



9CV

POWER PENTODE

6BQ5

6BQ5/EL84

8BQ5, 10BQ5

Miniature type used in the output stage of audio-frequency amplifiers. Outlines section, 6G; requires miniature 9-contact socket. Types 8BQ5 and 10BQ5 are identical with type 6BQ5 except for heater ratings.

	6BQ5 6BQ5/EL84	8BQ5	10BQ5	
Heater Voltage (ac/dc)	6.3	8	10.6	volts
Heater Current	0.76	0.6	0.45	ampere
Heater Warm-up Time (Average)	—	11	11	seconds
Heater-Cathode Voltage:				
Peak value	±100 max	±100 max	±100 max	volts
Average value	100 max	100 max	100 max	volts
Direct Interelectrode Capacitances:				
Grid No.1 to Plate			0.5 max	pF
Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3			10.8	pF
Plate to Cathode, Heater, Grid No.2, and Grid No.3			6.5	pF
Grid No.1 to Heater			0.25 max	pF

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Center Values)

Plate Voltage	300	volts
Grid-No.2 (Screen-Grid) Voltage	300	volts
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	volts
Cathode Current	65	mA
Plate Dissipation	12	watts
Grid No.2 Input	2	watts

TYPICAL OPERATION

Plate Voltage	250	volts
Grid-No.2 Voltage	250	volts
Grid-No.1 (Control-Grid) Voltage	—7.3	volts
Peak AF Grid No.1 Voltage	6.2	volts
Zero-Signal Plate Current	48	mA
Maximum-Signal Plate Current	50.6	mA
Zero-Signal Grid-No.2 Current	5.5	mA
Maximum-Signal Grid-No.2 Current	10	mA
Plate Resistance (Approx.)	38000	ohms
Transconductance	11300	μmhos
Load Resistance	4500	ohms
Total Harmonic Distortion	10	per cent
Maximum-Signal Power Output	5.7	watts

MAXIMUM CIRCUIT VALUES

Grid-No.-Circuit Resistance:		
For fixed-bias operation	0.3	megohm
For cathode-bias operation	1	megohm

Push-Pull Class AB₁ AmplifierMAXIMUM RATINGS (Same as for Single-Tube Class A₁ Amplifier)

TYPICAL OPERATION (Values are for two tubes)

Plate Supply Voltage	250	300	volts
Grid-No.2 Supply Voltage	250	300	volts
Cathode-Bias Resistor	130	130	ohms
Peak AF Grid-No.1-to-Grid-No.1 Voltage	22.6	28.3	volts
Zero-Signal Plate Current	62	72	mA
Maximum-Signal Plate Current	75	92	mA
Zero-Signal Grid-No.2 Current	7	8	mA
Maximum-Signal Grid-No.2 Current	15	22	mA
Effective Load Resistance (Plate-to-plate)	8000	8000	ohms
Total Harmonic Distortion	3	4	per cent
Maximum-Signal Power Output	11	17	watts

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.3	megohm
For cathode-bias operation	1	megohm

Refer to chart at end of section.

6BQ6GT