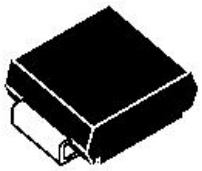
# WEOS4-150/XXAS

## Thyristor Surge Protector

## Features

- Bi-directional crowbar transient voltage protection
- High surge capability
- High off-state impedance, Low leakage current
- Short-circuit failure mode
- Low on-state voltage



SMB
(JEDEC DO-214AA)

## Main Application

WAYON's thyristor surge protector devices are designed to help protect sensitive telecommunication equipment from the hazards caused by lightning, power contact, and power induction. These devices enable equipment to comply with various regulatory requirements including GR 1089, ITU K.20, K.21 and K.45, IEC 60950, UL 60950, and TIA-968-A (formerly known as FCC Part 68).

Typical application including:

- Central office switching equipment, Analog and digital linecards (xDSL, T1/E1, ISDN...).
- Customer Premises Equipment (CPE) such as phones, fax machines, modems, POS terminals, PBX systems and caller ID adjunct boxes.
- Primary protection modules including Main Distribution Frames (MDF), building entrance equipment and station protection modules.
- Access network equipment such as remote terminals, line repeaters, multiplexers, cross-connects,WAN equipment, Network Interface Devices (NID).
- Data lines and security systems.
- CATV line amplifiers and power inserters.
- Sprinkler systems.

## Absolute Maximum Ratings ($T_A$ =25°C)

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Non-repetitive peak impulse current<br>10/1000 μs (Telcordia GR-1089-CORE) | $I_{PPSM}$ | 150 | A |
| Non-repetitive peak impulse Voltage<br>10/700 μs (ITU-T K.20, K.21 & K.44, K.45) | $V_{PPSM}$ | 8000 | V |
| Operating Junction Temperature range | $T_J$ | -40 to + 125 | ℃ |
| Storage Temperature range | $T_S$ | -55 to + 150 | ℃ |

## Electrical Parameters ($T_A$ =25°C)

| Part Number | Marking code | $V_{DRM}$ | $I_{DRM}$ | $V_{BO}$ | $I_{BO}$ | $V_T$ | $I_T$ | $C_O$ | $I_H$ |
|---|---|---|---|---|---|---|---|---|---|
| | | Max. | Max. | Max. | Max. | Max. | Max. | Typ. | Min. |
| | | V | μA | V | mA | V | A | pF | mA |
| **WEOS4-150/58AS** | W06SD | 58 | 5 | 77 | 800 | 4 | 2.2 | 100 | 50 |
| **WEOS4-150/120AS** | W14SD | 120 | 5 | 160 | 800 | 4 | 2.2 | 80 | 50 |
| **WEOS4-150/220AS** | W26SD | 220 | 5 | 300 | 800 | 4 | 2.2 | 60 | 50 |
| **WEOS4-150/270AS** | W31SD | 270 | 5 | 350 | 800 | 4 | 2.2 | 60 | 50 |

**$V_{DRM}$**: Stand-off voltage, is measured at $I_{DRM}$.

**$I_{DRM}$**: Leakage current at $V_{DRM}$.

**$V_{BO}$**: Breakover voltage, is measured at 100V/μs.

**$I_{BO}$**: Breakover current.

**$V_T$**: On-state voltage.

**$I_T$**: On-state current.

**$C_O$**: Off-state capacitance.

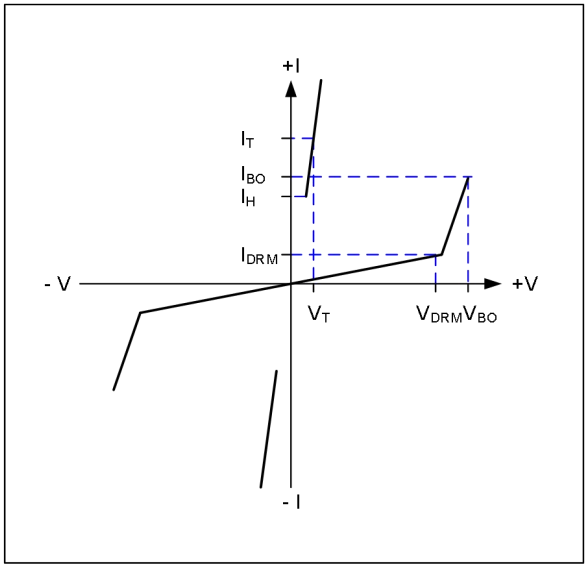
**$I_H$**: Holding current.

