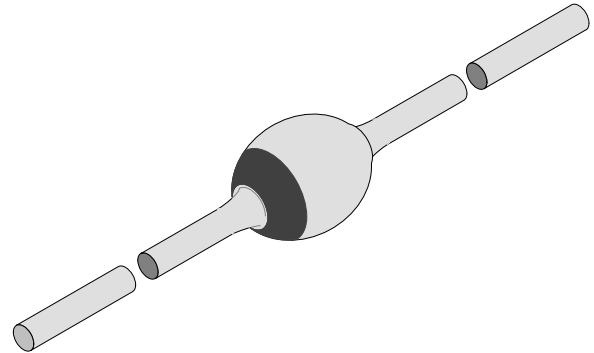# Fast Silicon Mesa Rectifiers

Features

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

94 9539

Applications

Fast rectifiers and switches

Absolute Maximum Ratings

$T_j = 25°C$

Parameter	Test Conditions	Type	Symbol	Value	Unit
Reverse voltage= Repetitive peak reverse voltage		BYT52A	$V_R= V_{RRM}$	50	V
		BYT52B		100	
		BYT52D		200	
		BYT52G		400	
		BYT52J		600	
		BYT52K		800	
		BYT52M		1000	
Peak forward surge current	t_p=10ms, half sinewave		I_{FSM}	50	A
Average forward current	on PC board		I_{FAV}	0.85	A
	l=10mm			1.4	
Junction and storage temperature range			$T_j=T_{stg}$	−65...+175	°C
Non repetitive reverse avalanche energy	$I_{(BR)R}$=0.4A	BYT52J.. BYT52M	E_R	10	mJ

Maximum Thermal Resistance

$T_j = 25°C$

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	l=10mm, T_L=constant	R_{thJA}	45	K/W
	on PC board with spacing 25mm		100	

BYT52.

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Electrical Characteristics

$T_j = 25°C$

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=1A$		V_F			1.3	V
Reverse current	$V_R=V_{RRM}$		I_R			5	μA
	$V_R=V_{RRM}$, $T_j=150°C$					150	
Reverse recovery time	$I_F=0.5A$, $I_R=1A$, $i_R=0.25A$		t_{rr}			200	ns

Characteristics ($T_j = 25°C$ unless otherwise specified)

94 9552
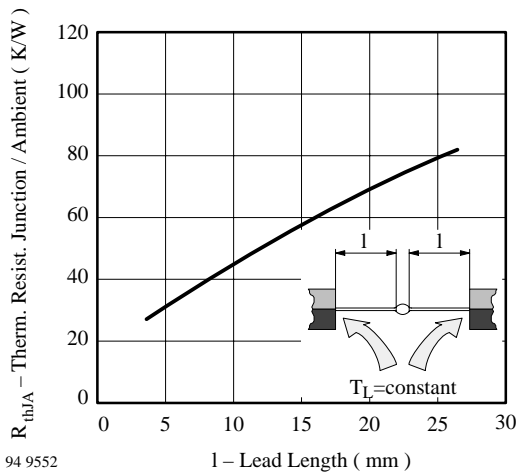
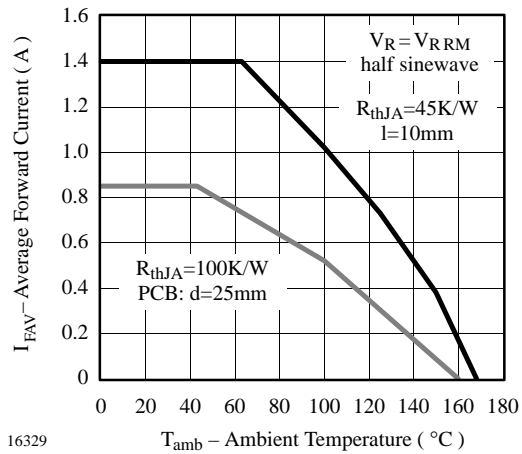Figure 1. Max. Thermal Resistance vs. Lead Length

16329

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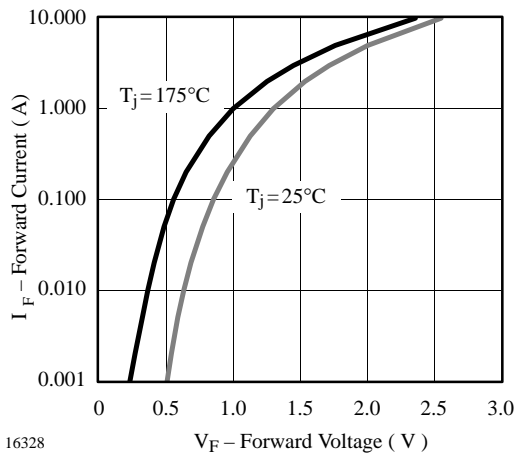

