

Fast Avalanche Sinterglass Diode

Features

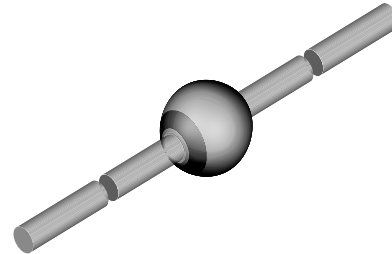
- Glass passivated junction
- Hermetically sealed package
- Low reverse current
- Soft recovery characteristics

Applications

Very fast rectification and switching diode

Mechanical Data

Case: Sintered glass case, SOD 64



949588

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Mounting Position: Any

Weight: 860 mg, (max. 1000 mg)

Polarity: Color band denotes cathode end

Parts Table

Part	Type differentiation	Package
BYT56A	$V_R = 50 \text{ V}; I_{FAV} = 3 \text{ A}$	SOD64
BYT56B	$V_R = 100 \text{ V}; I_{FAV} = 3 \text{ A}$	SOD64
BYT56D	$V_R = 200 \text{ V}; I_{FAV} = 3 \text{ A}$	SOD64
BYT56G	$V_R = 400 \text{ V}; I_{FAV} = 3 \text{ A}$	SOD64
BYT56J	$V_R = 600 \text{ V}; I_{FAV} = 3 \text{ A}$	SOD64
BYT56K	$V_R = 800 \text{ V}; I_{FAV} = 3 \text{ A}$	SOD64
BYT56M	$V_R = 1000 \text{ V}; I_{FAV} = 3 \text{ A}$	SOD64

Absolute Maximum Ratings

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

Parameter	Test condition	Sub type	Symbol	Value	Unit
Reverse voltage = Repetitive peak reverse voltage	see electrical characteristics	BYT56A	$V_R =$ V_{RRM}	50	V
	see electrical characteristics	BYT56B	$V_R =$ V_{RRM}	100	V
	see electrical characteristics	BYT56D	$V_R =$ V_{RRM}	200	V
	see electrical characteristics	BYT56G	$V_R =$ V_{RRM}	400	V
	see electrical characteristics	BYT56J	$V_R =$ V_{RRM}	600	V
	see electrical characteristics	BYT56K	$V_R =$ V_{RRM}	800	V
	see electrical characteristics	BYT56M	$V_R =$ V_{RRM}	1000	V

Parameter	Test condition	Sub type	Symbol	Value	Unit
Peak forward surge current	$t_p = 10$ ms, half sinewave		I_{FSM}	80	A
Average forward current	on PC board		I_{FAV}	1.5	A
	$l = 10$ mm		I_{FAV}	3	A
Junction and storage temperature range			$T_j = T_{stg}$	-55 to +175	°C
Non repetitive reverse avalanche energy	$I_{(BR)R} = 0.4$ A		E_R	10	mJ

Maximum Thermal Resistance

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

Parameter	Test condition	Sub type	Symbol	Value	Unit
Junction ambient	$l = 10$ mm, $T_L = \text{constant}$		R_{thJA}	25	K/W
	on PC board with spacing 25 mm		R_{thJA}	70	K/W

Electrical Characteristics

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

Parameter	Test condition	Sub type	Symbol	Min	Typ.	Max	Unit
Forward voltage	$I_F = 3$ A		V_F			1.4	V
Reverse current	$V_R = V_{RRM}$		I_R			5	μA
	$V_R = V_{RRM}$, $T_j = 150$ °C		I_R			150	μA
Reverse recovery time	$I_F = 0.5$ A, $I_R = 1$ A, $i_R = 0.25$ A		t_{rr}			100	ns

