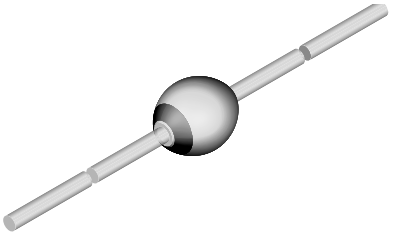
Standard Avalanche Sinterglass Diode



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FEATURES

- Glass passivated junction
- Hermetically sealed package
- Low reverse current
- High surge current loading
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

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

ORDERING INFORMATION (Example)			
DEVICE NAME	**ORDERING CODE**	**TAPED UNITS**	**MINIMUM ORDER QUANTITY**
BYX86	BYX86TR	5000 per 10" tape and reel	25 000
BYX86	BYX86TAP	5000 per ammopack	25 000

PARTS TABLE		
PART	**TYPE DIFFERENTIATION**	**PACKAGE**
BYX82	V_R = 200 V; $I_{F(AV)}$ = 2 A	SOD-57
BYX83	V_R = 400 V; $I_{F(AV)}$ = 2 A	SOD-57
BYX84	V_R = 600 V; $I_{F(AV)}$ = 2 A	SOD-57
BYX85	V_R = 800 V; $I_{F(AV)}$ = 2 A	SOD-57
BYX86	V_R = 1000 V; $I_{F(AV)}$ = 2 A	SOD-57

ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25 °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 ms, half sine wave		I_{FSM}	50	A
Repetitive peak forward current			I_{FRM}	10	A
Average forward current	$T_{amb} \leq 45$ °C		$I_{F(AV)}$	2	A
i^2t-rating			$i^2 t$	8	A^2s
Junction and storage temperature range			$T_j = T_{stg}$	- 55 to + 175	°C

MAXIMUM THERMAL RESISTANCE (T_{amb} = 25 °C, unless otherwise specified)				
PARAMETER	**TEST CONDITION**	**SYMBOL**	**VALUE**	**UNIT**
Junction ambient	Lead length l = 10 mm, T_L = constant	R_{thJA}	45	K/W
	On PC board with spacing 25 mm	R_{thJA}	100	K/W

ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)						
PARAMETER	**TEST CONDITION**	**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Forward voltage	I_F = 1 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 °C	I_R	-	10	25	µA
Diode capacitance	V_R = 4 V, f = 1 MHz	C_D	-	20	-	pF
Reverse recovery time	I_F = 0.5 A, I_R = 1 A, i_R = 0.25 A	t_{rr}	-	2	4	µs
Reverse recovery charge	$I_F = I_R$ = 1 A, dI/dt = 5 A/µs	Q_{rr}	-	3	6	µC

