

# Specification for release

Customer :  
 Ordercode: **82402374**  
 Description: **TVS Diode Array WE-TVS**  
 Package: **SC70-5L**



DATUM / DATE : 2010-01-27

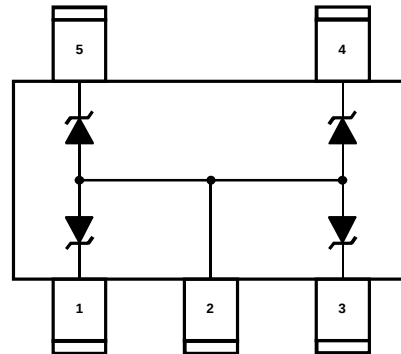
## A Features:

- ESD Protection for 4 Lines - unidirectional
- Provide ESD Protection for each line to IEC 61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact)  
 IEC 61000-4-4 (EFT) 35A (5/50ns)  
 IEC 61000-4-5 (Lightning) 6A (8/20 $\mu\text{s}$ )
- Below 5V operating voltage: 2.5 - 3.3 - 4.2 - 5.0V
- Array of surge rated equivalent TVS diodes

## Mechanical Characteristics:

- JEDEC SC70-5L Package
- Molding compound flamability rating: UL94V-0
- Packaging: Tape & Reel

## B Schematic and Pin Configuration:



## C Absolute Maximum Ratings:

|                                                | Symbol    | Rating     | Unit               |
|------------------------------------------------|-----------|------------|--------------------|
| Peak Pulse Current ( $t_p = 8/20\mu\text{s}$ ) | $I_{PP}$  | 6          | A                  |
| ESD per IEC 61000-4-2 (Air / Contact)          | $V_{ESD}$ | 16 / 10    | kV                 |
| Operating Temperature                          | $T_{Op}$  | -55 to +85 | $^{\circ}\text{C}$ |
| Storage Temperature                            | $T_{Sto}$ | -20 to +60 | $^{\circ}\text{C}$ |
|                                                |           |            |                    |
|                                                |           |            |                    |
|                                                |           |            |                    |

## D Electrical Characterisitcs:

| Properties | Test Conditions                                                 | Value min | Value typ | Value max | Unit          |
|------------|-----------------------------------------------------------------|-----------|-----------|-----------|---------------|
| $V_{RWM}$  | Pin 1,3,4,5 to pin 2                                            |           |           | 5         | V             |
| $V_{BV}$   | $I_{BV}=1\text{mA}$ , pin 1,3,4,5 to pin 2                      | 6.0       |           |           | V             |
| $I_R$      | $V_{RWM}=5\text{V}$ , pin 1,3,4,5 to pin 2                      |           |           | 2.5       | $\mu\text{A}$ |
| $V_F$      | $I_F = 15\text{mA}$ , pin 2 to pin 1,3,4,5                      | 0.6       | 0.8       | 1         | V             |
| $V_C$      | $I_{PP}=5\text{A}$ , $t_p=8/20\mu\text{s}$ , pin 1,3,4,5 to p.2 |           | 6.8       |           | V             |
| $V_{CI}$   | $I_{TLP} = 17\text{A}$ , pin 1,3,4,5 to pin 2                   |           | 8.5       |           | V             |
| $C_{IN}$   | $V_{IO}=0\text{V}$ , $f=1\text{MHz}$ , pin 1,3,4,5 to p.2       |           | 13        | 17        | pF            |
|            |                                                                 |           |           |           |               |
|            |                                                                 |           |           |           |               |
|            |                                                                 |           |           |           |               |
|            |                                                                 |           |           |           |               |

