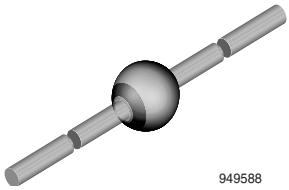
Fast Avalanche Sinterglass Diode

Features

- Glass passivated
- Hermetically sealed package
- Very low switching losses
- Low reverse current
- High reverse voltage



Applications

Switched mode power supplies
High-frequency inverter circuits

Mechanical Data

Case: SOD-64 Sintered glass case
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: approx. 858 mg

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 sinewave		I_{FSM}	65	A
Average forward current		BYM36A-BYM36C	I_{FAV}	3	A
		BYM36D-BYM36E	I_{FAV}	2.9	A
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	l = 10 mm, T_L = constant	R_{thJA}	25	K/W
	on PC Board with spacing \re\n25 mm	R_{thJA}	70	K/W

Electrical Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Part	Symbol	Min	Typ.	Max	Unit
Forward voltage	I_F = 3 A	BYM36A-BYM36C	V_F			1.6	V
		BYM36D-BYM36E	V_F			1.78	V
	I_F = 3 A, T_j = 175 °C	BYM36A-BYM36C	V_F			1.22	V
		BYM36D-BYM36E	V_F			1.28	V
Reverse current	$V_R = V_{RRM}$		I_R			5	µA
	$V_R = V_{RRM}$, T_j = 150 °C		I_R			100	µA
Reverse breakdown voltage	I_R = 100 µA	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
Reverse recovery time	I_F = 0.5 A, I_R = 1 A, i_R = 0.25 A	BYM36A-BYM36C	t_{rr}			100	ns
		BYM36D-BYM36E	t_{rr}			150	ns

Typical Characteristics (T_{amb} = 25 °C unless otherwise specified)

