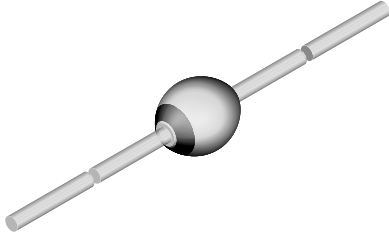


Standard Avalanche Sinterglass Diode



949539

MECHANICAL DATA

Case: SOD-57

Terminals: plated axial leads, solderable per MIL-STD-750, method 2026

Polarity: color band denotes cathode end

Mounting position: any

Weight: approx. 369 mg

FEATURES

- Glass passivated junction
- Hermetically sealed package
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition


RoHS
 COMPLIANT
 HALOGEN
FREE

APPLICATIONS

- High voltage rectification
- Efficiency diode in horizontal deflection circuits

PARTS TABLE

PART	TYPE DIFFERENTIATION	PACKAGE
BY448	$V_R = 1500\text{ V}$; $I_{FAV} = 2\text{ A}$	SOD-57
BY458	$V_R = 1200\text{ V}$; $I_{FAV} = 2\text{ A}$	SOD-57

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ }^\circ\text{C}$, 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	$t_p = 10\text{ ms}$, half sine wave		I_{FSM}	30	A
Average forward current			I_{FAV}	2	A
Junction temperature			T_j	140	$^\circ\text{C}$
Storage temperature range			T_{stg}	- 55 to + 175	$^\circ\text{C}$
Non repetitive reverse avalanche energy	$I_{(BR)R} = 0.4\text{ A}$		E_R	10	mJ

MAXIMUM THERMAL RESISTANCE ($T_{amb} = 25\text{ }^\circ\text{C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Junction ambient	$l = 10\text{ mm}$, $T_L = \text{constant}$	R_{thJA}	45	K/W
	On PC board with spacing 25 mm	R_{thJA}	100	K/W

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^\circ\text{C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX	UNIT
Forward voltage	$I_F = 3\text{ A}$	V_F	-	-	1.6	V
Reverse current	$V_R = V_{RRM}$	I_R	-	-	3	μA
	$V_R = V_{RRM}$, $T_j = 140\text{ }^\circ\text{C}$	I_R	-	-	140	μA
Reverse recovery time	$I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $i_R = 0.25\text{ A}$	t_{rr}	-	-	2000	ns
Total reverse recovery time	$I_F = 1\text{ A}$, $- di_F/dt = 0.05\text{ A}/\mu\text{s}$	t_{rr}	-	-	20	μs

TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

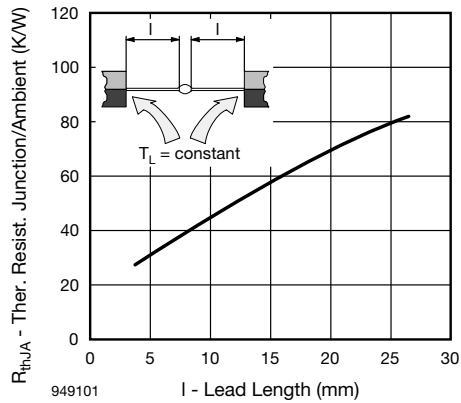


Fig. 1 - Typ. Thermal Resistance vs. Lead Length

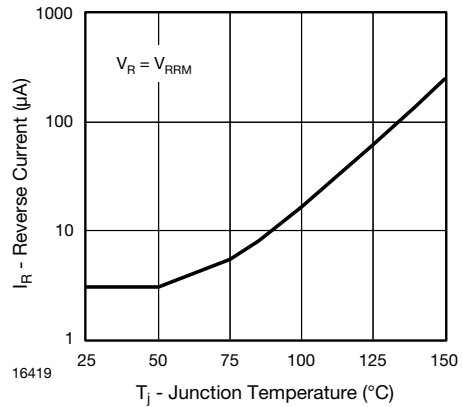


Fig. 4 - Reverse Current vs. Junction Temperature

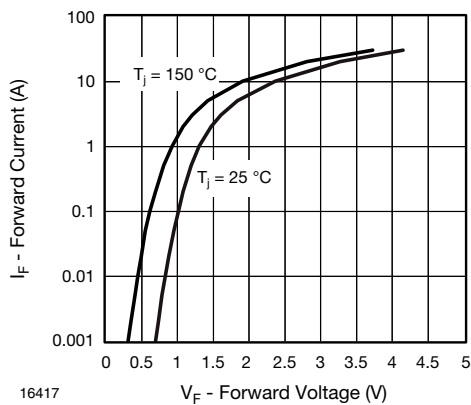


Fig. 2 - Forward Current vs. Forward Voltage

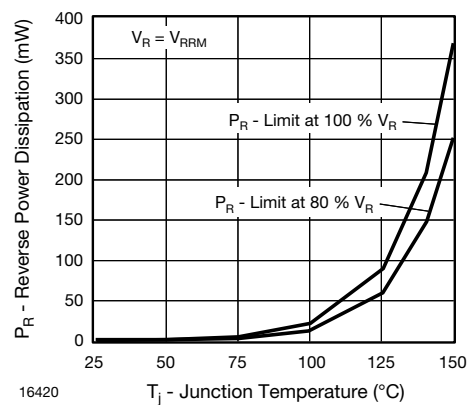


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

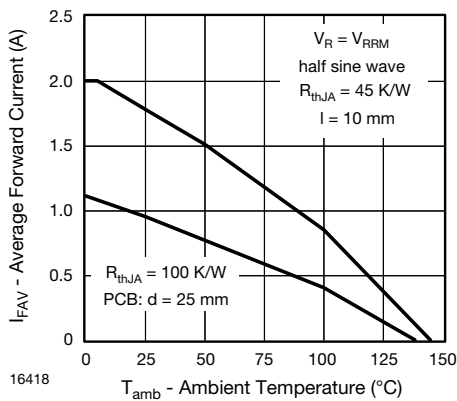


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

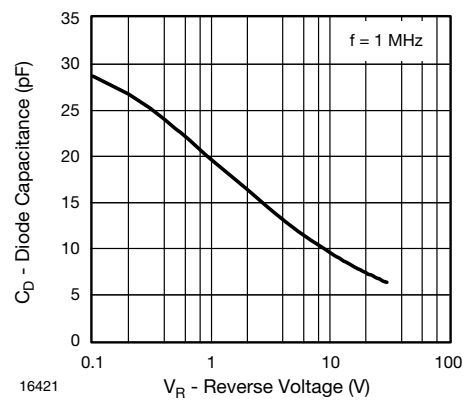
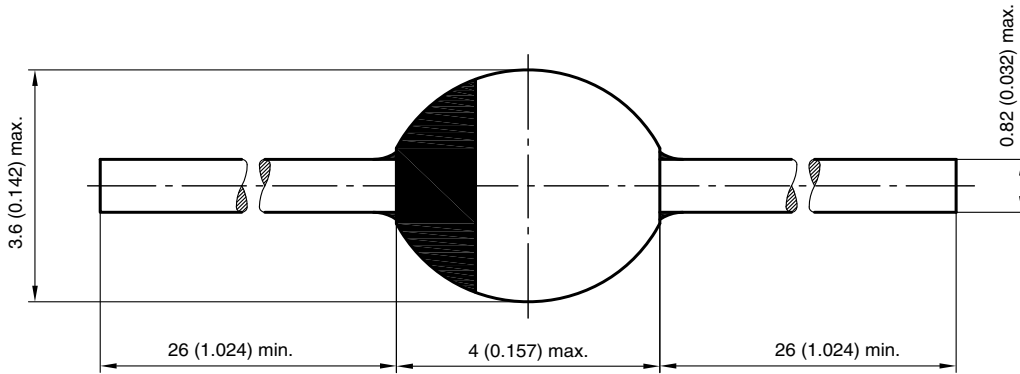


Fig. 6 - Diode Capacitance vs. Reverse Voltage



PACKAGE DIMENSIONS in millimeters (inches): **SOD-57**



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