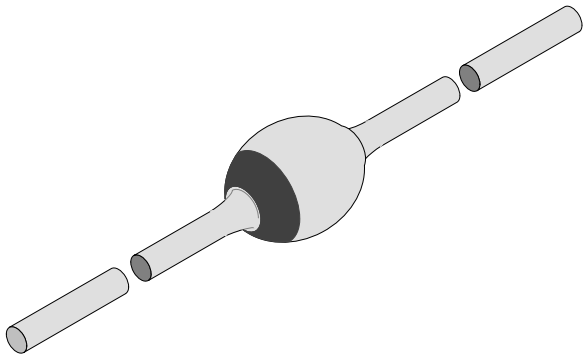
Ultra Fast Soft–Recovery Avalanche Rectifier

Features

- Glass passivated
- Hermetically sealed axial–leaded glass envelope
- Low reverse current
- Ultra fast soft recovery switching



94 9539

Applications

Electronic ballast
SMPS

Absolute Maximum Ratings

T_j = 25°C

Parameter	Test Conditions	Type	Symbol	Value	Unit
Reverse voltage=Repetitive peak reverse voltage			$V_R=V_{RRM}$	600	V
Peak forward surge current	t_p=10ms, half-sinewave		I_{FSM}	50	A
Average forward current	T_{amb} = 50˚C, l = 10 mm		I_{FAV}	2	A
Non–repetitive reverse avalanche energy	Inductive load, $I_{(BR)R}$=400mA		E_R	10	mJ
Junction and storage temperature range			$T_j=T_{stg}$	–55...+175	˚C

Maximum Thermal Resistance

T_j = 25°C

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

Electrical Characteristics

T_j = 25°C

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I_F=1A		V_F			1.15	V
	I_F=3A		V_F			1.35	V
	I_F=1A, T_j=175°C		V_F			0.85	V
	I_F=3A, T_j=175°C		V_F			1.15	V
Reverse current	V_R=V_{RRM}		I_R			5	µA
	V_R=V_{RRM}, T_j=150°C		I_R			150	µA
Reverse breakdown voltage	I_R=100µA		$V_{(BR)R}$	600			V
Reverse recovery time	I_F=0.5A, I_R=1A,i_R=0.25A		t_{rr}			40	ns
Forward recovery	I_F=1A		V_{FP}		3.4		V
Forward recovery time			t_{fr}		250		ns

Characteristics (T_j = 25°C unless otherwise specified)

