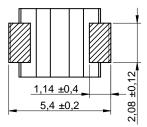
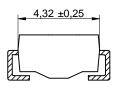
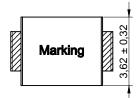
# Dimensions: [mm]









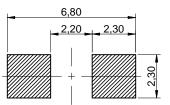
 $2,4 \pm 0,25$  $2,3 \pm 0,17$ 

Scale - 5:1

# **Product Marking:**

Marking	CE

### **Recommended Land Pattern: [mm]**



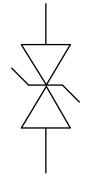
Scale - 5:1

### **Electrical Properties:**

Properties	Test conditions		Value	Unit	Tol.
DC Operating Voltage		V <sub>DC</sub>	26	٧	max.
(Reverse) Breakdown Voltage	1 mA	$V_{BR}$	30.4	V	±5%
Clamping Voltage	I <sub>PEAK</sub>	V <sub>Clamp</sub>	42.1	٧	max.
(Reverse) Peak Pulse Current	10/1000 µs	I <sub>Peak</sub>	14.3	А	max.
Leakage Current	V <sub>DC</sub>	I <sub>LEAK</sub>	1	μΑ	max.
Steady State Power Dissipation	T <sub>A</sub> = 50 °C	P <sub>DISS</sub>	5	W	max.
Power Dissipation 1)	10/1000 μs	P <sub>DISS</sub>	600	W	max.
Polarity	Bidirectional				

<sup>1)</sup> Mounted on 5.0 mm x 5.0 mm (0.03 mm thick) Copper Pads to each terminal

### **Schematic:**



### **General Information:**

001.000

It is recommeded that the temperature of the component does not exceed +150  $^{\circ}\text{C}$  under worst case conditions

	Operating Temperature	-65 °C up to +150 °C				
	Storage Temperature (in original packaging)	-40 °C up to +60 °C				
Test and the set Florida I Donatha COSO COSO DILLEGATION OF SET ALL HER SET AL						

Test conditions of Electrical Properties: +20°C, 33% RH if not specified differently

Würth Elektronik eiSos GmbH & Co	).	KG	
EMC & Inductive Solutions			

Max-Eyth-Str. 1 74638 Waldenburg Germany

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WE-TVSP Power TVS Diode							
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2015-11-10

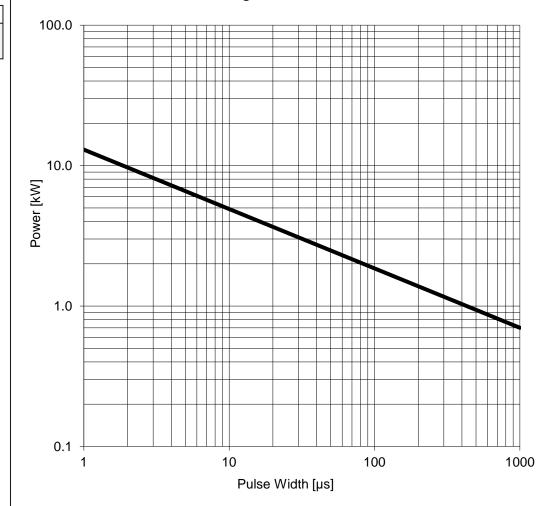
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### **Properties & Approvals:**

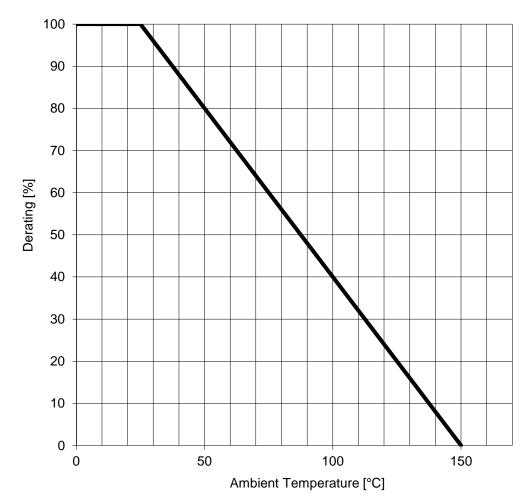
UL Approval	UL497B: E478010
Plastic Housing Flammability Rating	UL94-V0

