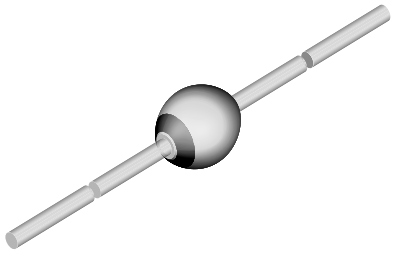
BY448/BY458

Standard Avalanche Sinterglass Diode

Features

- Glass passivated junction
- Hermetically sealed package
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



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Applications

High voltage rectification diode

Efficiency diode in horizontal deflection circuits

Mechanical Data

Case: SOD-57 Sintered glass case

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: approx. 369 mg

Parts Table

Part	Type differentiation	Package
BY448	V_R = 1500 V; I_{FAV} = 2 A	SOD-57
BY458	V_R = 1200 V; I_{FAV} = 2 A	SOD-57

Absolute Maximum Ratings

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Part	Symbol	Value	Unit
Reverse voltage	see electrical characteristics	BY448	$V_R = V_{RRM}$	1500	V
		BY458	$V_R = V_{RRM}$	1200	V
Peak forward surge current	t_p = 10 ms, half sinewave		I_{FSM}	30	A
Average forward current			I_{FAV}	2	A
Junction temperature			T_j	140	°C
Storage temperature range			T_{stg}	- 55 to + 175	°C
Non repetitive reverse avalanche energy	$I_{(BR)R}$ = 0.4 A		E_R	10	mJ

Maximum Thermal Resistance

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Junction ambient	l = 10 mm, T_L = constant	R_{thJA}	45	K/W
	on PC board with spacing 25 mm	R_{thJA}	100	K/W

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Electrical Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Forward voltage	I_F = 3 A	V_F			1.6	V
Reverse current	$V_R = V_{RRM}$	I_R			3	µA
	$V_R = V_{RRM}$, T_j = 140 °C	I_R			140	µA
Total reverse recovery time	I_F = 1 A, - d_{iF}/d_t = 0.05 A/µs	t_{rr}			20	µs
Reverse recovery time	I_F = 0.5 A, I_R = 1 A, i_R = 0,25 A	t_{rr}			2	µs

Typical Characteristics (Tamb = 25 °C unless otherwise specified)

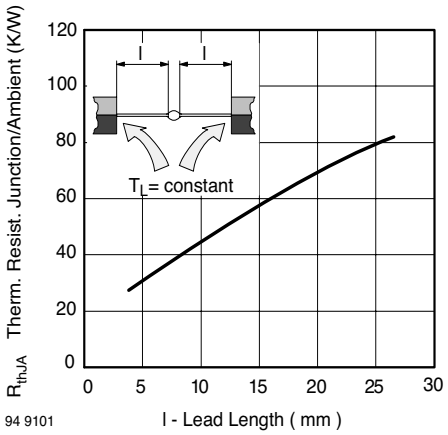

Figure 1. Typ. Thermal Resistance vs. Lead Length

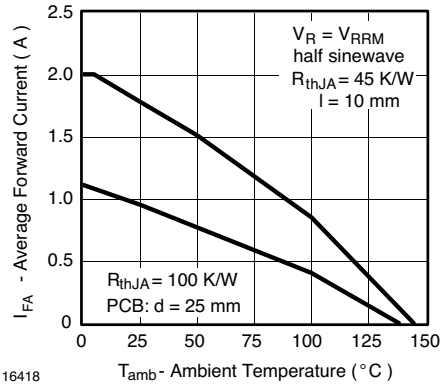

Figure 3. Max. Average Forward Current vs. Ambient Temperature

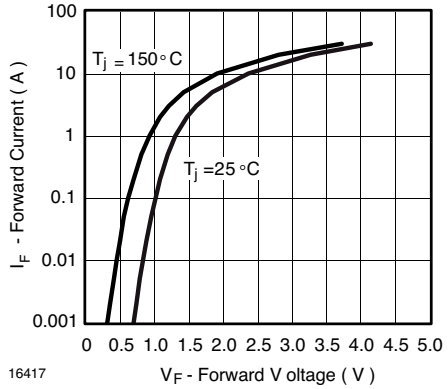

Figure 2. Forward Current vs. Forward Voltage

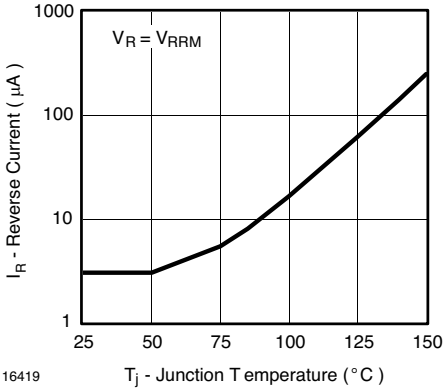

Figure 4. Reverse Current vs. Junction Temperature

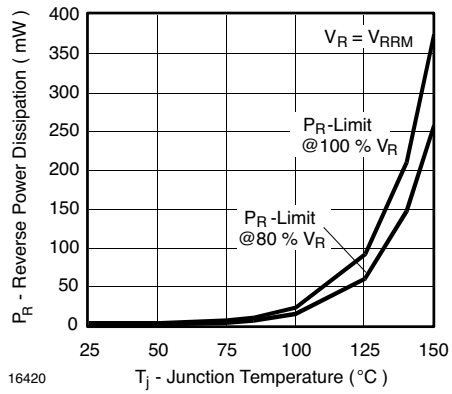

Figure 5. Max. Reverse Power Dissipation vs. Junction Temperature

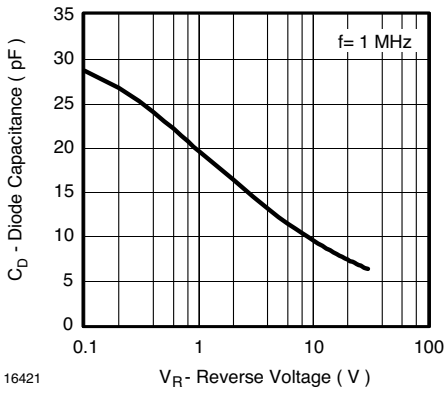

Figure 6. Diode Capacitance vs. Reverse Voltage

Package Dimensions in mm (Inches)