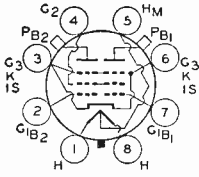


TWIN BEAM POWER TUBE

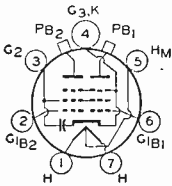
3E22



Glass-octal heater-cathode type used as push-pull rf power amplifier and oscillator in intermittent mobile-service applications. May be used with full input up to 15 Mc. OUTLINE 25, *Outlines* Section. Heater volts (ac/dc), 12.6 ± 10% (series), 6.3 ± 10% (parallel); amperes, 0.8 (series), 1.6 (parallel). Direct inter-electrode capacitances (each unit): grid No.1 to plate, 0.22 max μuf; grid No.1 to cathode, grid No.3, internal shield, grid No.2, and heater, 14 μuf; plate to cathode, grid No.3, internal shield, grid No.2, and heater, 8.5 μuf. Maximum IMS ratings as PUSH-PULL RF POWER AMPLIFIER AND OSCILLATOR, CLASS C TELEGRAPHY (per tube): dc plate volts, 600 max; dc grid-No.2 volts, 225 max; dc grid-No.1 volts, -175 max; dc plate milliamperes, 175 max; dc grid-No.1 milliamperes, 11 max; plate input, 100 max watts; grid-No.2 input, 6 max watts; plate dissipation, 35 max watts; peak heater-cathode volts, ± 100 max. Plates show no color when the tube is operated at maximum IMS ratings during the normal cycle of 15 seconds on, 1 minute off. The 3E22 is used principally for renewal purposes.

TWIN BEAM POWER TUBE

3E29



Heater-cathode type containing two high-perveance units used as rectangular-wave pulse modulator. Modulator Service maximum CCS plate dissipation (per tube), 15 watts. Requires Septar seven-contact socket and may be mounted in vertical position with base up or down, or in horizontal position with pins 2 and 6 in vertical plane. OUTLINE 22, *Outlines* Section. Plates show no color when the tube is operated at maximum CCS ratings.

HEATER ARRANGEMENT	Series	Parallel	
HEATER VOLTAGE (AC/DC).....	12.6°	6.3°	volts
HEATER CURRENT.....	1.125	2.25	amperes
TRANSCONDUCTANCE (Each unit, approx.)*		8500	μmhos
MU-FACTOR, Grid No.2 to Grid No.1 (Each unit)**.....		9	
DIRECT INTERELECTRODE CAPACITANCES (Each unit):			
Grid No.1 to plate (with external shield).....			
Grid No.1 to cathode, grid No.3, grid No.2, and heater mid-tap.....		0.12 max	μuf
Plate to cathode, grid No.3, grid No.2, and heater mid-tap.....		14.0	μuf
		7.0	μuf

° Should not deviate more than +10% or -5% from value shown.
 * Plate volts, 250; grid-No.2 volts, 175; plate milliamperes, 60.
 ** Plate and grid-No.2 volts, 225; plate milliamperes, 60.

MODULATOR—Rectangular-Wave Modulation
 Values are for both units in parallel

Maximum CCS Ratings:

For Duty Factor[▲] between 0.0001 and 1.0 and Maximum Averaging Time of 1200 Microseconds in Any Interval

DC PLATE-SUPPLY VOLTAGE*.....	5000 max	volts
INSTANTANEOUS PLATE VOLTAGE.....	5750 max	volts
DC GRID-NO.2 (SCREEN-GRID) SUPPLY VOLTAGE*.....	850 max	volts
DC GRID-NO.1 (CONTROL-GRID) SUPPLY VOLTAGE*.....	-225 max	volts
INSTANTANEOUS GRID-NO.1 VOLTAGE.....	-600 max	volts
PEAK POSITIVE GRID-NO.1 VOLTAGE.....	250 max	volts
PEAK PLATE CURRENT.....	● max	amperes
PEAK GRID-NO.2 CURRENT.....	3.5 max	amperes
PEAK GRID-NO.1 CURRENT.....	4 max	amperes
PLATE INPUT.....	85 max	watts
GRID-NO.2 INPUT.....	3 max	watts
GRID-NO.1 INPUT.....	1 max	watt
PLATE DISSIPATION.....	15 max	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.....	100 max	volts
Heater positive with respect to cathode.....	100 max	volts

▲ Duty factor is defined as the "on" time in microseconds divided by 1200 microseconds. Pulse dura-