**$I_{PP}$**: Peak pulse current, is a repetitive surge rating and is guaranteed for the life of the product.

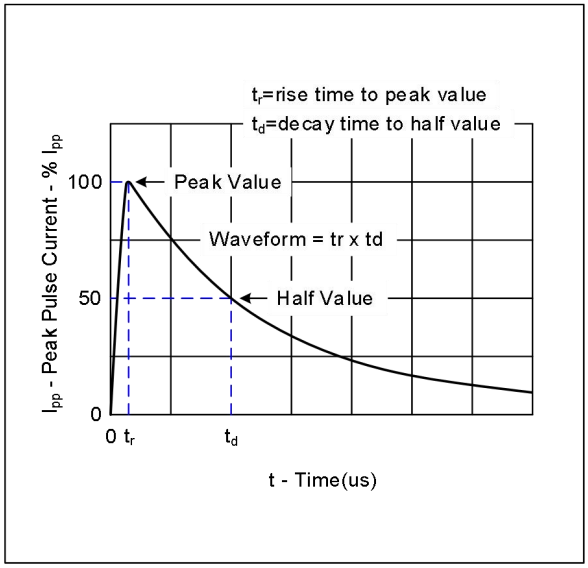
**General Notes:**

- All measurements are made at an ambient temperature of 25 °C. $I_{PP}$ applies to -40 °C through +85 °C temperature range.
- WEOS4 devices are bi-directional. All electrical parameters and surge ratings apply to forward and reverse polarities.
- Special voltage ($V_{BO}$ and $V_{DRM}$) and holding current ($I_H$) requirements are available up on request. Off-state capacitance is measured at 1 MHz with a 2 V bias.

