

BY448 AND BY458

MINIATURE GLASS PASSIVATED JUNCTION CLAMPER / DAMPER SILICON RECTIFIER

Voltage - 1200 to 1500 Volts Current - 1.5 Amperes

GENERAL DESCRIPTION

These silicon Glass Passivated Clamper / Damper Rectifiers are designed for TV Applications such as clamping circuits in horizontal deflection systems and damper applications.

The glass passivated construction and Dual Heat - Sink design assures reliable and stable operation.

FEATURES

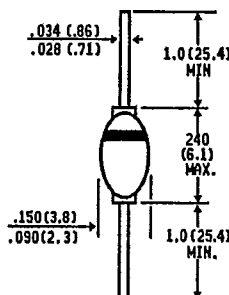
- ◆ High temperature metallurgically bonded constructed rectifiers
- ◆ Glass passivated cavity-free junction in DO-204AP package
- ◆ 1.5 Ampere operation at $T_A = 50^\circ\text{C}$ with no thermal runaway
- ◆ Typical I_R less than $0.1 \mu\text{A}$
- ◆ Hermetically sealed package
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ High temperature soldering guaranteed: $350^\circ\text{C}/10$ seconds/.375", (9.5mm) lead length at 5 lbs., (2.3kg) tension

MECHANICAL DATA

Case: One piece glass, hermetically sealed
Terminals: Plated Axial leads, solderable per MIL-STD-202, Method 208
Polarity: Color band denotes cathode
Mounting Position: Any **Weight:** .02 ounce, .56 gram

PATENTED*

DO-204AP



Dimensions in inches and (millimeters)

* Brazed-lead assembly is covered by Patent No. 3,930,308 of 1976 and glass composition by Patent No. 3,752,701 of 1973

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 50 - 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

	SYMBOLS	BY458	BY448	UNITS
Maximum Non Recurrent Peak Reverse Voltage	V_{RSM}	1400	1650	Volts
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	1200	1500	Volts
Maximum DC Blocking Voltage	V_{DC}	1200	1500	Volts
Maximum Average Forward Rectified Current .375", (9.5mm) Lead Lengths at $T_A = 50^\circ\text{C}$	$I_{(AV)}$	1.5		Amps
Peak Forward Surge Current 10ms single half sine wave superimposed on rated load	I_{FSM}	30.0		Amps
Maximum Instantaneous Forward Voltage at 3.0A	V_F	1.6		Volts
Working Peak Forward Current at $T_A = 75^\circ\text{C}$	I_{FWM}	4.0		Amps
Peak Repetitive Forward Current at $T_A = 75^\circ\text{C}$	I_{RFM}	8.0		Amps
Maximum Peak Reverse Current $T_A = 25^\circ\text{C}$ at Rated Peak Reverse Voltage $T_A = 140^\circ\text{C}$	I_R	5.0 200		μA
Maximum Reverse Recovery Time (Note 1) $T_J = 140^\circ\text{C}$	T_{RR}	20.0		μs
Typical Junction Capacitance (Note 2)	C_J	15.0		pf
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	40.0		$^\circ\text{C}/\text{W}$
Operating Temperature Range	T_J	-65 to +150		$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +200		$^\circ\text{C}$

NOTES: 1. Measured with $I_F = 0.5\text{A}$, $I_R = 50\text{mA}$. 2. Measured at 1 MHz and applied reverse voltage of 4.0 Vdc.
 3. Thermal Resistance from Junction to Ambient at 375°C (9.5mm) Lead Lengths, P.C. Board Mounted.

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RATINGS AND CHARACTERISTIC CURVES BY448 AND BY458

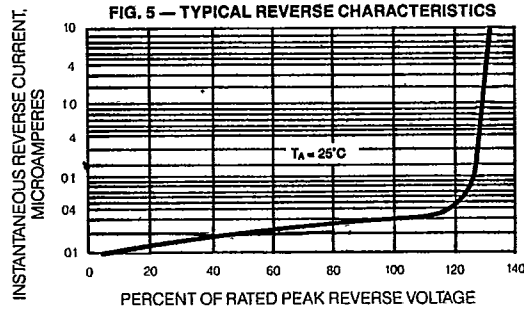
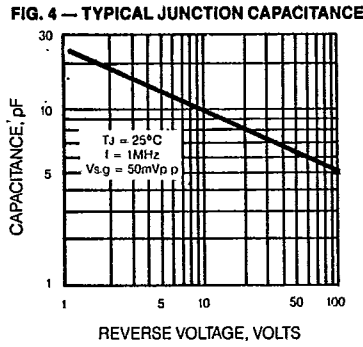
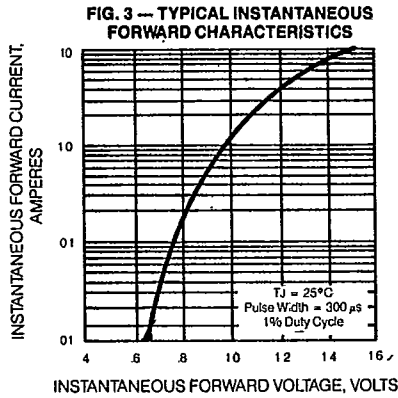
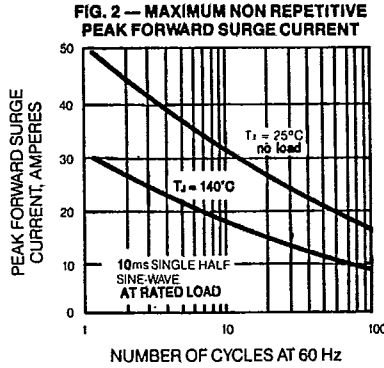
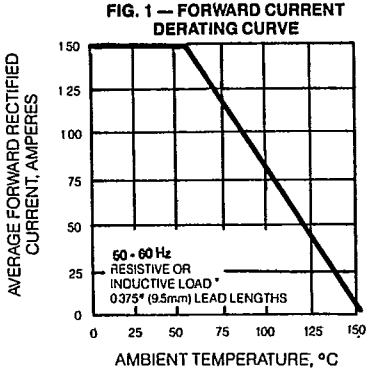
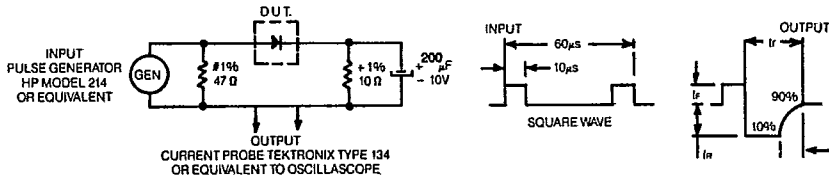


FIG. 6 — REVERSE RECOVERY TIME CHARACTERISTIC AND TEST DIAGRAM



GENERAL INSTRUMENT