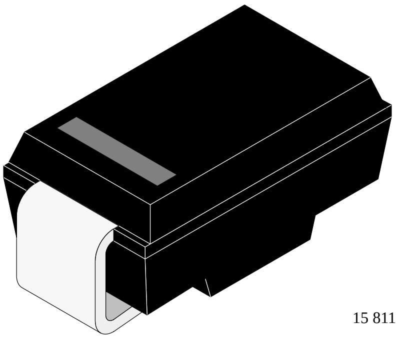
ESD Safe – High Voltage Power Schottky – Rectifier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Features

- 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_j = 25°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_{FAV}	1.5	A
Non–repeptive surge forward current	t_p=10ms, half sinewave		I_{FSM}	75	A
ESD – IEC 1000–4–2	R = 330Ω, C = 150pF		ESD	20	kV
Junction and storage temperature range			T_j=T_{stg}	–55...+150	˚C

Maximum Thermal Resistance

T_j = 25°C

Parameter	Test Conditions	Symbol	Value	Unit
Junction lead	T_L=constant	R_{thJL}	25	K/W
Junction ambient	Epoxy–glass hard tissue (see figure 1) 35µm * 17mm^2 copper area per electrode	R_{thJA}	150	K/W
	Epoxy–glass hard tissue (see figure 2) 35µm * 50mm^2 copper area per electrode		125	

Electrical Characteristics

T_j = 25°C

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I_F=100mA		V_F			430	mV
	I_F=3A				850	950	
	I_F=3A T_j = 100˚C				700	850	
Reverse current	V_R=V_{RRM}		I_R			30	µA
	V_R=V_{RRM}, T_j=100˚C					5	mA
Junction Capacitance	V_R=4V, f = 1MHz		C_D		130		pF

Characteristics (T_j = 25°C unless otherwise specified)

