

Push-Pull Class AB₁ Amplifier

Grid No.2 of Each Tube Connected to Tap on Plate Winding of Output Transformer

MAXIMUM RATINGS (Design-Maximum Values)

Plate and Grid-No.2 Supply Voltage	600	volts
Plate Dissipation	35	watts
Grid-No.2 Input	4.5	watts

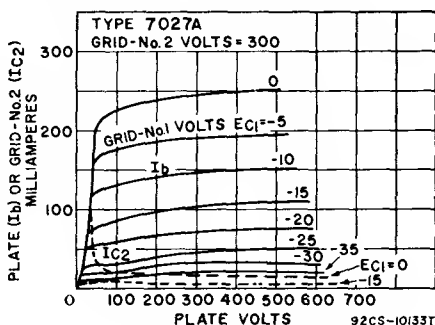
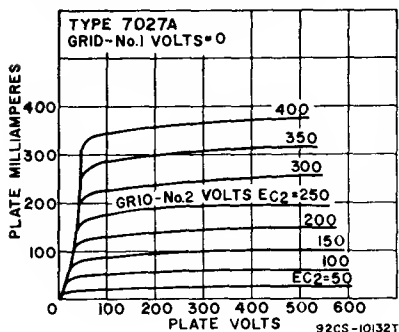
TYPICAL OPERATION (Values are for two tubes)

Plate Supply Voltage	410	volts
Grid-No.2 Supply Voltage	*	volts
Cathode-Bias Resistor	220	ohms
Peak AF Grid-No.1-to-Grid-No.1 Voltage	68	volts
Zero-Signal Cathode Current	134	mA
Maximum-Signal Cathode Current	155	mA
Effective Load Resistance (Plate to plate)	8000	ohms
Total Harmonic Distortion	1.6	per cent
Maximum-Signal Power Output	24	watts

MAXIMUM CIRCUIT VALUE

Grid-No.1-Circuit Resistance, for cathode-bias operation	0.5	megohm
--	-----	--------

* Obtained from taps on the primary winding of the output transformer. The taps are located on each side of the center tap (B₁) so as to apply 43 per cent of the plate signal voltage to grid No.2 of each output tube.

**7044**

Refer to chart at end of section.

7054

Refer to chart at end of section.

7055

Refer to chart at end of section.

7056

Refer to chart at end of section.

7057

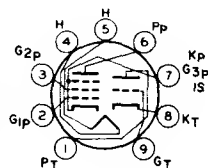
Refer to chart at end of section.

7058

Refer to chart at end of section.

7059**INDUSTRIAL
TYPE****MEDIUM-MU TRIODE—
SHARP-CUTOFF PENTODE**

Miniature type medium-mu triode sharp-cutoff pentode for use as a combined oscillator and mixer in mobile communications equipment. Outlines section, 6B; requires miniature 9-contact socket.

**9AE**

Heater Voltage Range (ac dc)
 Heater Current (Approx.) at 13.5 Volts
 Peak Heater-Cathode Voltage

12 to 15 volts
 0.195 ampere
 ±120 max. volts

Direct Interelectrode Capacitances:

Triode Unit:

	Unshielded	Shielded	
Grid to Plate	1.7	1.7	pF
Grid to Cathode, Heater	2.7	2.7	pF
Plate to Cathode, Heater	0.4	1	pF

Pentode Unit:

	Unshielded	Shielded	
Grid No.1 to Plate	0.15 max.	0.007 max.	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	5	5	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	2.5	3.4	pF
Heater to Cathode	3	3	pF

○ With external shield connected to cathode of unit under test except as noted.

■ With external shield connected to ground.

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

	Triode Unit	Pentode Unit	
Plate Voltage	300	300	volts
Grid-No.2 (Screen-Grid) Supply Voltage	—	300	volts
Grid-No.2 Voltage	—	See curve page 300	
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	0	volt
Plate Dissipation	2.5	2.8	watts
Grid-No.2 Input:			
For grid-No.2 voltages up to 150 volts	—	0.5	watt
For grid-No.2 voltages between 150 and 300 volts	—	See curve page 300	

MAXIMUM CIRCUIT VALUES

	Triode Unit	Pentode Unit	
Grid-No 1-Circuit Resistance:			
For fixed-bias operation	0.5	0.5	megohm
For cathode-bias operation	1	1	megohm

CHARACTERISTICS

Heater Voltage	13.5	13.5	volts
Plate Supply Voltage	150	250	volts
Grid-No.2 Voltage	—	110	volts
Cathode-Bias Resistor	56	68	ohms
Amplification Factor	40	—	
Plate Resistance (Approx.)	4700	40000	ohms
Transconductance	8500	5200	μmhos
Plate Current	18	10	mA
Grid-No.2 Current	—	3.5	mA
Grid-No.1 Voltage for plate current of 10 μA	-12	-10	volts

Special Ratings & Performance Data

HEATER-CYCLING LIFE PERFORMANCE

Cycles of Intermittent Operation	2000 min.	cycles
----------------------------------	-----------	--------

LOW-FREQUENCY VIBRATION PERFORMANCE

RMS Output Voltage, Triode Unit	150 max.	mV
RMS Output Voltage, Pentode Unit	250 max.	mV

