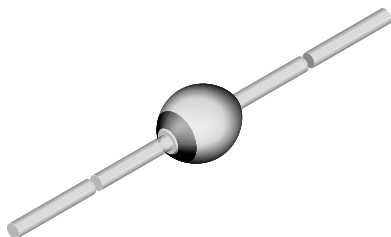


Standard Avalanche Sinterglass Diode



949539

FEATURES

- Glass passivated junction
- Hermetically sealed package
- Low reverse current
- High surge current loading
- 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

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

APPLICATIONS

- Rectification, general purpose

PARTS TABLE

PART	TYPE DIFFERENTIATION	PACKAGE
BYX82	$V_R = 200\text{ V}$; $I_{FAV} = 2\text{ A}$	SOD-57
BYX83	$V_R = 400\text{ V}$; $I_{FAV} = 2\text{ A}$	SOD-57
BYX84	$V_R = 600\text{ V}$; $I_{FAV} = 2\text{ A}$	SOD-57
BYX85	$V_R = 800\text{ V}$; $I_{FAV} = 2\text{ A}$	SOD-57
BYX86	$V_R = 1000\text{ V}$; $I_{FAV} = 2\text{ A}$	SOD-57

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ °C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Reverse voltage = repetitive peak reverse voltage	See electrical characteristics	BYX82	$V_R = V_{RRM}$	200	V
		BYX83	$V_R = V_{RRM}$	400	V
		BYX84	$V_R = V_{RRM}$	600	V
		BYX85	$V_R = V_{RRM}$	800	V
		BYX86	$V_R = V_{RRM}$	1000	V
Peak forward surge current	$t_p = 10\text{ ms}$, half sine wave		I_{FSM}	50	A
Repetitive peak forward current			I_{FRM}	10	A
Average forward current	$T_{amb} \leq 45\text{ °C}$		I_{FAV}	2	A
$i^2 \cdot t$ -rating			$i^2 \cdot t$	8	$A^2 \cdot s$
Junction and storage temperature range			$T_j = T_{stg}$	- 55 to + 175	°C

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

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

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 1\text{ A}$	V_F	-	0.9	1	V
Reverse current	$V_R = V_{RRM}$	I_R	-	0.1	1	μA
	$V_R = V_{RRM}, T_J = 100^{\circ}\text{C}$	I_R	-	10	25	μA
Diode capacitance	$V_R = 4\text{ V}, f = 1\text{ MHz}$	C_D	-	20	-	pF
Reverse recovery time	$I_F = 0.5\text{ A}, I_R = 1\text{ A}, i_R = 0.25\text{ A}$	t_{rr}	-	2	4	μs
Reverse recovery charge	$I_F = I_R = 1\text{ A}, di/dt = 5\text{ A}/\mu\text{s}$	Q_{rr}	-	3	6	μC

