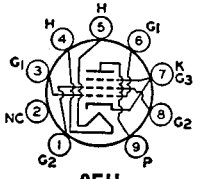
Refer to chart at end of section. **12A6Y**

Refer to chart at end of section. **12A7**

Refer to chart at end of section. **12A8GT**



9EU

BEAM POWER TUBE 12AB5

Miniature type used in the output stage of automobile radio receivers operating from a 12-volt storage battery. **Outlines section,** 6E; requires miniature 9-contact socket.

Heater-Voltage Range (ac/dc)•	10 to 15.9	volts
Heater Current (Approx.) at 12.6 volts	0.2	ampere
Peak Heater-Cathode Voltage	±90 max	volts
Direct Interelectrode Capacitances:		
Grid No.1 to Plate	0.7 max	pF
Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3	8	pF
Plate to Cathode, Heater, Grid No.2, and Grid No.3	8.5	pF

• For longest life, it is recommended that the heater be operated within the voltage range of 11 to 14 volts.

Class A_1 Amplifier

MAXIMUM RATINGS (Design-Center Values)

Plate Voltage	315	volts
Grid-No.2 (Screen-Grid) Voltage	285	volts
Plate Dissipation	12	watts
Grid-No.2 Input	2	watts
Bulb Temperature (At hottest point)	250	°C

TYPICAL OPERATION WITH 12.6 VOLTS ON HEATER

Plate Supply Voltage	250	250	volts
Grid-No.2 Supply Voltage	200	250	volts
Grid-No.1 (Control-Grid) Voltage	—	−12.5	volts
Cathode-Bias Resistor	270	—	ohms
Peak AF Grid-No.1 Voltage	10.5	12.5	volts
Zero-Signal Plate Current	33.5	45	mA
Maximum-Signal Plate Current	36	47	mA
Zero-Signal Grid-No.2 Current	1.6	4.5	mA
Maximum-Signal Grid-No.2 Current	3.2	7	mA
Plate Resistance (Approx.)	75000	50000	ohms
Transconductance	4000	4100	μmhos
Load Resistance	6000	5000	ohms
Total Harmonic Distortion	8	8	per cent
Maximum-Signal Power Output	3.3	4.5	watts

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.1	megohm
For cathode-bias operation	0.5	megohm

Push-Pull Class AB_1 Amplifier

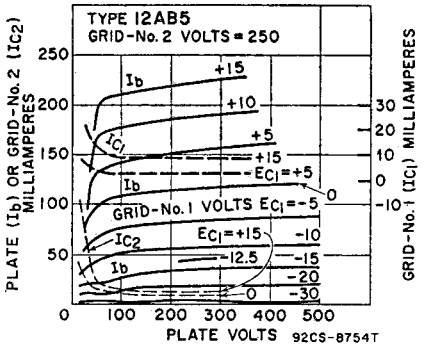
MAXIMUM RATINGS (Same as for Single-Tube Class A_1 Amplifier)

TYPICAL OPERATION WITH 12.6 VOLTS ON HEATER (Values are for two tubes)

Plate Voltage	250	volts
Grid-No.2 Voltage	250	volts
Grid-No.1 Voltage	−15	volts
Peak AF Grid-No.1-to-Grid-No.1 Voltage	30	volts
Zero-Signal Plate Current	70	mA
Maximum-Signal Plate Current	79	mA
Zero-Signal Grid-No.2 Current	5	mA
Maximum-Signal Grid-No.2 Current	13	mA
Effective Load Resistance (Plate-to-Plate)	10000	ohms
Total Harmonic Distortion	5	per cent
Maximum-Signal Power Output	10	watts

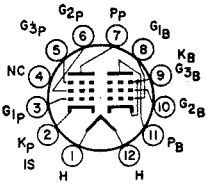
MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.1	megohm
For cathode-bias operation	0.5	megohm



12AC6	Refer to chart at end of section.
12AC10A	Refer to type 6AC10
12AD6	Refer to chart at end of section.
12AE6 **12AE6A**	Refer to chart at end of section.
12AE7	Refer to chart at end of section.

12AE10 BEAM POWER TUBE— SHARP-CUTOFF PENTODE



Duodecar type used as combined FM detector and audio-frequency output amplifier in television receivers. The beam power unit is used in af output stages and the pentode unit as an FM detector. **Outlines section,** 8C; requires duodecar 12-contact socket. **Heater:** volts (ac/dc), 12.6; amperes, 0.45; warm-up time (average), 11 seconds; maximum heater-cathode volts, ±200 peak, 100 average.

Beam Power Unit as Class A_1 Amplifier

MAXIMUM RATINGS (Design-Maximum Values)		
Plate Voltage	165	volts
Grid-No.2 (Screen-Grid) Voltage	150	volts
Cathode Current	60	mA
Plate Dissipation	6	watts
Grid-No.2 Input	1.25	watts
TYPICAL OPERATION		
Plate Voltage	145	volts
Grid-No.2 Voltage	110	volts
Grid-No.1 (Control-Grid) Voltage	—7	volts
Peak AF Grid-No.1 Voltage	7	volts
Zero-Signal Plate Current	34	mA
Maximum-Signal Plate Current	39	mA
Zero-Signal Grid-No.2 Current	6.5	mA
Maximum-Signal Grid-No.2 Current	9.3	mA
Plate Resistance (Approx.)	33000	ohms
Transconductance	5600	μmhos
Load Resistance	2500	ohms
Total Harmonic Distortion (Approx.)	12	per cent
Maximum-Signal Power Output	1.45	watts
MAXIMUM CIRCUIT VALUE		
Grid-No.1-Circuit Resistance:		
For cathode-bias operation	1	megohm