

**OBJECTIVE  
TECHNICAL INFORMATION**

These ratings represent the design objective for this product. Refer to the Preliminary Technical Information sheet for ratings currently achieved in the progression towards design objectives. If PTI sheets do not exist, consult your local Tube Department Regional Sales Office.

**DEVELOPMENTAL  
TYPE**

ZP-1043  
OTI-90  
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*This technical information is proprietary and is furnished only as a service to customers*

**ZP-1043**

**TRIODE**

Grid-Pulsed Amplifier Service  
Grounded-Grid Operation

Heat-Sink and Forced-Air Cooled  
Metal and Ceramic

The ZP-1043 is a heat-sink-cooled triode especially designed for grid-pulsed amplifier service in L-band. This tube is particularly well suited for use in navigational aid application. Features include small size, long pulse width and high duty capability, long life and reliability.

**ELECTRICAL**

Heater Voltage* . . . . .	5.0	Volts
Heater Current . . . . .	2.4	Amperes
Cathode Heating Time, minimum . . . . .	1	Minute
Direct Interelectrode Capacitances		
Input . . . . .	16.5	$\mu\text{mf}$
Output . . . . .	4.0	$\mu\text{mf}$
Plate-Cathode . . . . .	0.1	$\mu\text{mf}$

**MECHANICAL**

Mounting Position - Any		
Net Weight, approximately . . . . .	2-1/2	Ounces

**THERMAL**

Cooling - Heat-sink or Forced air		
Maximum Anode Temperature § . . . . .	250	C
Maximum Ceramic Temperature at Any Point . . . . .	200	C

**GRID-PULSED AMPLIFIER - CLASS C**

Maximum Ratings		
DC Plate Voltage . . . . .	2.5	Kilovolts
DC Plate Current, during pulse . . . . .	3.0	Amperes
DC Grid Voltage . . . . .	-200	Volts
Plate Dissipation . . . . .	50	Watts
Pulse Width ¶ . . . . .	10	Microseconds
Duty Factor ¶ . . . . .	0.01	
Typical Operation		
Grounded-Grid Circuit at 1150 mcs, 1/4 $\lambda$ Output		
DC Plate Voltage . . . . .	2000	2000 Volts
DC Plate Current, during pulse . . . . .	1.1	2.25 Amperes
DC Grid Voltage . . . . .	-80	-80 Volts
DC Grid Current, during pulse . . . . .	0.35	0.75 Amperes
Power Output, during pulse (useful) . . . . .	1000	2000 Watts
Drive Power, during pulse . . . . .	200	350 Watts
Pulse Width ◇ . . . . .	10	10 Microseconds
Duty Factor . . . . .	0.01	0.004

\* Because of back-heating due to transit time effects, it may be necessary to reduce the heater voltage.  
 § A suitable heat-sink clamping arrangement must be provided to limit the anode hub temperature to the value specified.  
 ¶ Maximum ratio of on-time to elapsed time during any 250 microsecond period.  
 ◇ Pulse duration is measured between points at 70 percent of the peak value. The peak value is defined as the maximum value of a smooth curve through the average of the fluctuations over the top portion of the pulse.  
 ¶ For recommendations on longer pulse width and higher duty factor refer to the manufacturer.