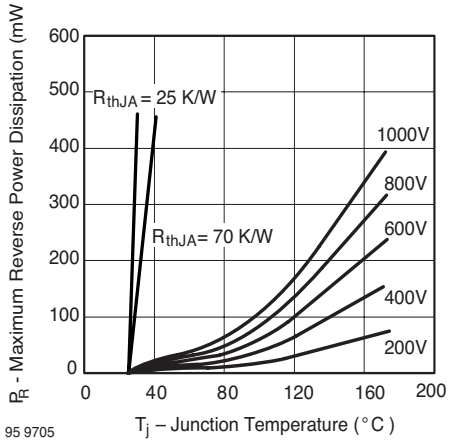


Figure 1. Max. Reverse Power Dissipation vs. Junction Temperature

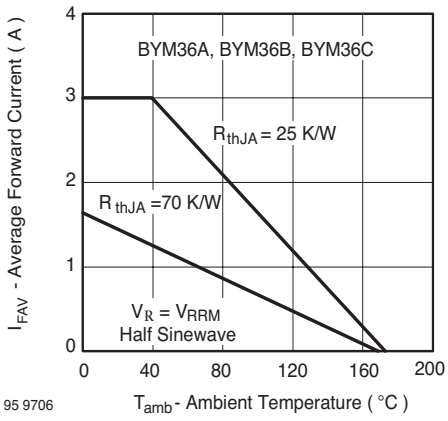


Figure 2. Max. Average Forward Current vs. Ambient Temperature

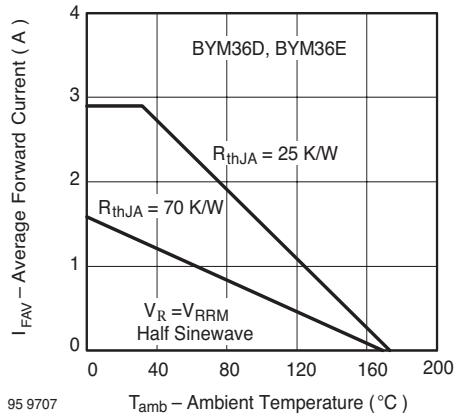


Figure 3. Max. Average Forward Current vs. Ambient Temperature

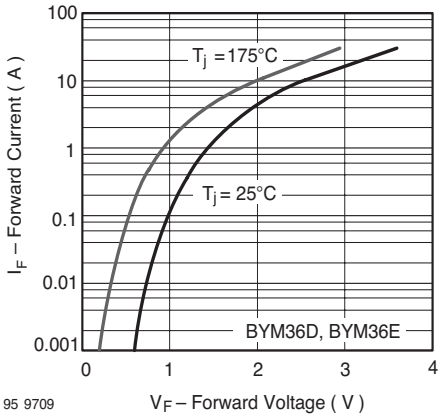


Figure 6. Max. Forward Current vs. Forward Voltage

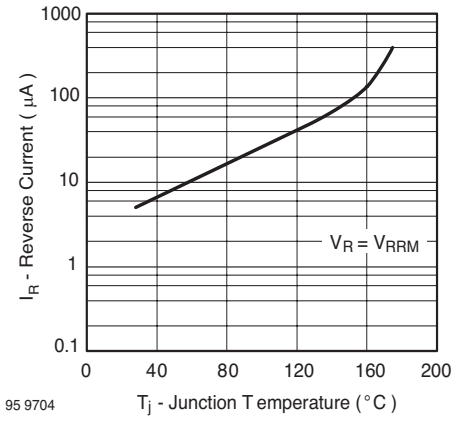


Figure 4. Max. Reverse Current vs. Junction Temperature

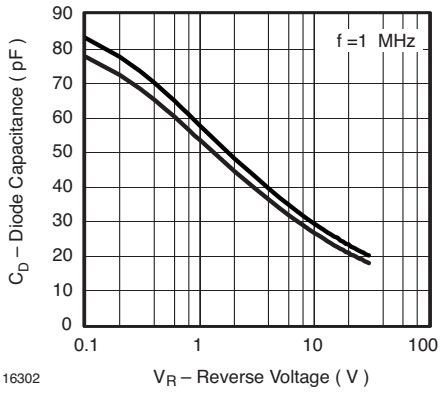


Figure 7. Diode Capacitance vs. Reverse Voltage

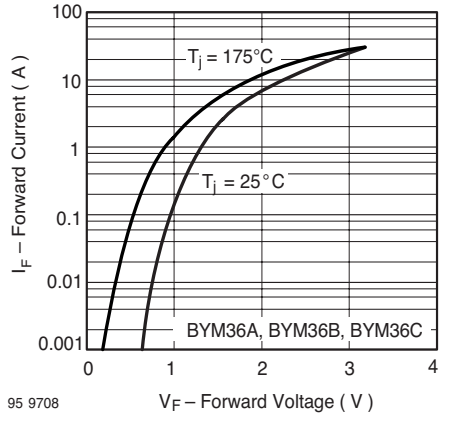
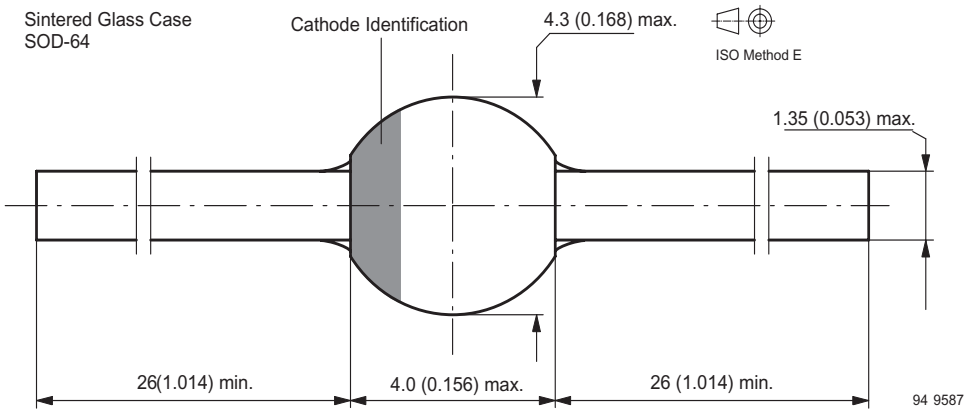


Figure 5. Max. Forward Current vs. Forward Voltage

Package Dimensions in mm (Inches)



Ozone Depleting Substances Policy Statement

It is the policy of **Vishay Semiconductor GmbH** to

1. Meet all present and future national and international statutory requirements.
2. Regularly and continuously improve the performance of our products, processes, distribution and operatingsystems with respect to their impact on the health and safety of our employees and the public, as well as their impact on the environment.

It is particular concern to control or eliminate releases of those substances into the atmosphere which are known as ozone depleting substances (ODSs).

The Montreal Protocol (1987) and its London Amendments (1990) intend to severely restrict the use of ODSs and forbid their use within the next ten years. Various national and international initiatives are pressing for an earlier ban on these substances.

Vishay Semiconductor GmbH has been able to use its policy of continuous improvements to eliminate the use of ODSs listed in the following documents.

1. Annex A, B and list of transitional substances of the Montreal Protocol and the London Amendments respectively
2. Class I and II ozone depleting substances in the Clean Air Act Amendments of 1990 by the Environmental Protection Agency (EPA) in the USA
3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

Vishay Semiconductor GmbH can certify that our semiconductors are not manufactured with ozone depleting substances and do not contain such substances.

We reserve the right to make changes to improve technical design and may do so without further notice.

Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer. Should the buyer use Vishay Semiconductors products for any unintended or unauthorized application, the buyer shall indemnify Vishay Semiconductors against all claims, costs, damages, and expenses, arising out of, directly or indirectly, any claim of personal damage, injury or death associated with such unintended or unauthorized use.

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