

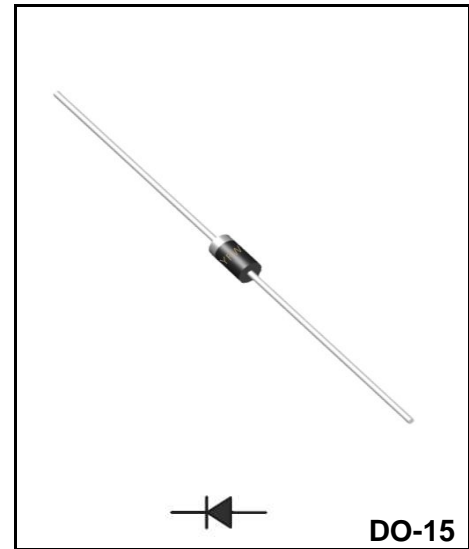
Miniature Clamper/Damper Glass Passivated Rectifier

Reverse Voltage - 1650V

Forward Current - 1.5A

FEATURES

- ◆ Superrectifier structure for high reliability application
- ◆ Cavity-free glass-passivated junction
- ◆ Low forward voltage drop
- ◆ Typical IR less than 0.1μA
- ◆ High forward surge capability
- ◆ Meets environmental standard MIL-S-19500
- ◆ Solder dip 275°C max. 10s, per JESD 22-B106
- ◆ Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC



TYPICAL APPLICATIONS

For use in high voltage rectification of power supplies, inverters, converters and freewheeling diodes specially designed for clamping circuits, horizontal deflection systems and damper applications.

MECHANICAL DATA

◆ Case: DO-15

◆ Approx. Weight: 0.33g / 0.0116oz

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	BY448G	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1650	V
Maximum RMS voltage	V_{RMS}	1150	V
Maximum DC Blocking Voltage	V_{DC}	1650	V
Maximum average forward rectified current 0.375" (9.5 mm) lead length at $T_A=50\text{ }^\circ\text{C}$	$I_{F(AV)}$	1.5	A
Peak forward surge current 8.3 ms single half sine wave superimposed on rated load	I_{FSM}	40	A
Maximum instantaneous forward voltage ⁽¹⁾ $I_F=1.5A$	V_F	1.6	V
Maximum full load reverse current, full cycle average, 0.375" (9.5 mm) lead length at $T_A = 100\text{ }^\circ\text{C}$	$I_{R(AV)}$	50	μA
Maximum reverse current $V_R = 1650V$	I_R	$T_A = 25\text{ }^\circ\text{C}$ 5.0	μA
		$T_A = 100\text{ }^\circ\text{C}$ 100	
Maximum reverse recovery time $I_F=0.5\text{ A}, I_R=50\text{ mA}$	t_{rr}	20	μs
Reverse recovery time $I_F = 0.5\text{ A}$ $I_R = 1.0\text{ A}$ $I_{rr} = 0.25\text{ A}$	typical	0.5	μs
	maximum	1.5	
Typical Junction Capacitance 4.0 V, 1 MHz	C_j	15	pF
Typical Thermal Resistance ⁽¹⁾	$R_{\theta JA}$	55	°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-65 ~ +175	°C