16328

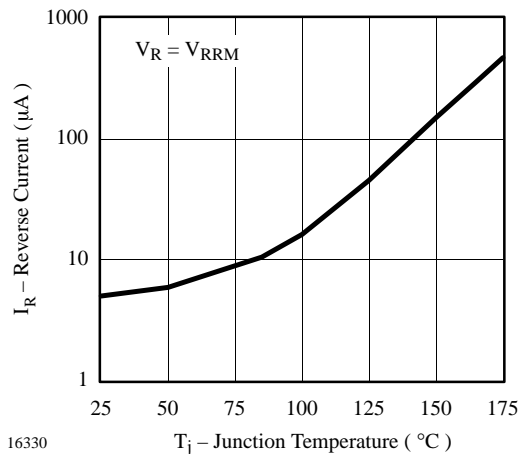Figure 2. Forward Current vs. Forward Voltage
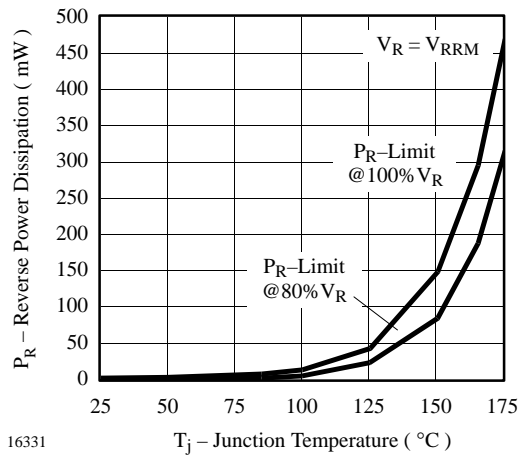

16330

Figure 4. Reverse Current vs. Junction Temperature

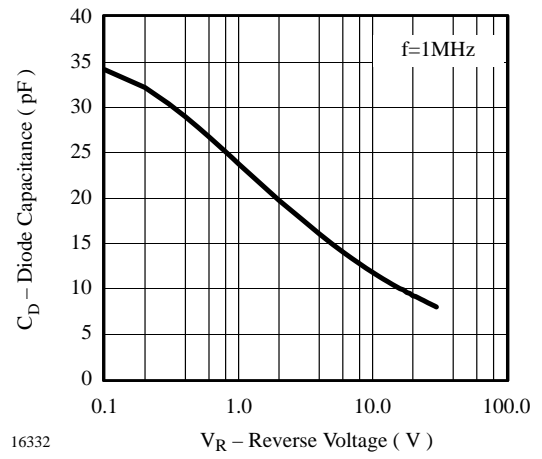Figure 5. Max. Reverse Power Dissipation vs. Junction Temperature

Figure 6. Diode Capacitance vs. Reverse Voltage
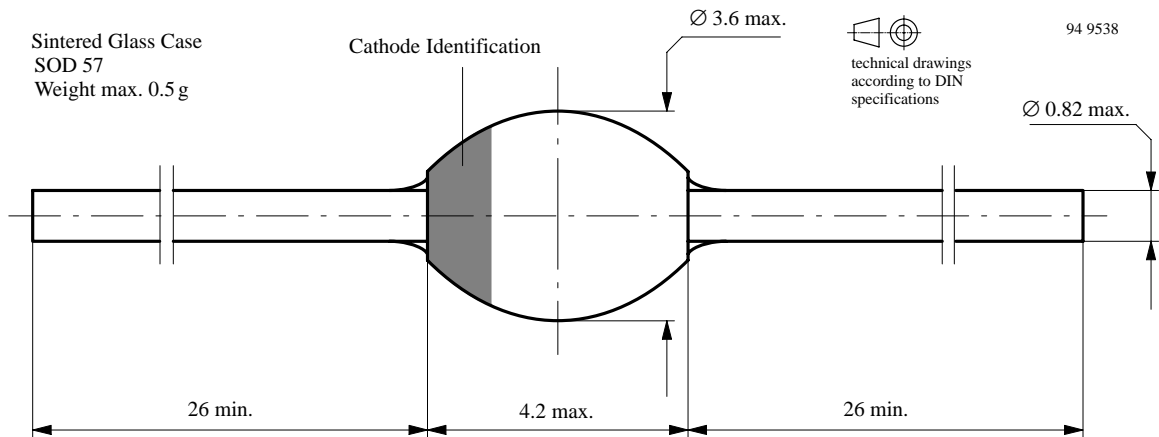
Dimensions in mm

Sintered Glass Case
SOD 57
Weight max. 0.5 g

Cathode Identification

$\varnothing$ 3.6 max.

technical drawings
according to DIN
specifications

94 9538

$\varnothing$ 0.82 max.

26 min.

4.2 max.

26 min.

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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.