

TUNG-SOL

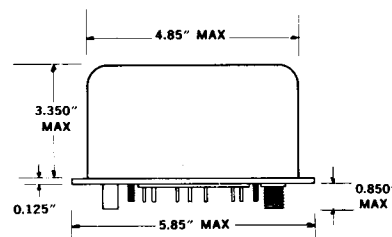
PRODUCT BULLETIN

HIGH PULSE POWER, GRID-CONTROLLED, ELECTRON MULTIPLIER TUBES

DESCRIPTION The 8428 and 8455 are multi-stage secondary emission multiplier tubes capable of supplying high peak power pulses with negligible input power. Because of their extremely fast rise time, low delay time and positive going output pulse they are excellent for modulating travelling wave tubes and hydrogen thyratrons. They are, in general, capable of replacing complete multi-stage pulse amplifiers, without the delay time inherent in the latter devices.

ELECTRICAL DATA

	8428	8455	
Load	150	250	Ohms
Peak Pulse Output Voltage	600	1000	Volts
Peak Pulse Output Current (Note 1)	4	4	Amps
Peak Pulse Output Power	2.4	4.0	Kilowatts
Average Output Power	24	40	Watts
Output Capacitance—Typical	70	70	Picofarads
Output Inductance—Typical	0.1	0.1	μ HENRY
Input Capacitance—Typical	13	13	Picofarads
Delay Time—Max. (Note 2)	20	20	Nanoseconds
Rise Time—Max. (Note 2)	10	10	Nanoseconds
Heater Voltage	6.3	6.3	Volts
Heater Current	1.2	1.2	Amps
Grid #1 Voltage	-15	-15	Volts
Grid Drive	20	20	Volts
Peak Input Driving Power—Typical	300	300	Milliwatts
Average Input Driving Power—Typical	3.0	3.0	Milliwatts
Duty Cycle	1.0	1.0	Percent

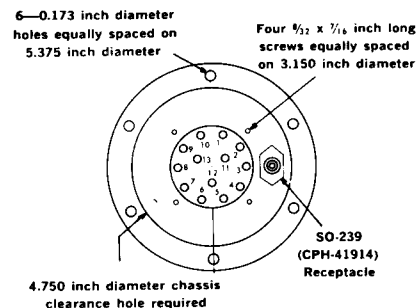


MAXIMUM RATINGS

	8428	8455	
Duty Cycle	1.0	1.0	Percent
Peak Grid #1 Voltage	35	35	Volts
Max. Anode to Cathode Voltage	3.4	4.0	Kilovolts
Pulse Width (Note 3)	10	10	μ sec

MECHANICAL DATA

	8428	8455	
Weight—Approximate	3.3	3.3	lbs.
Dimensions	See Drawing		
Chassis Clearance Hole	4.75"	4.75"	
Socket (Note 4)	T.S. X4473	T.S. X4473	
Shock	MIL-E-1/1494 NAVY NOTE 7		
Vibration	MIL-E-1 PAR 4.9.20.3		



BASING DATA

Pin	Element	Pin	Element
1	Getter	8	Grid 3
2	Getter	9	Grid 2
3	Anode	10	Getter
4	Dynode 4	11	Heater
5	Dynode 3	12	Heater-Cathode
6	Dynode 2	13	Grid 1
7	Dynode 1		

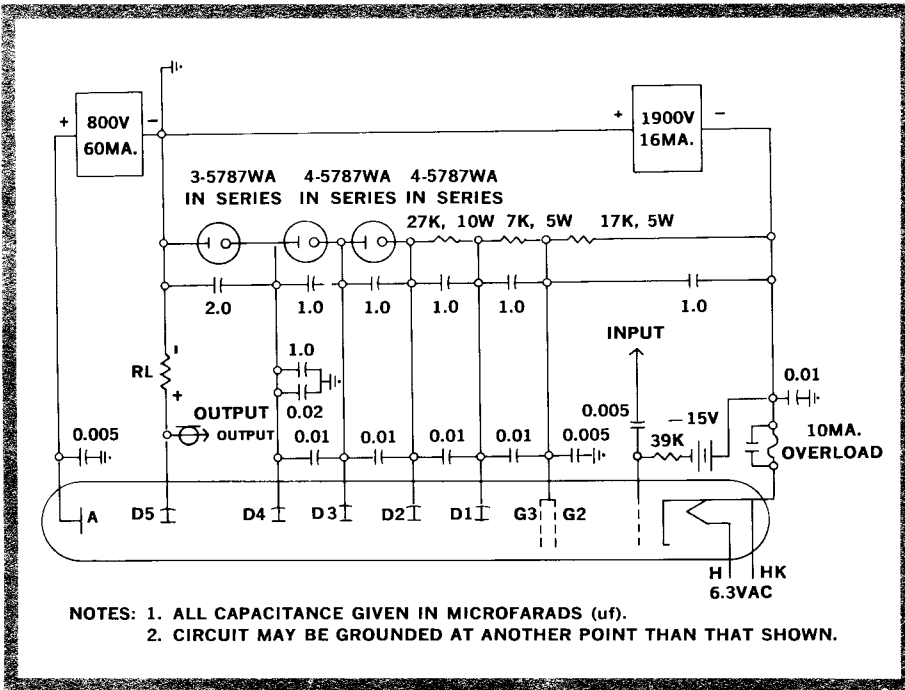
UHF Female
Coax Receptacle

Dynode 5

BOTTOM VIEW

TYPES 8428, 8455

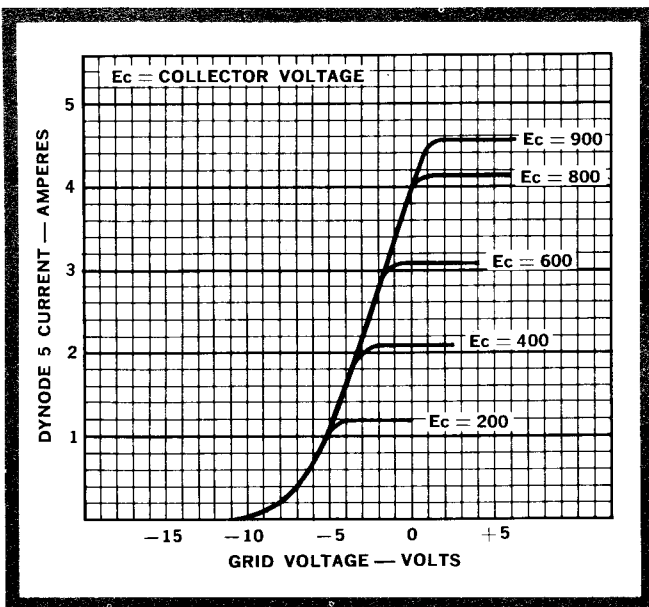
TYPICAL PULSE AMPLIFIER CIRCUIT



NOTES

1. Peak output current is a function of load and peak current capabilities of power supply. Peak currents greater than 4 amperes can be delivered to proper load; however, under these conditions pulse width must be reduced to keep duty cycle under maximum.
2. Under purely resistive loads.
3. Variation in peak output voltage ± 10 pc. from leading edge of pulse to trailing.
4. Alden Products Company 223FP Special. Drawing showing modifications are available.

DYNODE 5 OUTPUT CURRENT VS GRID INPUT VOLTAGE



OUTPUT CURRENT VS ANODE SUPPLY VOLTAGE