Note: Pulse test: 300 μs pulse width, 1 % duty cycle

RATINGS AND CHARACTERISTICS CURVES

($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

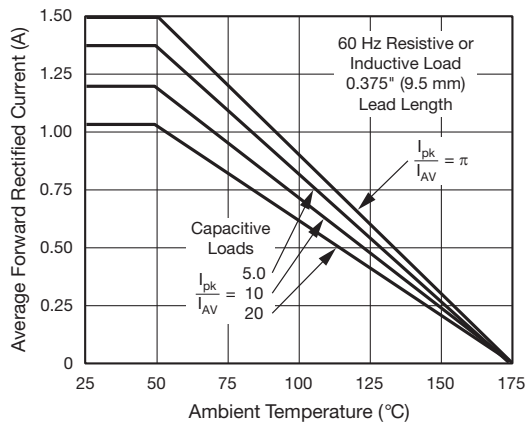


Fig. 1 - Forward Current Derating Curve

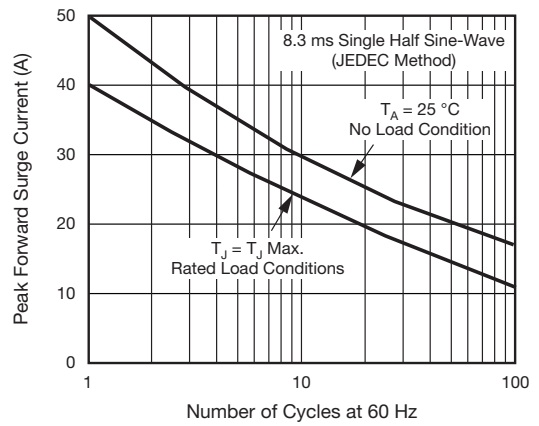


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

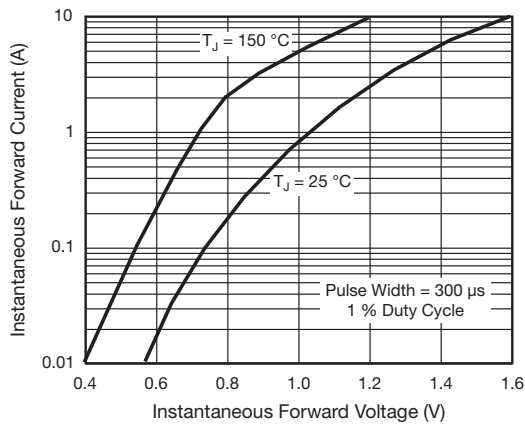


Fig. 3 - Typical Instantaneous Forward Characteristics

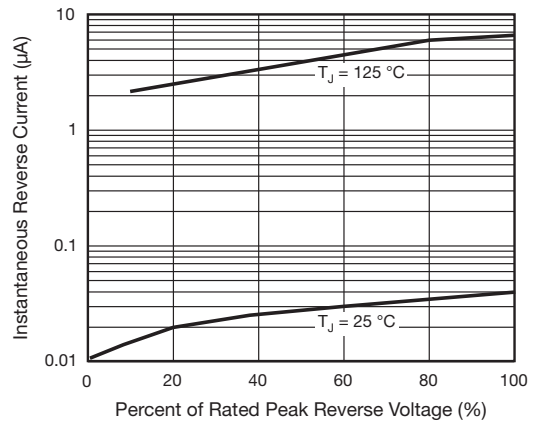


Fig. 4 - Typical Reverse Characteristics

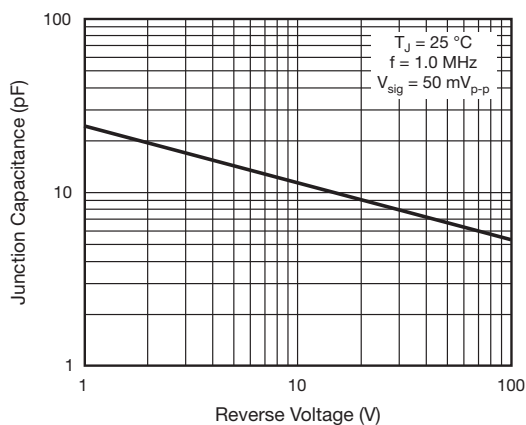


Fig. 5 - Typical Junction Capacitance

Ordering information

Package	Packing Description	Packing Quantity
DO-15	bulk	500PCS/Inner Box 30000PCS/Carton
	ammo pack	3000PCS/Inner Box 30000PCS/Carton

Package Dimensions

DO-15

Dim.	Millimeter(mm)		INCHES	
	Min.	Max.	Min.	Max.
A	5.80	7.60	0.230	0.300
B	2.60	3.60	0.104	0.140
C	0.71	0.86	0.028	0.034
D	25.4	-	1.00	-

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