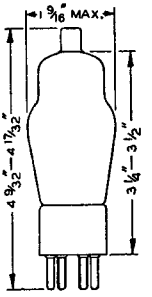
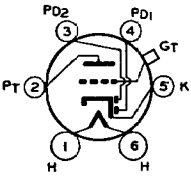


RCA-75

DUPLEX-DIODE HIGH-MU TRIODE



The 75 is a heater type of tube consisting of two diodes and a high-mu triode in a single bulb. It is for use as a combined detector, amplifier, and automatic-volume-control tube in a-c 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-Triode-Plate Capacitance	1.7	$\mu\mu$f
Grid-Cathode Capacitance	1.7	$\mu\mu$f
Triode Plate-Cathode Capacitance	3.8	$\mu\mu$f
Bulb		ST-12
Cap		Small Metal
Base		Small 6-Pin

Triode Unit—As Class A_1 Amplifier

Plate Voltage	250 *max.*	Volts
Grid Voltage	−2	Volts
Amplification Factor	100	
Plate Resistance	91000	Ohms
Transconductance	1100	Micromhos
Plate Current	0.8	Milliampere

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

The **base pins** of the 75 fit the standard six-contact socket which may be installed to hold the tube in any position.

Heater operation and **cathode** connection are the same as for the type 6A8.

APPLICATION

The 75 in many respects is similar in application to the 6Q7. The outstanding difference, however, is that the 75 has a high-mu triode. For this reason, the tube is recommended for use only in resistance-coupled circuits. Furthermore, diode-biasing of the triode unit is not suitable because of the probability of triode plate-current cut-off, even with relatively small signal voltages applied to the diode circuit.

As an **amplifier** in resistance-coupled a-f circuits, the 75 may be operated under the conditions given in the Resistance-Coupled Amplifier Section. A family of average plate characteristic curves applicable to this type will be found under type 2A6.