## Würth Elektronik eiSos GmbH & Co. KG

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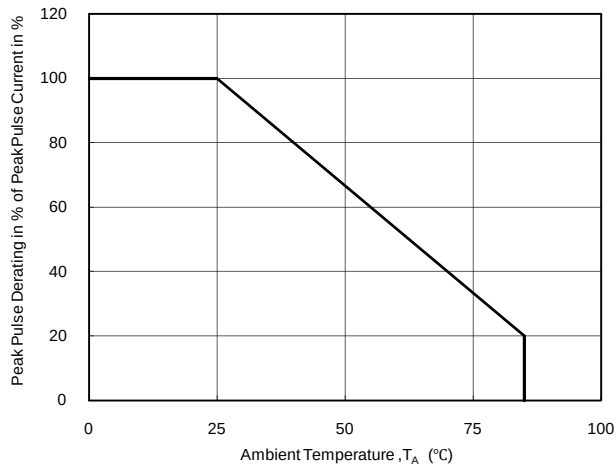
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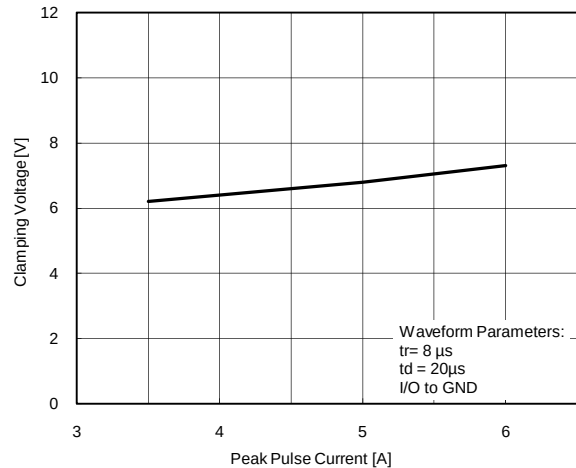


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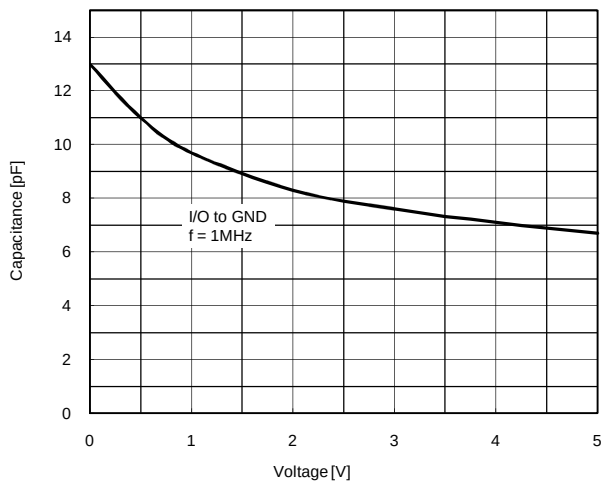
## E Typical Characteristics:



Power Derating Curve



Clamping Voltage vs. Peak Pulse Current



Variation of  $C_{IO}$  vs.  $V_{IO}$

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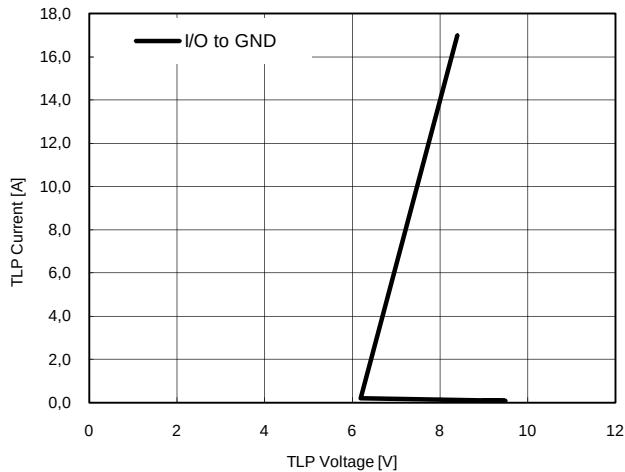
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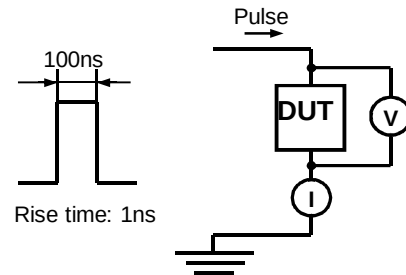