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

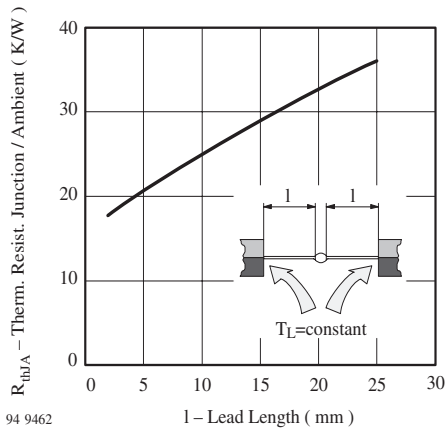


Figure 1. Max. Thermal Resistance vs. Lead Length

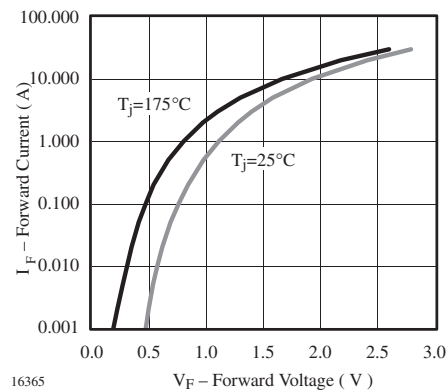


Figure 2. Forward Current vs. Forward Voltage

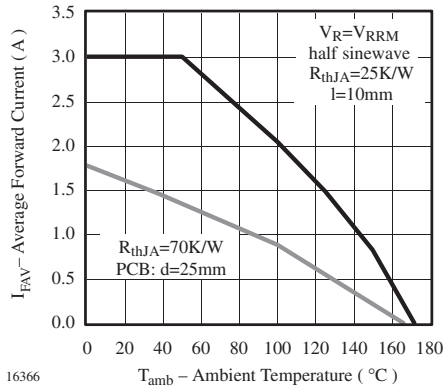


Figure 3. Max. Average Forward Current vs. Ambient Temperature

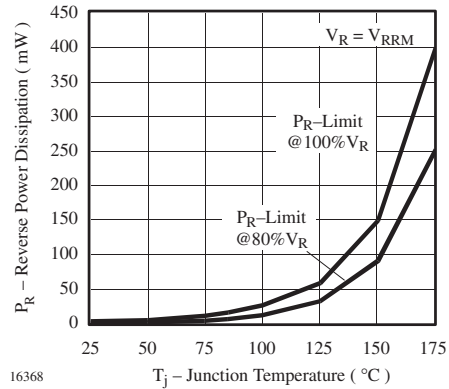


Figure 5. Max. Reverse Power Dissipation vs. Junction Temperature

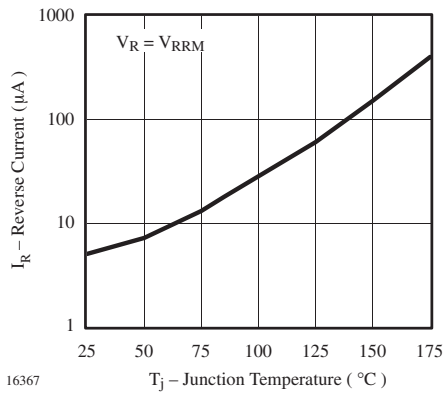


Figure 4. Reverse Current vs. Junction Temperature

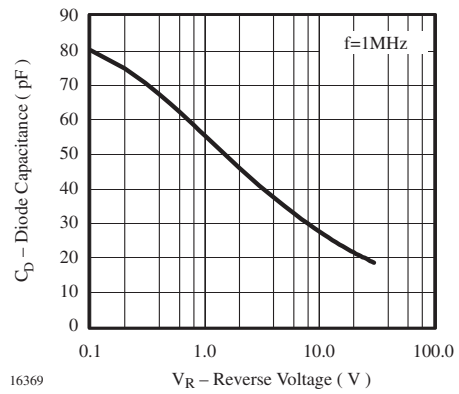
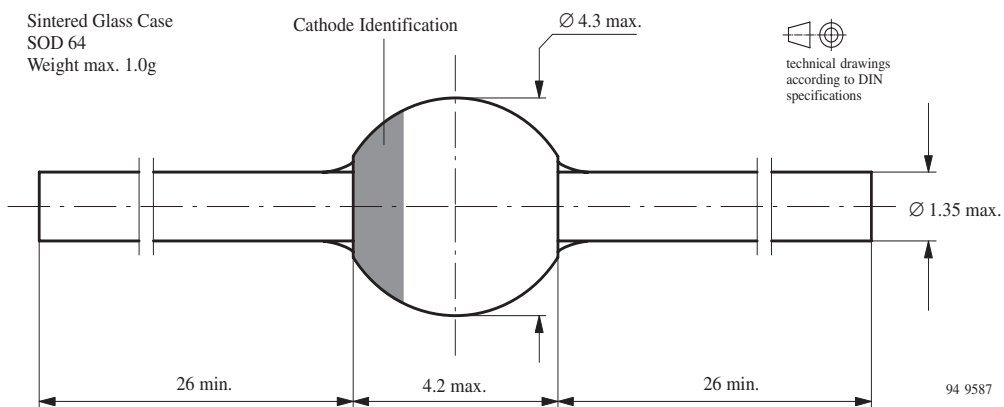


Figure 6. Diode Capacitance vs. Reverse Voltage

Package Dimensions in mm



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 operating systems 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.**

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