

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: $350^\circ\text{C}/10 \text{ seconds}/.375"$, (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

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		
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		$^\circ\text{C/W}$
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" (9.5mm) Lead Lengths, P.C. Board Mounted.

RATINGS AND CHARACTERISTIC CURVES BY448 AND BY458

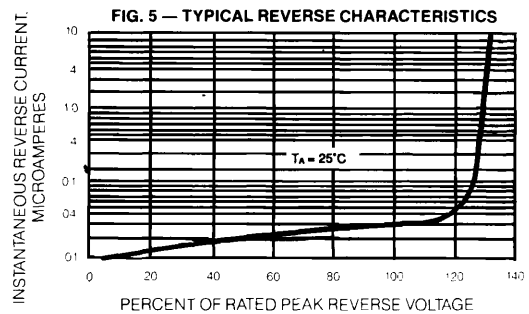
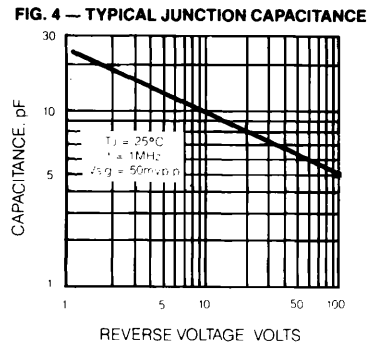
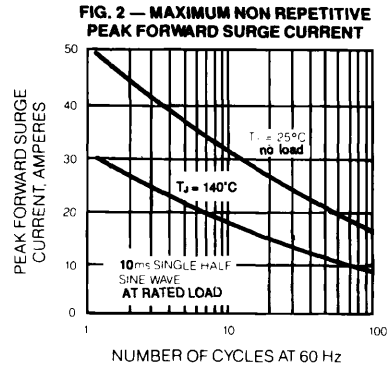
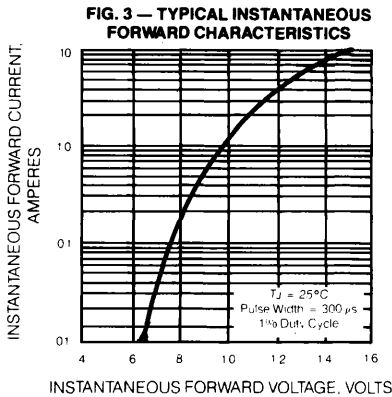
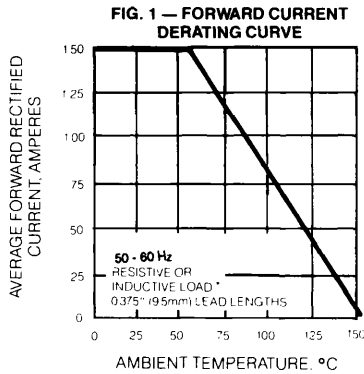
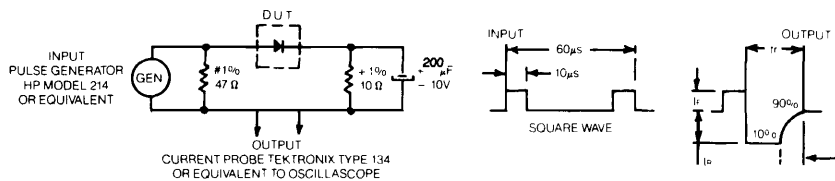


FIG. 6 — REVERSE RECOVERY TIME CHARACTERISTIC AND TEST DIAGRAM



**GENERAL
INSTRUMENT**