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## E Typical Characteristic:

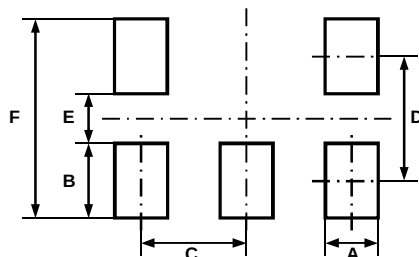


Transmission Line Pulsing (TLP) Measurement



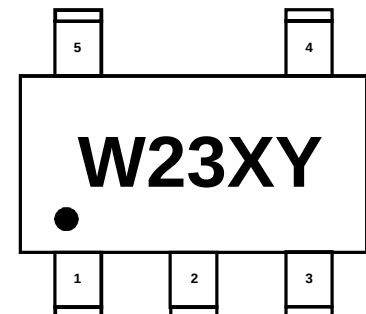
Transmission Line Pulsing System

## F Recommended Land Layout:



|   |      |    |
|---|------|----|
| A | 0.40 | mm |
| B | 0.85 | mm |
| C | 0.65 | mm |
| D | 1.85 | mm |
| E | 1.00 | mm |
| F | 2.70 | mm |

## G Body Marking:



W23: Device Code

X: Date Code

Y: Control Code

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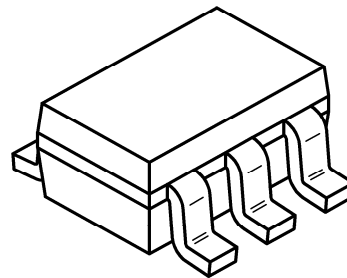
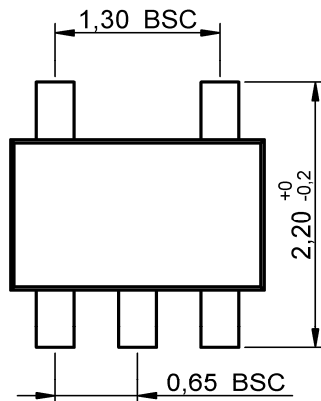
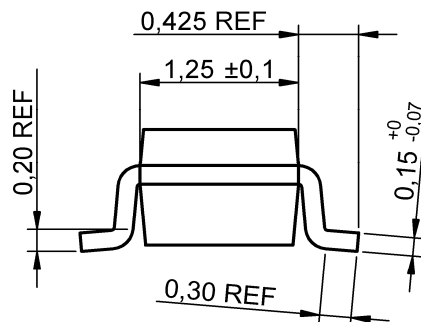
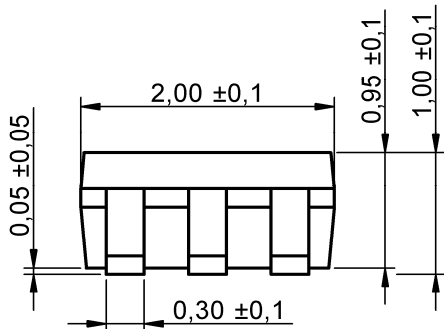
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## H Dimensions:



Scale - 10:1

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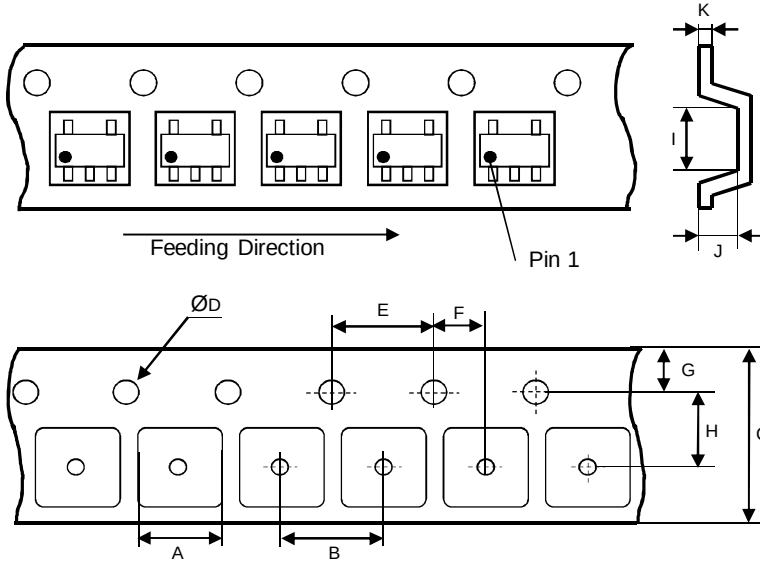
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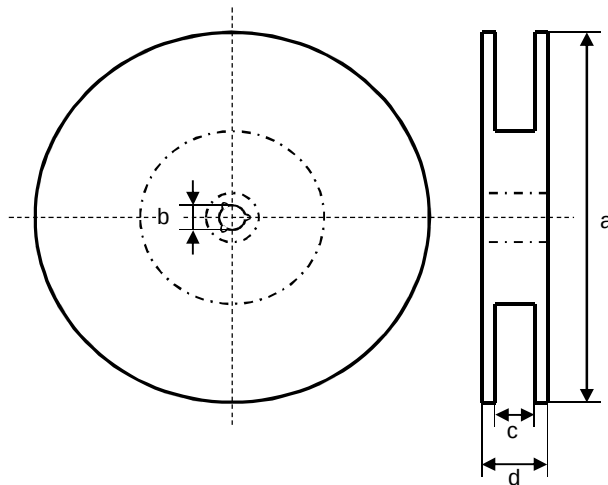


## I Tape:

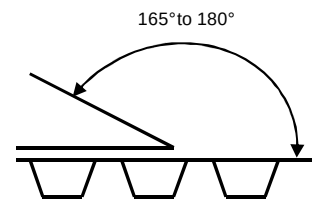


|   |             |    |
|---|-------------|----|
| A | 2.25 REF    | mm |
| B | 4.00 ± 0.10 | mm |
| C | 8.00 ± 0.20 | mm |
| D | 1.55 ± 0.05 | mm |
| E | 4.00 ± 0.10 | mm |
| F | 2.00 ± 0.05 | mm |
| G | 1.75 ± 0.10 | mm |
| H | 3.50 ± 0.05 | mm |
| I | 2.4 REF     | mm |
| J | 1.2 REF     | mm |
| K | 0.30 ± 0.02 | mm |

## J Reel:



|   |             |    |
|---|-------------|----|
| a | 178.0 ± 2.0 | mm |
| b | 13.0 ± 0.8  | mm |
| c | 10.0 ± 1.5  | mm |
| d | 12.5 ± 2.0  | mm |



Quantity per Reel: 3000

General Release:

Customer

Date

Signature

Würth Elektronik

Checked

Approved

|      |              |            |
|------|--------------|------------|
| JB   | Version 1    | 2010-01-27 |
| Name | Modification | Date       |

This electronic component has been designed and developed for usage in general electronic equipment. Before incorporating this component into any equipment where higher safety and reliability is especially required or if there is the possibility of direct damage or injury to human body, for example in the range of aerospace, aviation, nuclear control, submarine, transportation, (automotive control, train control, ship control), transportation signal, disaster prevention, medical, public information network etc, Würth Elektronik eiSos GmbH must be informed before the design-in stage. In addition, sufficient reliability evaluation checks for safety must be performed on every electronic component which is used in electrical circuits that require high safety and reliability functions or performance.

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# AMEYA360

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