### **Maximum Peak Pulse Power Rating**

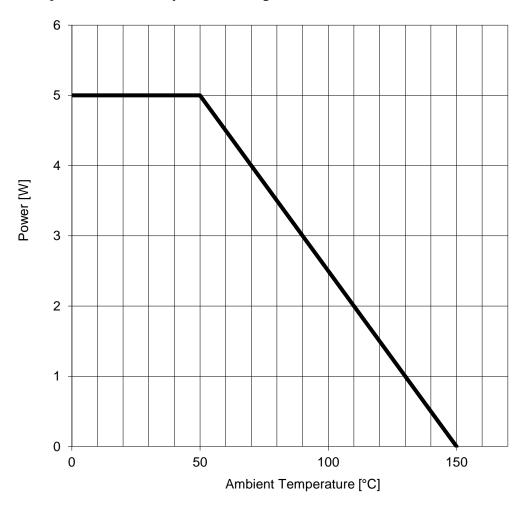




### **Peak Pulse Power and Current Derating**

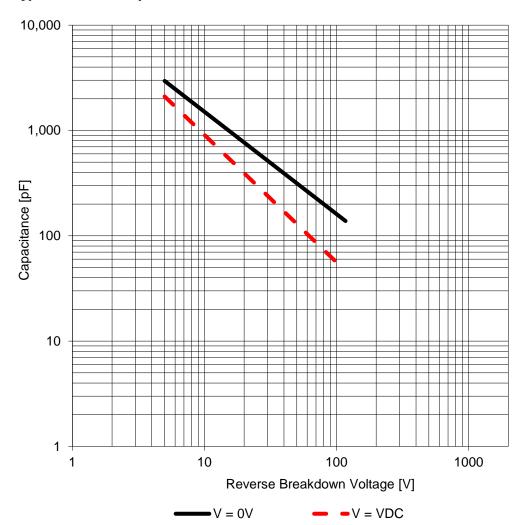


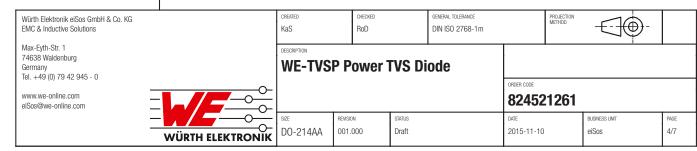
## **Steady State Power Dissipation Derating**



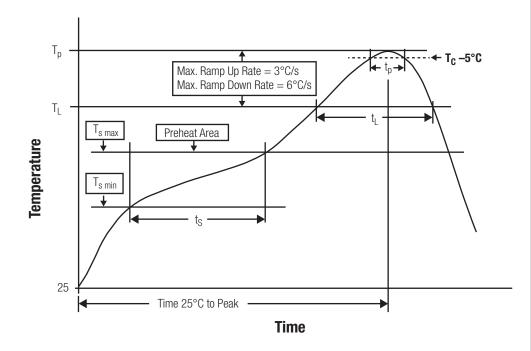
GENERAL TOLERANCE CREATED CHECKED Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions KaS RoD DIN ISO 2768-1m Max-Eyth-Str. 1 74638 Waldenburg **WE-TVSP Power TVS Diode** Tel. +49 (0) 79 42 945 - 0 www.we-online.com 824521261 eiSos@we-online.com REVISION STATUS BUSINESS UNIT PAGE Draft 001.000 2015-11-10 eiSos 3/7

