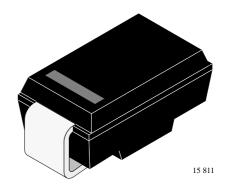




# ESD Safe – High Voltage Power Schottky – Rectifier

### **Features**

- High efficiency
- Low forward voltage drop
- Negligible switching losses
- Low reverse current
- High reverse surge capability
- High ESD capability



## **Applications**

High frequency SMPS Free wheeling diode in low voltage converters

### **Absolute Maximum Ratings**

 $T_i = 25^{\circ}C$ 

Parameter	Test Conditions	Type	Symbol	Value	Unit
Repeptive peak reverse voltage			$V_{RRM}$	90	V
Continuous reverse voltage			$V_{R}$	90	V
Average forward current	$T_{j}=76$ °C, $V_{R}=90V$		I <sub>FAV</sub>	1.5	Α
Non-repeptive surge forward current	t <sub>p</sub> =10ms, half sinewave		I <sub>FSM</sub>	75	Α
ESD - IEC 1000-4-2	$R = 330\Omega$ , $C = 150pF$		ESD	20	kV
Junction and storage temperature range			T <sub>i</sub> =T <sub>stq</sub>	<i>−</i> 55+150	°C

### **Maximum Thermal Resistance**

 $T_i = 25^{\circ}C$ 

Parameter	Test Conditions	Symbol	Value	Unit
Junction lead	T <sub>L</sub> =constant	$R_{thJL}$	25	K/W
Junction ambient	ction ambient Epoxy–glass hard tissue (see figure 1) 35µm * 17mm <sup>2</sup> copper area per electrode		150	K/W
	Epoxy–glass hard tissue (see figure 2) 35μm * 50mm <sup>2</sup> copper area per electrode		125	

### **Electrical Characteristics**

 $T_i = 25^{\circ}C$ 

Parameter	Test Conditions	Type	Symbol	Min	Тур	Max	Unit
	I <sub>F</sub> =100mA					430	
	I <sub>F</sub> =3A		$V_{F}$		850	950	mV
	I <sub>F</sub> =3A T <sub>i</sub> = 100°C				700	850	
Reverse current	$V_R = V_{RRM}$		1_			30	μΑ
	V <sub>R</sub> =V <sub>RRM</sub> , T <sub>j</sub> =100°C		IR			5	mA
Junction Capacitance	$V_R=4V$ , $f=1MHz$		C <sub>D</sub>		130		pF

### Vishay Semiconductors

# VISHAY

# **Characteristics** $(T_i = 25^{\circ}C \text{ unless otherwise specified})$

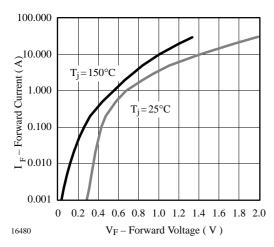


Figure 1. Forward Current vs. Forward Voltage

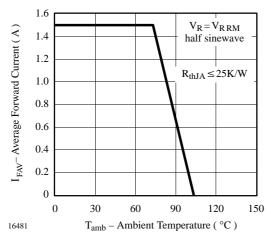


Figure 2. Max. Average Forward Current vs. Ambient Temperature

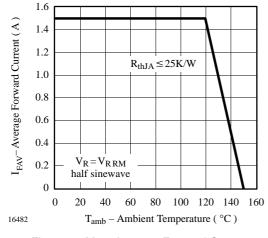


Figure 3. Max. Average Forward Current vs.
Ambient Temperature

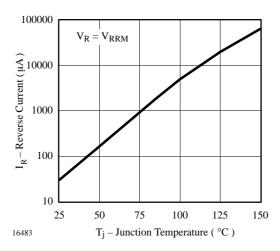


Figure 4. Reverse Current vs. Junction Temperature

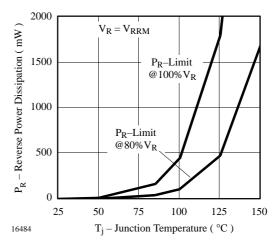


Figure 5. Max. Reverse Power Dissipation vs. Junction Temperature

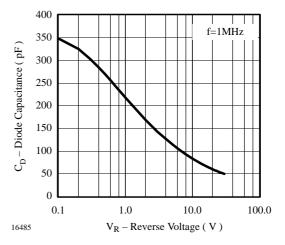
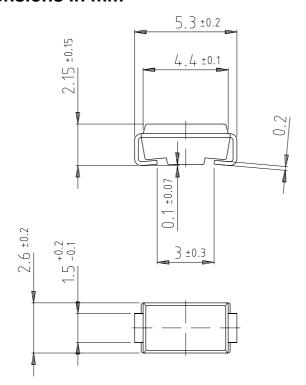


Figure 6. Diode Capacitance vs. Reverse Voltage



# Vishay Semiconductors

### **Dimensions in mm**





Plastic case JEDEC DO 214 similar to SMA Cathode indicated by a band



14275

technical drawings according to DIN specifications

### Vishay Semiconductors



### **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-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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