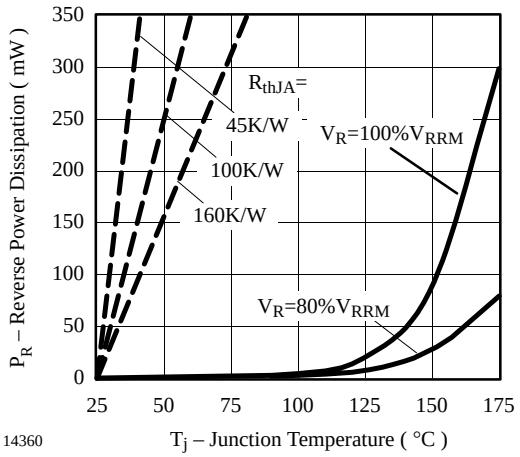


Figure 1. Max. Reverse Power Dissipation vs. Junction Temperature

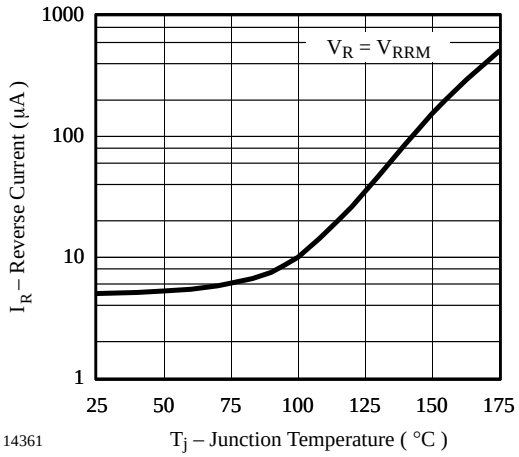


Figure 2. Max. Reverse Current vs. Junction Temperature

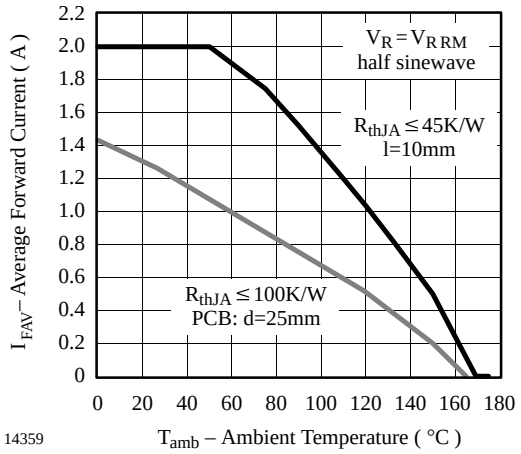


Figure 3. Max. Average Forward Current vs. Ambient Temperature

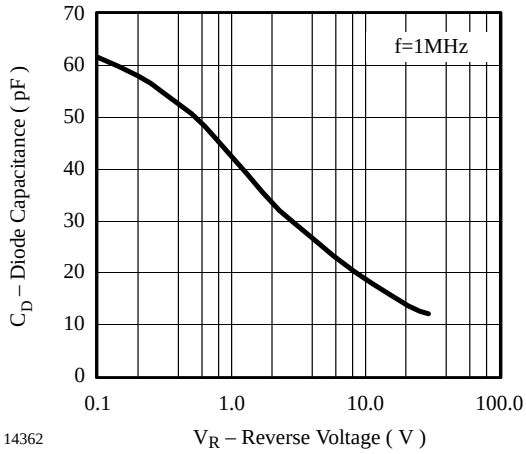


Figure 5. Typ. Diode Capacitance vs. Reverse Voltage

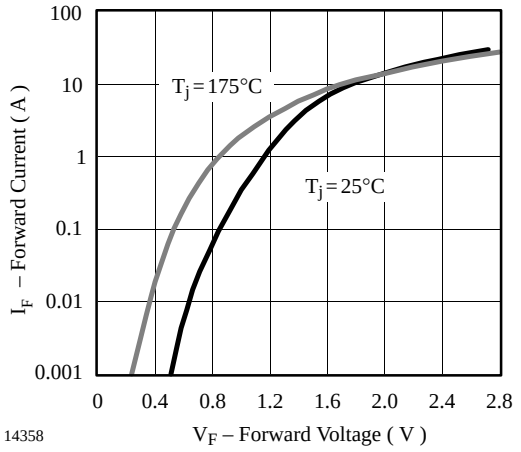
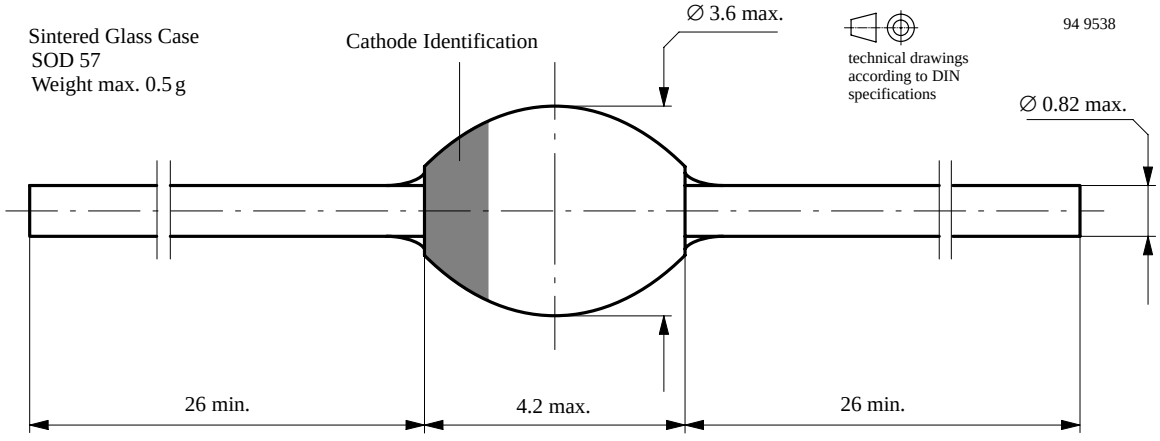


Figure 4. Max. Forward Current vs. Forward Voltage

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.
Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer. Should the buyer use Vishay-Telefunken products for any unintended or unauthorized application, the buyer shall indemnify Vishay-Telefunken 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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