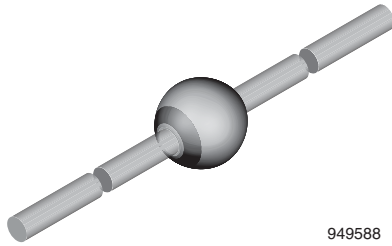




## Fast Avalanche Sinterglass Diode



949588

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### DESIGN SUPPORT TOOLS



### MECHANICAL DATA

**Case:** SOD-64

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

**Polarity:** color band denotes cathode end

**Mounting position:** any

**Weight:** approx. 858 mg

### FEATURES

- Glass passivated
- Hermetically sealed package
- Very low switching losses
- Low reverse current
- High reverse voltage
- Material categorization:  
for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

### APPLICATIONS

- Switched mode power supplies
- High-frequency inverter circuits

ORDERING INFORMATION (Example)			
DEVICE NAME	ORDERING CODE	TAPED UNITS	MINIMUM ORDER QUANTITY
BYM36E	BYM36E-TR	2500 per 10" tape and reel	12 500
BYM36E	BYM36E-TAP	2500 per ammpack	12 500

PARTS TABLE		
PART	TYPE DIFFERENTIATION	PACKAGE
BYM36A	$V_R = 200\text{ V}; I_{F(AV)} = 3\text{ A}$	SOD-64
BYM36B	$V_R = 400\text{ V}; I_{F(AV)} = 3\text{ A}$	SOD-64
BYM36C	$V_R = 600\text{ V}; I_{F(AV)} = 3\text{ A}$	SOD-64
BYM36D	$V_R = 800\text{ V}; I_{F(AV)} = 2.9\text{ A}$	SOD-64
BYM36E	$V_R = 1000\text{ V}; I_{F(AV)} = 2.9\text{ A}$	SOD-64

ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ }^\circ\text{C}$ , unless otherwise specified)					
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Reverse voltage = repetitive peak reverse voltage	See electrical characteristics	BYM36A	$V_R = V_{RRM}$	200	V
		BYM36B	$V_R = V_{RRM}$	400	V
		BYM36C	$V_R = V_{RRM}$	600	V
		BYM36D	$V_R = V_{RRM}$	800	V
		BYM36E	$V_R = V_{RRM}$	1000	V
Peak forward surge current	$t_p = 10\text{ ms}$ , half sine wave		$I_{FSM}$	65	A
Average forward current		BYM36A	$I_{F(AV)}$	3	A
		BYM36B	$I_{F(AV)}$	3	A
		BYM36C	$I_{F(AV)}$	3	A
		BYM36D	$I_{F(AV)}$	2.9	A
		BYM36E	$I_{F(AV)}$	2.9	A
Non repetitive reverse avalanche energy	$I_{(BR)R} = 1\text{ A}$ , inductive load		$E_R$	20	mJ
Junction and storage temperature range			$T_j = T_{stg}$	-55 to +175	$^\circ\text{C}$



MAXIMUM THERMAL RESISTANCE ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Junction ambient	Lead length $l = 10\text{ mm}$ , $T_L = \text{constant}$	$R_{thJA}$	25	K/W
	On PC board with spacing 25 mm	$R_{thJA}$	70	K/W

ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 3\text{ A}$	BYM36A	$V_F$	-	-	1.6	V
		BYM36B	$V_F$	-	-	1.6	V
		BYM36C	$V_F$	-	-	1.6	V
		BYM36D	$V_F$	-	-	1.78	V
		BYM36E	$V_F$	-	-	1.78	V
	$I_F = 3\text{ A}$ , $T_j = 175\text{ }^{\circ}\text{C}$	BYM36A	$V_F$	-	-	1.22	V
		BYM36B	$V_F$	-	-	1.22	V
		BYM36C	$V_F$	-	-	1.22	V
		BYM36D	$V_F$	-	-	1.28	V
		BYM36E	$V_F$	-	-	1.28	V
Reverse current	$V_R = V_{RRM}$		$I_R$	-	-	5	$\mu\text{A}$
	$V_R = V_{RRM}$ , $T_j = 150\text{ }^{\circ}\text{C}$		$I_R$	-	-	100	$\mu\text{A}$
Reverse recovery time	$I_F = 0.5\text{ A}$ , $I_R = 1\text{ A}$ , $i_R = 0.25\text{ A}$	BYM36A	$t_{rr}$	-	-	100	ns
		BYM36B	$t_{rr}$	-	-	100	ns
		BYM36C	$t_{rr}$	-	-	100	ns
		BYM36D	$t_{rr}$	-	-	150	ns
		BYM36E	$t_{rr}$	-	-	150	ns
Reverse breakdown voltage	$I_R = 100\text{ }\mu\text{A}$	BYM36A	$V_{(BR)R}$	300	-	-	V
		BYM36B	$V_{(BR)R}$	500	-	-	V
		BYM36C	$V_{(BR)R}$	700	-	-	V
		BYM36D	$V_{(BR)R}$	900	-	-	V
		BYM36E	$V_{(BR)R}$	1100	-	-	V

