

RADIOTRON

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SHEET 1

DUPLEX-DIODE TRIODE

The electrical characteristics of type 6B8-G, when connected as a triode, are almost identical to those of type 85 and a triode-connected 6B8-G may be used to replace type 85 without change in the electrical circuit. Type 6B8-G requires an octal socket (as compared with a 6-pin socket for type 85) pins 3 and 4 tied together forming the plate connection.

Heater	Coated Unipotential Cathode		
Voltage	6.3		a-c or d-c volts
Current	0.3		amp.
Direct Interelectrode Capacitances - Triode Unit			
Grid to Plate	1.5		μmf
Grid to Cathode	1.5		μmf
Plate to Cathode	4.3		μmf
Maximum Overall Length			4-17/32"
Maximum Diameter			1-9/16"
Bulb			ST-12
Cap			Small Metal
Base			Small 6-Pin
Pin 1-Heater			Pin 5-Cathode
Pin 2-Triode Plate			Pin 6-Heater
Pin 3-Diode Plate # 2			Cap -Triode Grid
Pin 4-Diode Plate # 1			
Mounting Position			any



BOTTOM VIEW

TRIODE UNIT - Class A Amplifier

Operating Conditions and Characteristics:				
Heater*	6.3	6.3	6.3	volts
Plate Voltage	135	180	250 max.	volts
Grid Voltage	-10.5	-13.5	-20	volts
Amp. Fact.	8.3	8.3	8.3	
Plate Res.	11000	8500	7500	ohms
Transcond.	750	975	1100	μmhos
Plate Cur.	3.7	6.0	8.0	mA.
Load Res.	25000	20000	20000	ohms
Power Output	75	160	350	mW.

DIODE UNITS - Two

(For average diode characteristics see under 6B7, 6B7S)

The two diode plates are placed around a cathode the sleeve of which is common to the triode unit. Each diode has its own base pin. Their rectifying or detecting action may be used in half-wave or full-wave arrangement to supply signal voltage to the triode unit and/or voltage to regulate the gain of the r-f or i-f amplifier stages so as to maintain essentially constant-carrier input to the audio detector. The half-wave circuit will provide approximately twice the rectified voltage obtainable from the full-wave circuit.

Regulation of amplifier gain by means of a rectified voltage may be accomplished by a number of methods. The regulating voltage may be applied to the control grids of the amplifier tubes or it may be applied in the case of the r-f pentodes to their suppressors, plates and/or screens.

The complex structure of the 85 permits of obtaining a-v-c voltage in a number of ways. The term "diode-biased" amplifier denotes the arrangement where the grid bias for the triode is obtained from the diode circuit. Diode biasing of the triode may be used only when at least 20,000 ohms resistance is in the triode plate circuit.

* 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.

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AVERAGE PLATE CHARACTERISTICS TRIODE UNIT