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

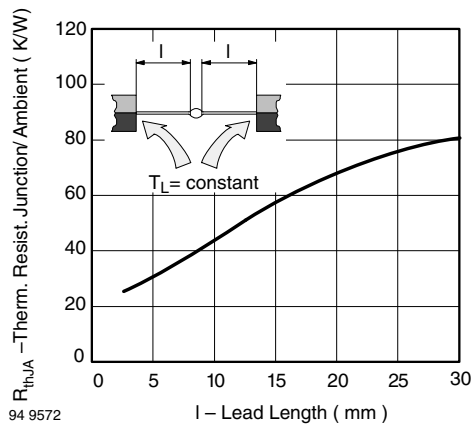


Fig. 1 - Max. Thermal Resistance vs. Lead Length

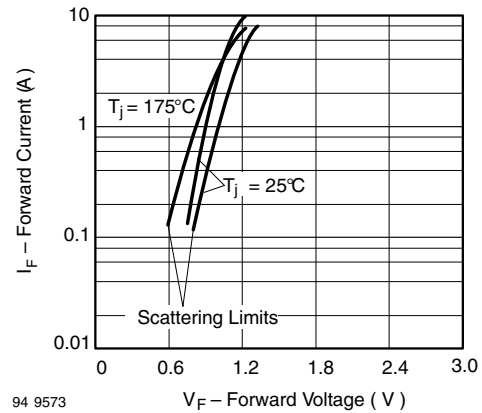


Fig. 3 - Forward Current vs. Forward Voltage

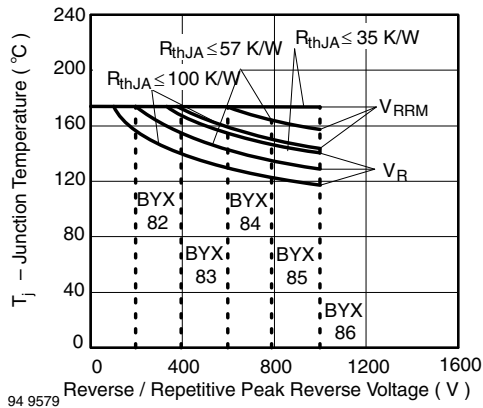


Fig. 2 - Junction Temperature vs. Reverse/Repetitive Peak Reverse Voltage

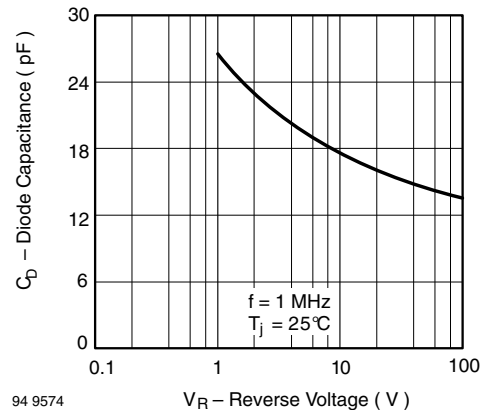
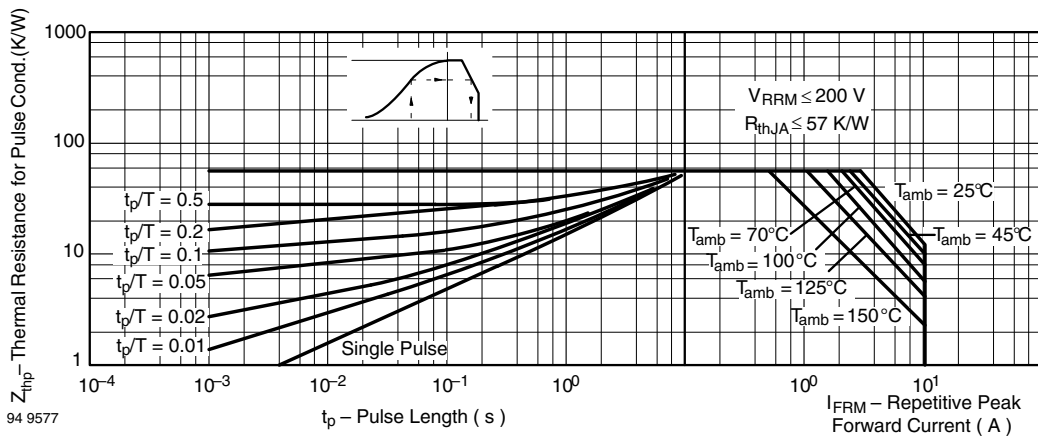
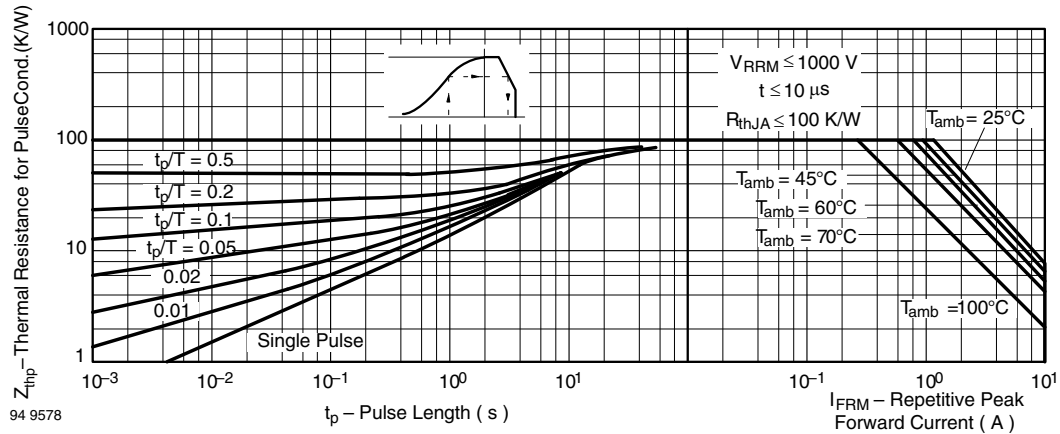
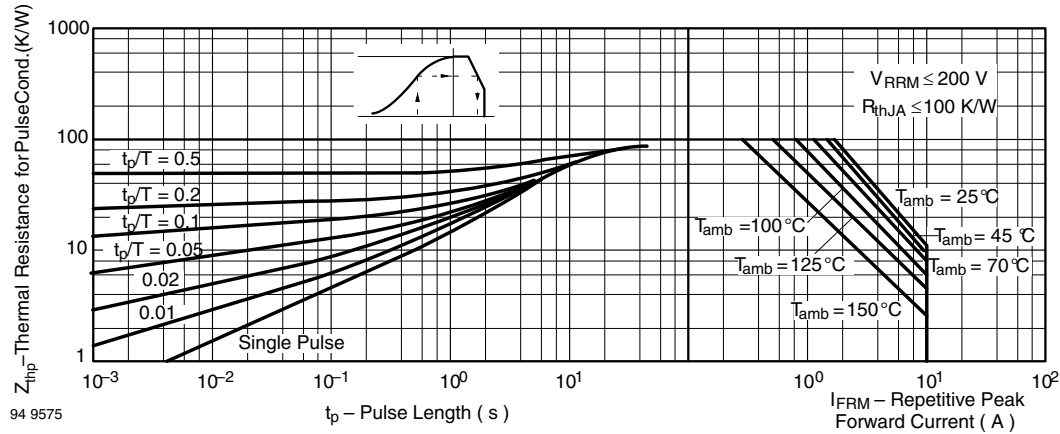