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

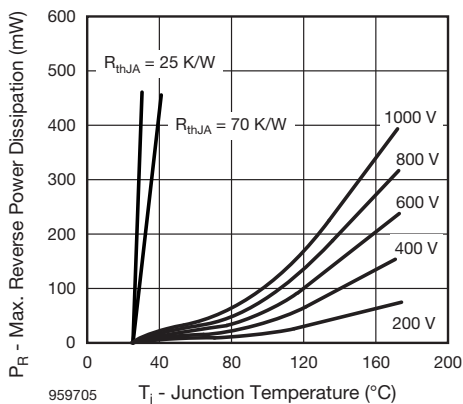


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

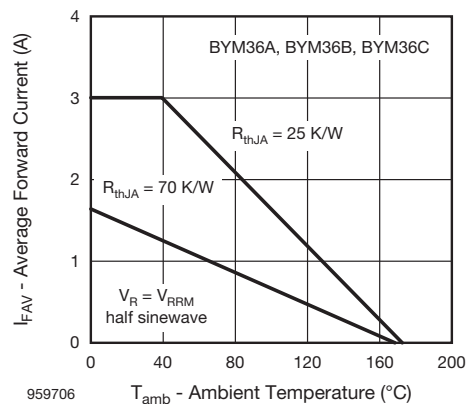


Fig. 2 - Max. Average Forward Current vs. Ambient Temperature

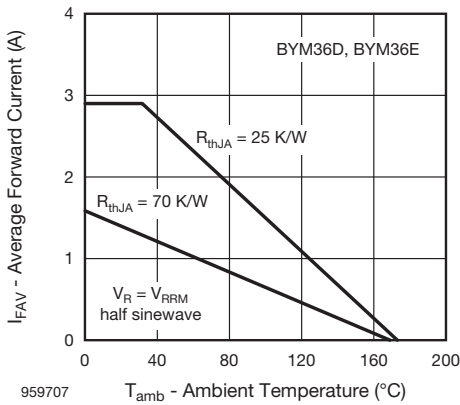


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

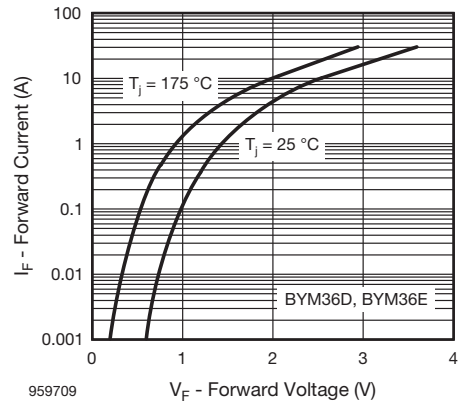


Fig. 6 - Max. Forward Current vs. Forward Voltage

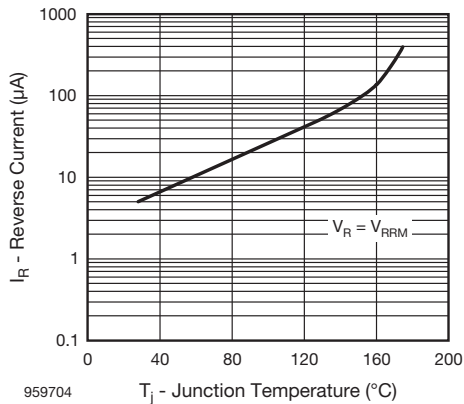


Fig. 4 - Max. Reverse Current vs. Junction Temperature

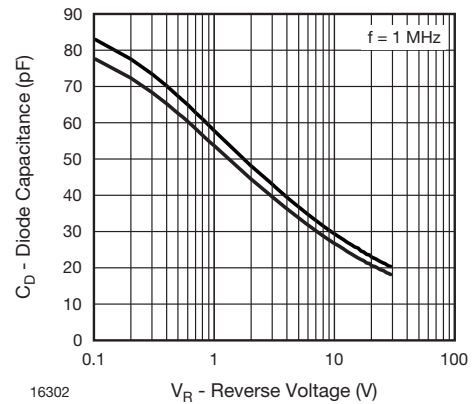


Fig. 7 - Diode Capacitance vs. Reverse Voltage

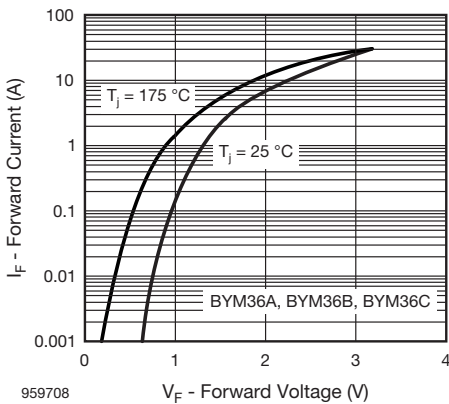
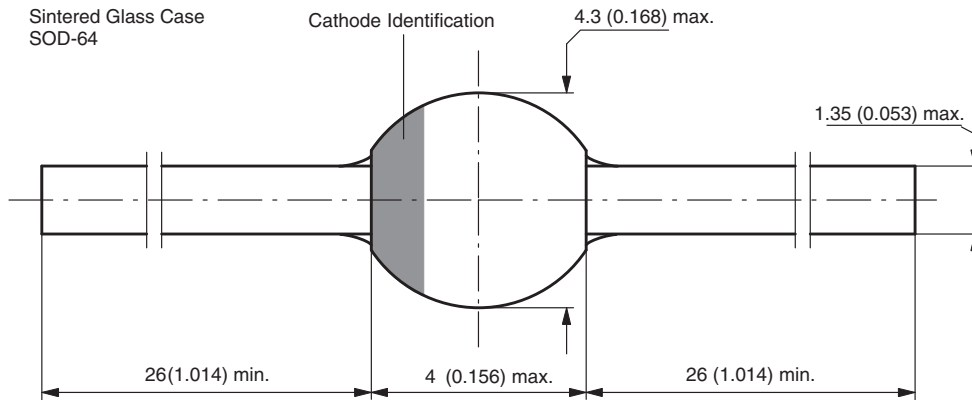


Fig. 5 - Max. Forward Current vs. Forward Voltage



**PACKAGE DIMENSIONS** in millimeters (inches): **SOD-64**



Document-No.: 6.563-5006.4-4  
Rev. 3 - Date: 09.February.2005  
94 9587



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