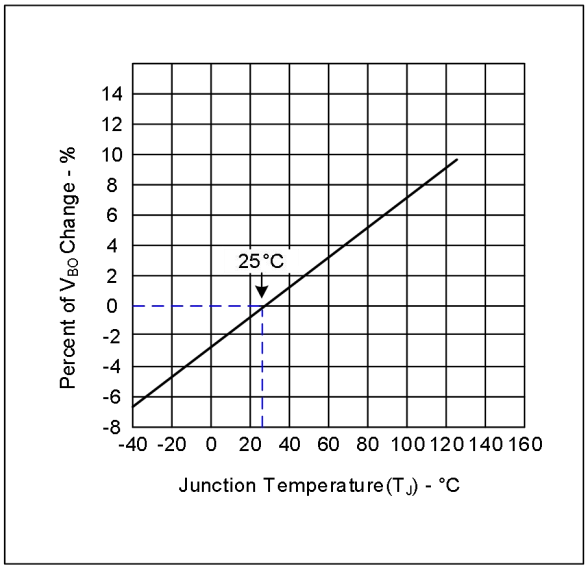
## Electrical Characteristics Curves



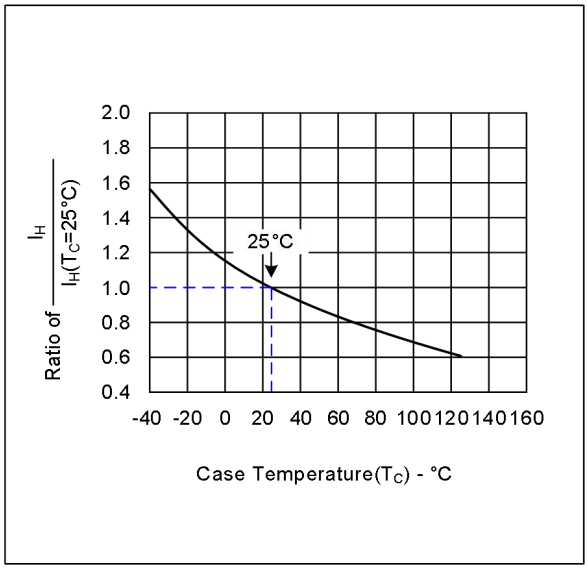

V - I Characteristics




$t_r$ X $t_d$ Pulse Waveform



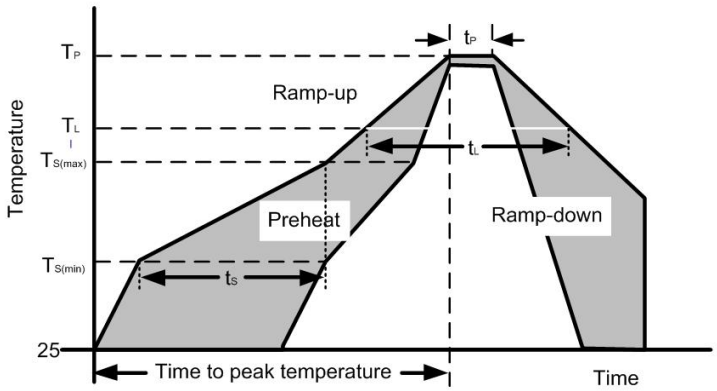

Normalized $V_{BO}$ Change versus Junction Temperature




Normalized DC Holding Current versus Case Temperature

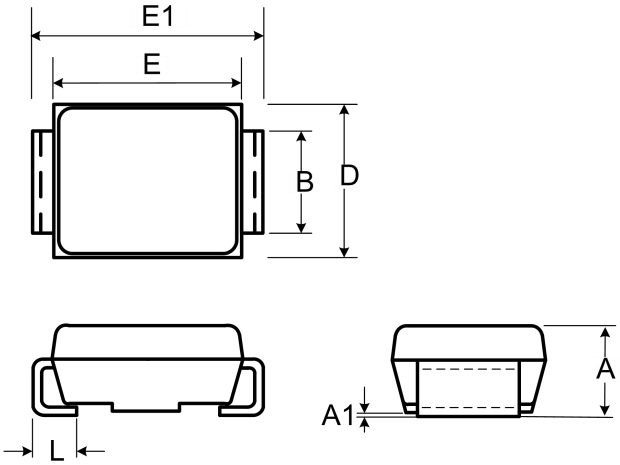
## Soldering Parameters

| Reflow Condition | | |
|---|---|---|
| Pre Heat | Temperature Min ($T_{s(min)}$) | 150°C |
| | Temperature Max ($T_{s(max)}$) | 200°C |
| | Time (min to max) ($t_s$ ) | 60-190 s |
| Average ramp up rate (Liquidus Temp) ($T_L$) to peak | | 3°C/s max |
| Ts(max) to TL - Ramp-up Rate | | 3°C/s max |
| Reflow | Temperature ($T_L$) (Liquidus) | 217°C |
| | Temperature ($t_L$) | 60-150 s |
| Peak Temperature ($T_P$) | | $260^{+0/-5}$ °C |
| Time within actual peak Temperature ($t_p$) | | 20-40 s |
| Ramp-down Rate | | 5°C/s max |
| Time 25°C to peak Temperature ($T_P$) | | 8 minutes Max. |
| Do not exceed | | 260°C |



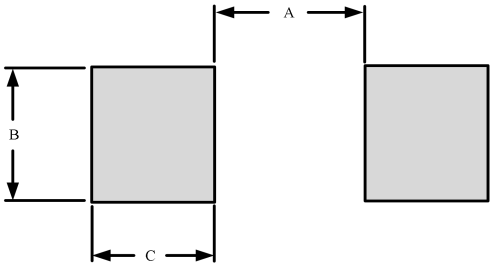

## Product Dimensions

| Ref.（mm） | Min. | Max. |
|---|---|---|
| A | 2.130 | 2.600 |
| A1 | - | 0.300 |
| B | 1.900 | 2.200 |
| E | 4.100 | 4.750 |
| E1 | 5.210 | 5.590 |
| D | 3.300 | 3.940 |
| L | 0.760 | 1.520 |

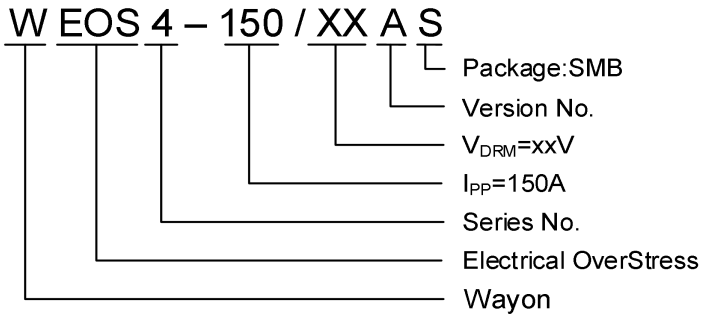



## Recommended Solder Pad Layout

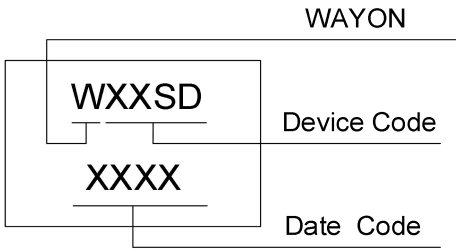
| DIM(mm) | MILLIMETERS |
|---|---|
| **A** | **2.74** |
| **B** | **2.26** |
| **C** | **2.16** |



## Part Numbering System and Marking




Marking:




## Package Information

| Package Type | Description | Quantity（pcs） |
|---|---|---|
| SMB(DO-214AA) | Tape & Reel Pack | 2500 |

## Contact Information

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单击下面可查看定价，库存，交付和生命周期等信息

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