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

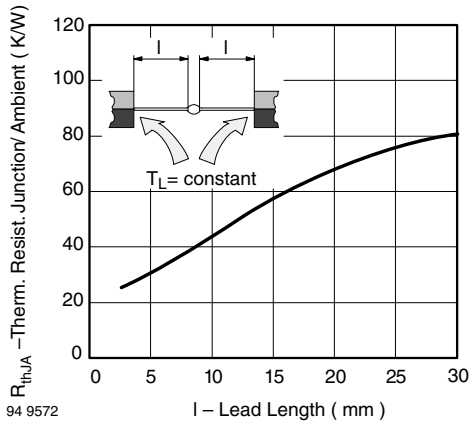


Fig. 1 - Max. Thermal Resistance vs. Lead Length

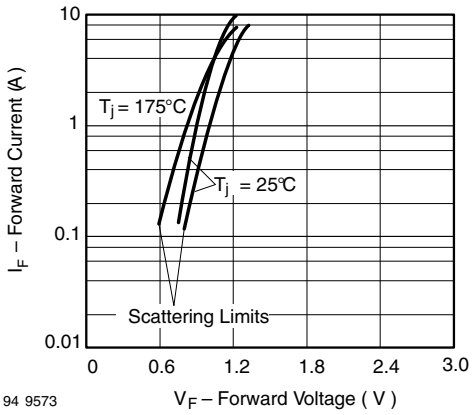


Fig. 3 - Forward Current vs. Forward Voltage

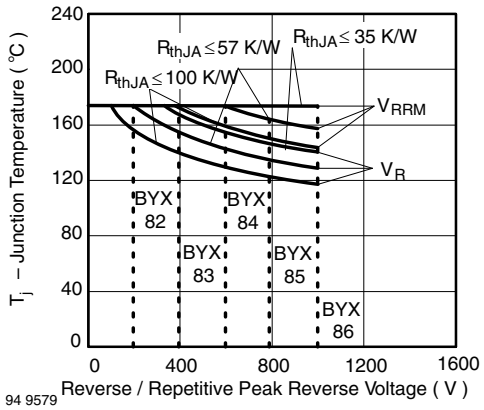


Fig. 2 - Junction Temperature vs.
Reverse/Repetitive Peak Reverse Voltage

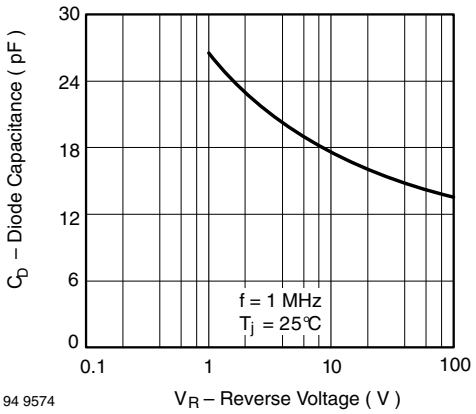


Fig. 4 - Typ. Diode Capacitance vs. Reverse Voltage