### **Typical Junction Capacitance**





### **Classification Reflow Profile for SMT components:**



### **Classification Reflow Soldering Profile:**

Profile Feature		Value
Preheat Temperature Min	T <sub>s min</sub>	150 °C
Preheat Temperature Max	T <sub>s max</sub>	200 °C
Preheat Time $t_s$ from $T_{s min}$ to $T_{s max}$	t <sub>s</sub>	60 - 120 seconds
Ramp-up Rate (T <sub>L</sub> to T <sub>P</sub> )		3 °C/ second max.
Liquidous Temperature	T <sub>L</sub>	217 °C
Time t <sub>L</sub> maintained above T <sub>L</sub>	t <sub>L</sub>	60 - 150 seconds
Peak package body temperature	T <sub>p</sub>	see table below
Time within 5°C of actual peak temperaure	t p	20 - 30 seconds
Ramp-down Rate (T <sub>L</sub> to T <sub>P</sub> ) Time 25°C to peak temperature		6 °C/ second max.
		8 minutes max.

refer to IPC/ JEDEC J-STD-020E

# **Package Classification Reflow Temperature:**

Properties	Volume mm³ <350	Volume mm <sup>3</sup> 350-2000	<b>Volume mm³</b> >2000 260 °C	
PB-Free Assembly   Package Thickness < 1.6 mm	260 °C	260 °C		
PB-Free Assembly I Package Thickness 1.6 mm - 2.5 mm	260 °C	250 °C	245 °C	
PB-Free Assembly I Package Thickness ≥ 2.5 mm	250 °C	245 °C	245 °C	

refer to IPC/ JEDEC J-STD-020E

CHECKED GENERAL TOLERANCE Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions KaS RoD DIN ISO 2768-1m Max-Eyth-Str. 1 74638 Waldenburg **WE-TVSP Power TVS Diode** Tel. +49 (0) 79 42 945 - 0 ORDER CODE www.we-online.com 824521261 eiSos@we-online.com REVISION STATUS BUSINESS UNIT PAGE Draft 2015-11-10 5/7 001.000 eiSos **WÜRTH ELEKTRONİK** 

### **Cautions & Warnings:**

The following conditions apply to all goods within the product series of WE-TVSP of Würth Elektronik eiSos GmbH & Co. KG:

### General:

All recommendations according to the general technical specifications of the data-sheet have to be complied with. Further the TVS Diode is not designed for voltage stabilization with continuous power dissipation.

The disposal and operation of the product within ambient conditions which probably alloy or harm the component surface has to be avoided.

The exposure of steam, saline spray, atmosphere with reduced oxygen content, corrosive gases, rain or condensation and direct sunlight shall be prohibited.

If the product is potted in customer applications, the potting material might shrink and react chemically during and after hardening.

According to this the product is exposed to the pressure and material of the potting material with the effect that the body and termination is possibly damaged by this pressure or the chemically reaction and so the electrical as well as the mechanical characteristics and the life time are in danger to be affected. After the potting material is cured, the body and termination of the product have to be checked if any reduced electrical or mechanical functions or destructions have occurred.

The responsibility for the applicability of customer specific products and use in a particular customer design is always within the authority of the customer. All technical specifications for standard products do also apply for customer specific products.

Cleaning agents that are used to clean the application might damage or change the characteristics of the component, body, pins or termination and might reduce the life time.

Direct mechanical impact to the product shall be prevented as the material of the body could flake or in the worst case it could break.

Signals operated continuously with a high ratio of direct-current voltage might have an influence on the product life time.

#### **Product specific:**

Follow all instructions mentioned in the data sheet, especially:

- The solder profile has to be complied with according to the technical reflow soldering specification, otherwise no warranty will be sustained.
- All products shall be used before the end of the period of 12 months based on the product date-code, if not a 100% solderability can
  not be warranted.
- Violation of the technical product specifications such as exceeding the nominal rated voltage will result in the loss of warranty.