Fig. 4 - Typ. Diode Capacitance vs. Reverse Voltage



BYX82, BYX83, BYX84, BYX85, BYX86

Vishay Semiconductors Standard Avalanche Sinterglass Diode

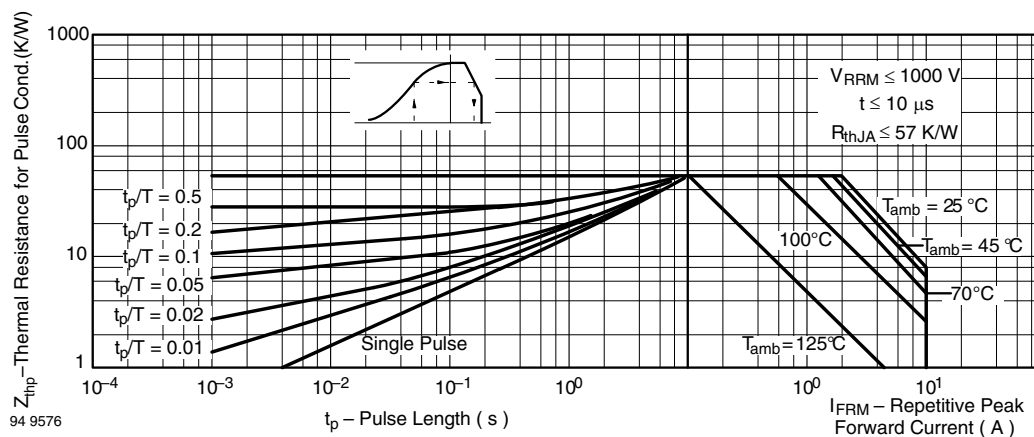
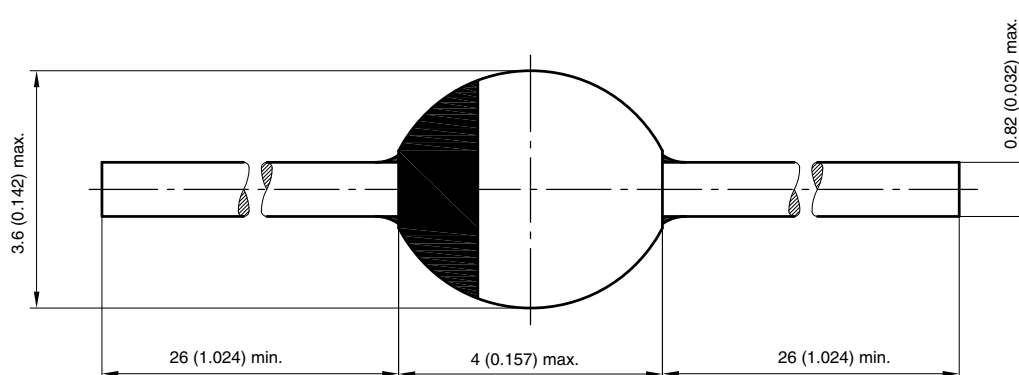


Fig. 8 - Thermal Response

PACKAGE DIMENSIONS in millimeters (inches): SOD-57



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