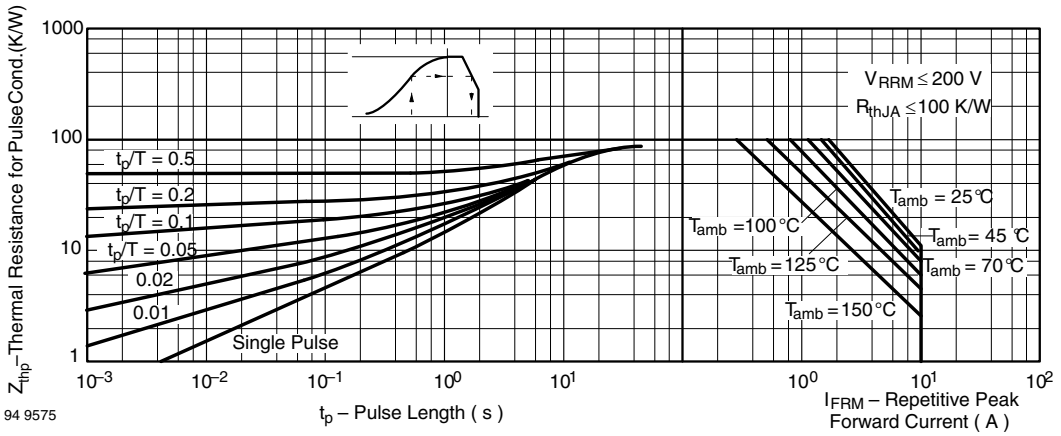


Fig. 5 - Thermal Response

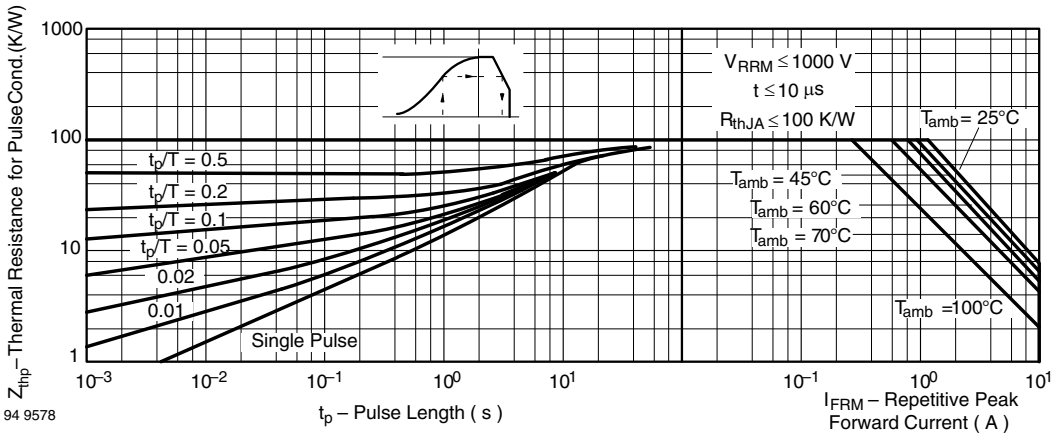


Fig. 6 - Thermal Response

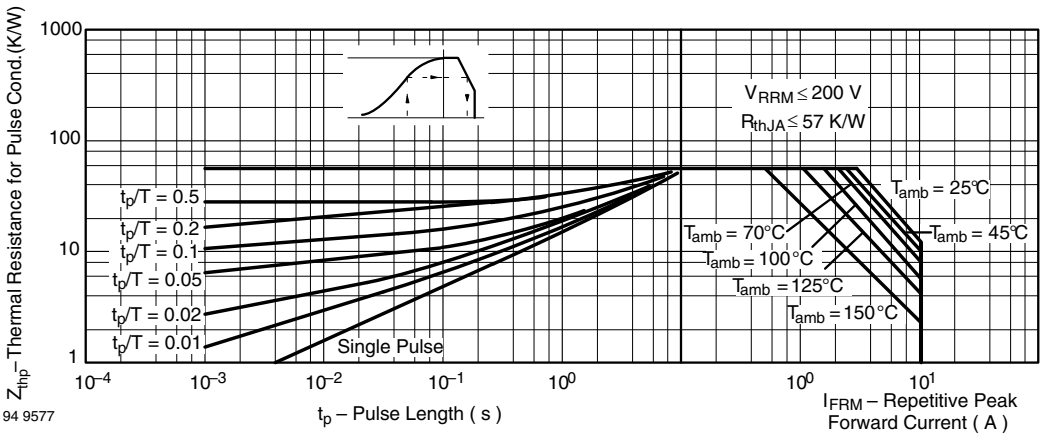


Fig. 7 - Thermal Response

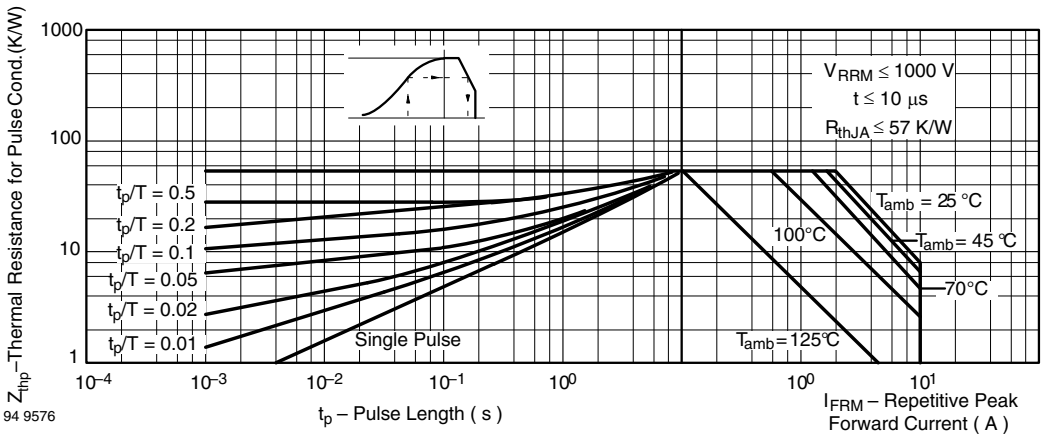
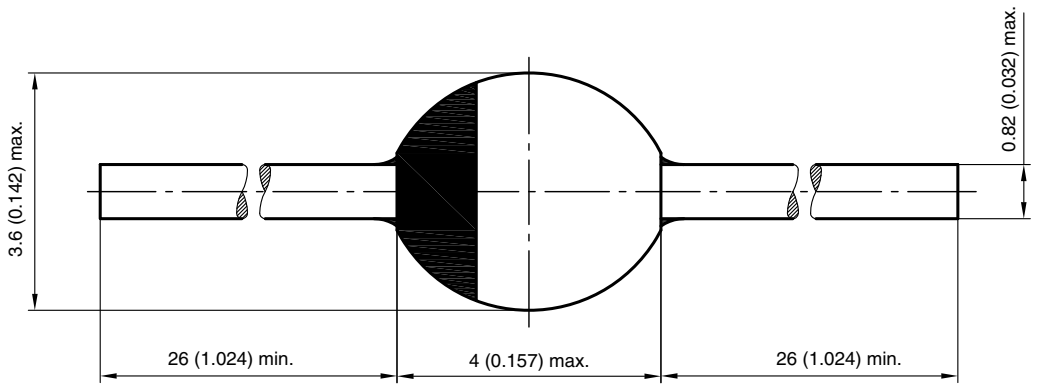


Fig. 8 - Thermal Response

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



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