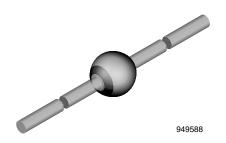
BYM36A, BYM36B, BYM36C, BYM36D, BYM36E

Vishay Semiconductors



Fast Avalanche Sinterglass Diode



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
- 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

HALOGEN FREE

APPLICATIONS

- Switched mode power supplies
- High-frequency inverter circuits

PARTS TABLE				
PART	TYPE DIFFERENTIATION	PACKAGE		
BYM36A	V _R = 200 V; I _{FAV} = 3 A	SOD-64		
BYM36B	V _R = 400 V; I _{FAV} = 3 A	SOD-64		
BYM36C	V _R = 600 V; I _{FAV} = 3 A	SOD-64		
BYM36D	V _R = 800 V; I _{FAV} = 2.9 A	SOD-64		
BYM36E	V _R = 1000 V; I _{FAV} = 2.9 A	SOD-64		

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	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 ms, half sine wave		I _{FSM}	65	Α	
Average forward current		BYM36A	I _{FAV}	3	Α	
		BYM36B	I _{FAV}	3	Α	
		BYM36C	I _{FAV}	3	Α	
		BYM36D	I _{FAV}	2.9	Α	
		BYM36E	I _{FAV}	2.9	Α	
Non repetitive reverse avalanche energy	I _{(BR)R} = 1 A, inductive load		E _R	20	mJ	
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 I = 10 mm, T _L = constant	R_{thJA}	25	K/W	
Junction ambient	On PC board with spacing 25 mm	R_{thJA}	70	K/W	



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ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
	I _F = 3 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
Forward voltage		BYM36E	V_{F}	-	-	1.78	V
Forward voltage	I _F = 3 A, T _j = 175 °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	μΑ
neverse current	$V_R = V_{RRM}$, $T_j = 150$ °C		I _R	-	-	100	μΑ
	I _F = 0.5 A, I _R = 1 A, i _R = 0.25 A	BYM36A	t _{rr}	-	-	100	ns
		BYM36B	t _{rr}	-	-	100	ns
Reverse recovery time		BYM36C	t _{rr}	-	-	100	ns
		BYM36D	t _{rr}	-	-	150	ns
		BYM36E	t _{rr}	-	-	150	ns
	I _R = 100 μA	BYM36A	V _{(BR)R}	300	-	-	V
		BYM36B	V _{(BR)R}	500	-	-	V
Reverse breakdown voltage		BYM36C	V _{(BR)R}	700	-	-	V
		BYM36D	V _{(BR)R}	900	-	-	V
		BYM36E	V _{(BR)R}	1100	-	-	V

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

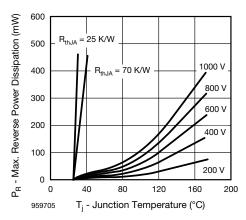


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

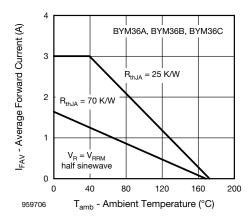


Fig. 2 - Max. Average Forward Current vs. Ambient Temperature

BYM36A, BYM36B, BYM36C, BYM36D, BYM36E

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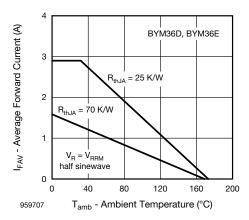
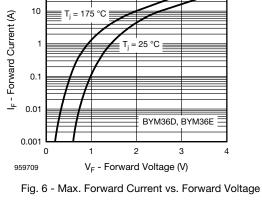


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature



100

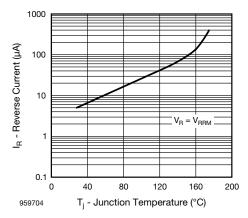


Fig. 4 - Max. Reverse Current vs. Junction Temperature

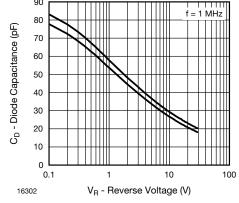


Fig. 7 - Diode Capacitance vs. Reverse Voltage

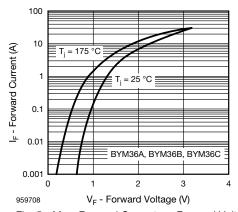
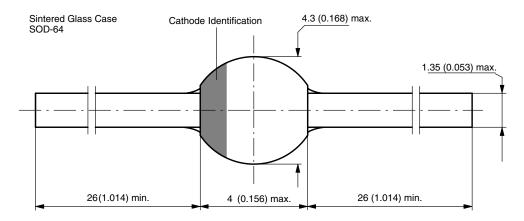


Fig. 5 - Max. Forward Current vs. Forward Voltage

BYM36A, BYM36B, BYM36C, BYM36D, BYM36E

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PACKAGE DIMENSIONS in millimeters (inches): SOD-64



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