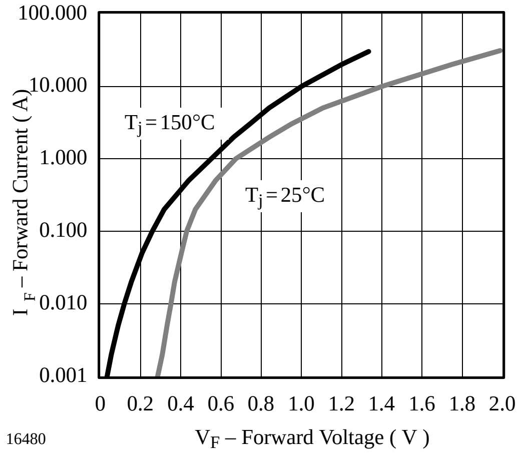


Figure 1. Forward Current vs. Forward Voltage

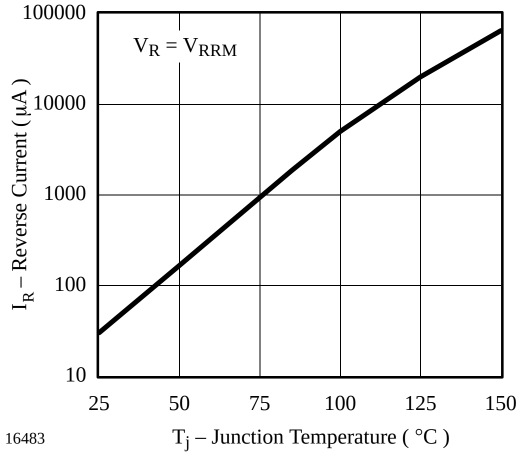


Figure 4. Reverse Current vs. Junction Temperature

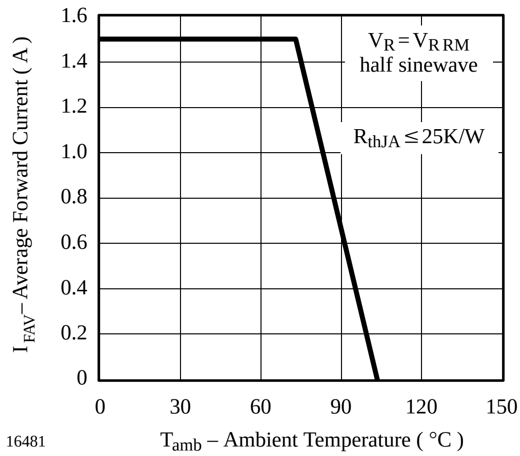


Figure 2. Max. Average Forward Current vs. Ambient Temperature

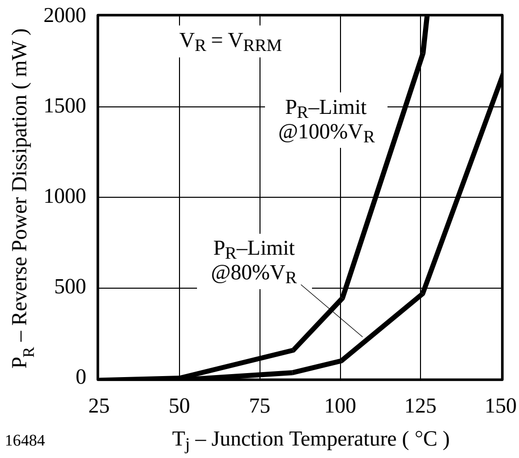


Figure 5. Max. Reverse Power Dissipation vs. Junction Temperature

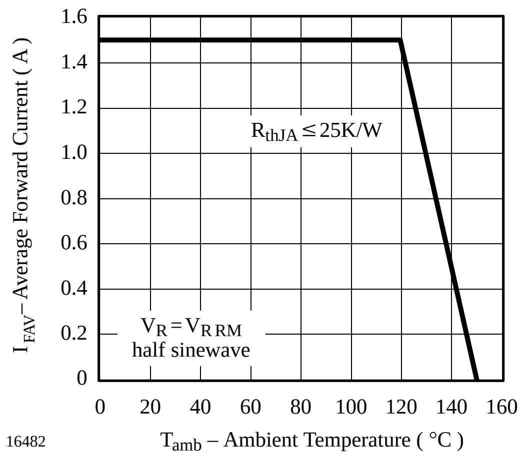


Figure 3. Max. Average Forward Current vs. Ambient Temperature

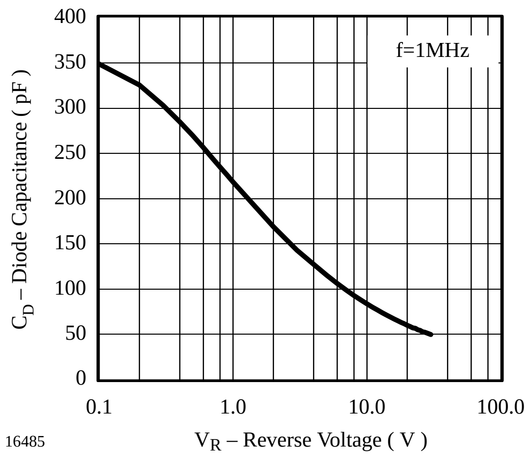
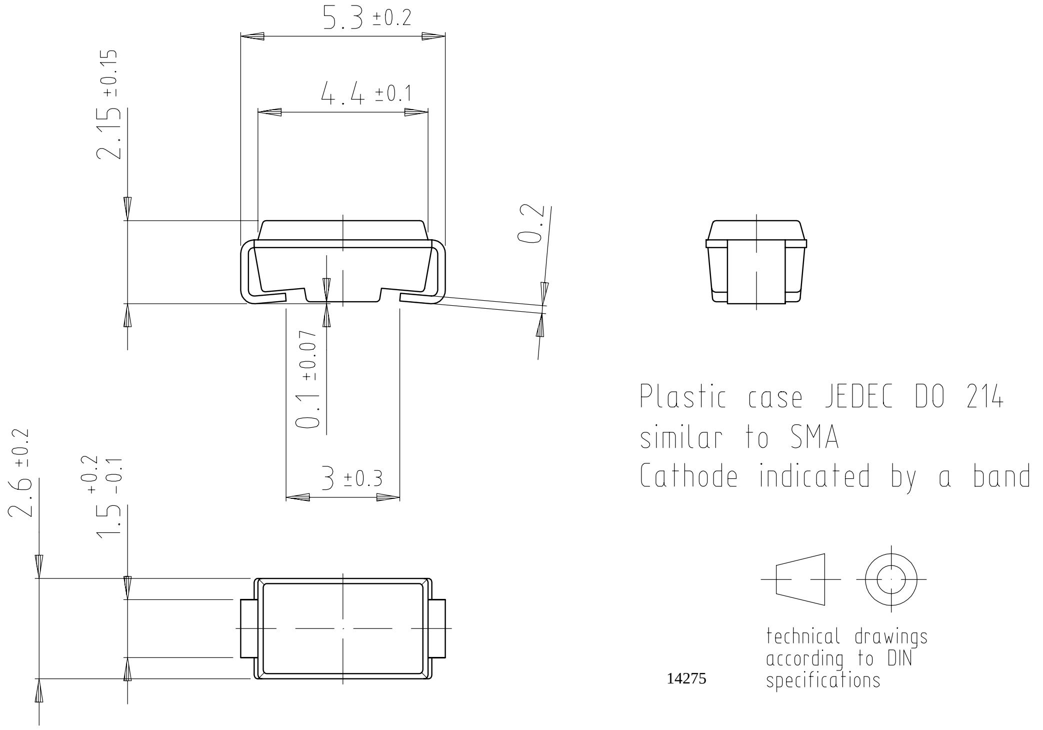


Figure 6. Diode Capacitance vs. Reverse Voltage

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.

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