The general and product specific cautions comply with the state of the scientific and technical knowledge and are believed to be accurate and reliable; however, no responsibility is assumed for inaccuracies or incompleteness.

Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions		KaS	RoD	1	DIN ISO 2768-1m	PROJECTION METHOD		
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www.we-online.com eiSos@we-online.com	om					ORDER CODE <b>824521261</b>		
	WÜRTH ELEKTRONIK	DO-214AA	REVISION 001.000	STATUS Draft		DATE 2015-11-10	BUSINESS UNIT eiSos	PAGE 6/7

### **Important Notes**

# The following conditions apply to all goods within the product range of Würth Elektronik eiSos GmbH & Co. KG:

#### 1. General Customer Responsibility

Some goods within the product range of Würth Elektronik eiSos GmbH & Co. KG contain statements regarding general suitability for certain application areas. These statements about suitability are based on our knowledge and experience of typical requirements concerning the areas, serve as general guidance and cannot be estimated as binding statements about the suitability for a customer application. The responsibility for the applicability and use in a particular customer design is always solely within the authority of the customer. Due to this fact it is up to the customer to evaluate, where appropriate to investigate and decide whether the device with the specific product characteristics described in the product specification is valid and suitable for the respective customer application or not.

### 2. Customer Responsibility related to Specific, in particular Safety-Relevant Applications

It has to be clearly pointed out that the possibility of a malfunction of electronic components or failure before the end of the usual lifetime cannot be completely eliminated in the current state of the art, even if the products are operated within the range of the specifications. In certain customer applications requiring a very high level of safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health it must be ensured by most advanced technological aid of suitable design of the customer application that no injury or damage is caused to third parties in the event of malfunction or failure of an electronic component. Therefore, customer is cautioned to verify that data sheets are current before placing orders. The current data sheets can be downloaded at www.we-online.com.

#### 3. Best Care and Attention

Any product-specific notes, cautions and warnings must be strictly observed. Any disregard will result in the loss of warranty.

#### 4. Customer Support for Product Specifications

Some products within the product range may contain substances which are subject to restrictions in certain jurisdictions in order to serve specific technical requirements. Necessary information is available on request. In this case the field sales engineer or the internal sales person in charge should be contacted who will be happy to support in this matter.

#### 5. Product R&D

Due to constant product improvement product specifications may change from time to time. As a standard reporting procedure of the Product Change Notification (PCN) according to the JEDEC-Standard inform about minor and major changes. In case of further queries regarding the PCN, the field sales engineer or the internal sales person in charge should be contacted. The basic responsibility of the customer as per Section 1 and 2 remains unaffected.

#### 6. Product Life Cycle

Due to technical progress and economical evaluation we also reserve the right to discontinue production and delivery of products. As a standard reporting procedure of the Product Termination Notification (PTN) according to the JEDEC-Standard we will inform at an early stage about inevitable product discontinuance. According to this we cannot guarantee that all products within our product range will always be available. Therefore it needs to be verified with the field sales engineer or the internal sales person in charge about the current product availability expectancy before or when the product for application design-in disposal is considered. The approach named above does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.

### 7. Property Rights

All the rights for contractual products produced by Würth Elektronik eiSos GmbH & Co. KG on the basis of ideas, development contracts as well as models or templates that are subject to copyright, patent or commercial protection supplied to the customer will remain with Würth Elektronik eiSos GmbH & Co. KG does not warrant or represent that any license, either expressed or implied, is granted under any patent right, copyright, mask work right, or other intellectual property right relating to any combination, application, or process in which Würth Elektronik eiSos GmbH & Co. KG components or services are used.

#### 8. General Terms and Conditions

Unless otherwise agreed in individual contracts, all orders are subject to the current version of the "General Terms and Conditions of Würth Elektronik eiSos Group", last version available at www.we-online.com.





Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию.

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России, а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научноисследовательскими институтами России.

С нами вы становитесь еще успешнее!

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