

Heater Voltage (ac/dc)	6.3 $\pm$ 20%	volts
Heater Current	0.15	ampere
Peak Heater-Cathode Voltage	$\pm$ 100 max.	volts
Direct Interelectrode Capacitances:		
Grid No.1 to Plate	0.0035 max.	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	5.4	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	4.4	pF

Class A₁ Amplifier**MAXIMUM RATINGS (Design-Maximum Values)**

Plate Voltage	330	volts
Grid-No.2 (Screen-Grid) Voltage	See curve page 300	
Grid-No.2 Supply Voltage	330	volts
Grid-No.1 (Control-Grid) Voltage:		
Negative-bias value	55	volts
Positive-bias value	0	volt
Plate Dissipation	3.3	watts
Grid-No.2 Input:		
For Grid-No.2 voltages up to 165 volts	0.55	watt
For Grid-No.2 voltages between 165 and 300 volts	See curve page 300	

CHARACTERISTICS

Plate Voltage	250	volts
Grid No.3	Connected to cathode at socket	
Grid-No.2 Voltage	150	volts
Cathode Resistor	100	ohms
Plate Resistance (Approx.)	1.4	megohms
Transconductance	4600	μ mhos
Plate Current	7.4	mA
Grid-No.2 Current	2.6	mA
Grid-No.1 Voltage (Approx.) for plate current of 10 μ A	—7.7	volts

TRANSCONDUCTANCE AT REDUCED HEATER VOLTAGE

Average Value	3600	μ mhos
With heater volts = 5, plate supply volts = 250, grid No.3 connected to cathode at socket, grid-No.2 supply volts = 150, and cathode resistor (ohms) bypassed = 100.		

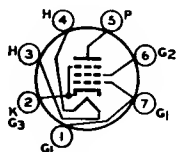
Refer to chart at end of section.

6662/6BJ6

Refer to chart at end of section.

6663/6AL5

Refer to chart at end of section.

6664/6AB4**7BZ****BEAM POWER TUBE**

Miniature type used as output amplifier primarily in mobile communications equipment. Outlines section, 5D; requires miniature 7-contact socket.

**6669/
6AQ5A**
INDUSTRIAL
TYPE

Heater Voltage (ac/dc)	6.3 $\pm$ 20%	volts
Heater Current	0.45	ampere
Heater Warm-up Time (Average)	11	seconds
Heater-Cathode Voltage:		
Peak value	$\pm$ 100 max.	volts
Direct Interelectrode Capacitances (Approx.):		
Grid No.1 to Plate	0.4	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

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage	250	volts
Grid-No.2 (Screen-Grid) Voltage	250	volts
Plate Dissipation	12	watts
Grid-No.2 Input	2	watts
Bulb Temperature (At hottest point on bulb surface)	225	°C

TYPICAL OPERATION AND CHARACTERISTICS

Plate Voltage	250	volts
Grid-No.2 Voltage	250	volts
Grid-No.1 (Control-Grid) Voltage	-12.5	volts
Peak AF Grid-No.1 Voltage	12.5	volts
Zero-Signal Plate Current	45	mA
Max.-Signal Plate Current	47	mA
Zero-Signal Grid-No.2 Current	4.5	mA
Max.-Signal Grid-No.2 Current	7	mA
Plate Resistance (Approx.)	52000	ohms
Transconductance	4100	μmhos
Load Resistance	5000	ohms
Total Harmonic Distortion	8	%
Max.-Signal Power Output	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

Class AB₁ AmplifierMAXIMUM RATINGS (Same as for Class A₁ Amplifier)

TYPICAL PUSH-PULL OPERATION

Unless otherwise specified, values are for 2 tubes

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

MAXIMUM CIRCUIT VALUES (Same as for Class A₁ Amplifier)

POWER OUTPUT AT REDUCED HEATER VOLTAGE

Average Value	4.1	watts
With heater volts = 5, plate volts = 250, grid-No.2 volts = 250, grid-No.1 volts = -12.5, rms signal volts = 8.8, and load resistance (ohms) = 5000.		

6676/6CB6A

Refer to chart at end of section.

6677/6CL6

Refer to chart at end of section.

6678/6U8A

Refer to chart at end of section.

6679/12AT7

INDUSTRIAL
TYPE

HIGH-MU TWIN TRIODE

Miniature type used as a mixer, oscillator or amplifier in mobile communications equipment. Outlines section, 6B; requires miniature 9-contact socket. For typical operation as a resistance-coupled amplifier, refer to Resistance-Coupled Amplifier section, type 12AT7 conditions.

