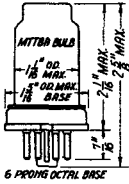


K49C-B

RAYTHEON

K49C-B

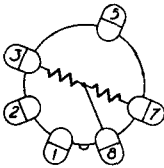


RESISTANCE TUBE
FOR A-C - D-C RECEIVERS
Metal Bulb Octal Base

The K49C-B is a resistance tube designed for use as a voltage dropping resistor in the filament circuit of a-c-d-c receivers. A ballast resistor tap provides voltage for one or two 6.3 volt pilot lamps.

RATINGS

- Voltage Drop at 300 ma.
Supplies correct filament voltage to:
3- 6.3 volt 300 ma. tubes and
2- 25 volt 300 ma. tubes in series
Pilot Lamp Voltage at 300 ma:
2- 6.3 volt 150 ma. lamps in series
1- 6.3 volt 200 ma. lamp
1- 6.3 volt 250 ma. lamp



BOTTOM VIEW OF SOCKET
CONNECT PILOT LAMPS
BETWEEN PINS #7 & #8

49	volts
10	volts
6.6	volts
4.8	volts

When the pilot lamp voltage in an a-c - d-c receiver is taken from a tap on the filament voltage dropping resistor, which usually has no ballasting action, the peak voltage applied to the pilot lamps at the instant the line switch is closed may be several times the rated voltage of the lamps, due to the high initial current drawn by the tubes in the set. In order to limit this peak voltage to a reasonable value, the resistance of the pilot lamp section of a straight resistance tube must be considerably lower than that required to operate the lamps at their rated voltage with the tubes hot. Thus, with a straight resistance tube, the life of the pilot lamps is shortened by the high peak voltage and the final brilliancy is reduced by the low operating voltage.

In the K49C-B the pilot lamp section is a ballast resistor which changes from a low value of resistance with the tube cold to several times its initial value as the tube heats. This limits the peak voltage applied to the pilot lamps to a value within their voltage rating, and operates the lamps at a higher voltage than with a straight resistance tube, increasing the life and final brilliancy of the lamps. The ballasting action also makes it possible to use several different types of pilot lamps with satisfactory results. The characteristic curves show the relation between pilot lamp voltage and time for a typical K49C-B tube and a typical straight resistance tube with similar ratings.

The resistors in the K49C-B are operated in air and the ballasting action obtained in the part shunted across the pilot lamps is due to the heat of the total winding. The resistors operate at relatively low temperature and their resistance characteristics are permanent if the normal rated current is not exceeded.

Resistance tubes with other ratings may also be made. There is considerable power available for ballasting action so that the total voltage drop may be changed to fit other tube combinations requiring either more or less voltage drop.

