA-6Q7

HIGH-MU TRIODE DUPLEX-DIODE



The 6Q7 is an All-Metal tube consisting of two diodes and a high-mu triode in one envelope. It is for use as a combined detector, amplifier, and automatic-volume-control tube in radio receivers designed for its characteristics. For diode-detector considerations, refer to page 26.

CHARACTERISTICS

Heater Voltage (A. C. or D. C.)	6.3	Volts
Heater Current	0.3	Ampere
Grid-Plate Capacitance*	1.5	μμf
Grid-Cathode Capacitance*	5.5	μμf
Plate-Cathode Capacitance*	5	μμf
Cap		Miniature
Base		Small Wafer Octal 7-Pin

Triode Unit—As Class A Amplifier

Plate Voltage	100	250 *max.*	Volts
Grid Voltage	−1.5	−3	Volts
Amplification Factor	70	70	
Plate Resistance	87500	58000	Ohms
Transconductance	800	1200	Micromhos
Plate Current	0.35	1.1	Milliamperes

* With shell connected to cathode.

Diode Units

The two diode plates are placed around a cathode, the sleeve of which is common to the triode unit. Each diode plate has its own base pin. Operation curves for the diode units are given under type 6B7.

INSTALLATION AND APPLICATION

The base pins of the 6Q7 fit the standard octal socket which may be installed to hold the tube in any position. Heater and cathode considerations are the same as for the 6A8.

The 6Q7 is, in many respects, similar to the 75 except that it has a lower amplification factor which permits of handling somewhat larger input driving voltage without overloading. The triode unit is recommended for use only in resistance-coupled circuits. Typical recommended operating conditions are given in the Resistance-Coupled Amplifier Section.

Grid bias for the triode unit of the 6Q7 may be obtained from a fixed source, such as a fixed-voltage tap on the d-c power supply or from a cathode-bias resistor. It should not be obtained by the diode-biasing method because of the probability of plate-current cut-off, even with relatively small signal voltages applied to the diode circuit.

A family of plate characteristic curves is given on the preceding page.

6Q7

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1	94	1937
2	FP	1999.10.10