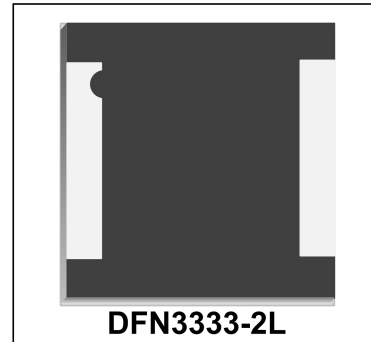


## Thyristor Surge Protector

### Features

- Low profile
- Small footprint
- Low capacitance
- Low voltage overshoot
- Low on-state voltage
- Fails short circuit when surged in excess of ratings



### Schematic Symbol



### 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 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 ( $T_A = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Minimum Non-repetitive peak impulse current 10/1000 $\mu\text{s}^{**}$ 、10/1000 $\mu\text{s}^*$	$I_{PPSM}$	100	A
Minimum Non-repetitive peak impulse current 10/700 $\mu\text{s}^{**}$ 、5/320 $\mu\text{s}^*$	$I_{PPSM}$	150	A
Operating Junction Temperature range	$T_J$	-40 to + 125	$^\circ\text{C}$
Storage Temperature range	$T_S$	-55 to + 150	$^\circ\text{C}$

Electrical Parameters ( $T_A=25^{\circ}\text{C}$ )

Part Number	Marking code	$V_{\text{DRM}}$	$I_{\text{DRM}}$	$V_{\text{BO}}$	$I_{\text{BO}}$	$I_{\text{T}}$	$V_{\text{T@I}_\text{T}}$	$I_{\text{H}}$	Co
		Max.	Max.	Max.	Max.	Max.	Max.	Typ.	Typ.
		V	$\mu\text{A}$	V	mA	A	V	mA	pF
WEOS4-100/6AD	-8DC	6	5	25	800	2.2	5	50	50
WEOS4-100/25AD	03DC	25	5	40	800	2.2	5	50	45
WEOS4-100/58AD	06DC	58	5	77	800	2.2	5	150	85
WEOS4-100/65AD	07DC	65	5	88	800	2.2	5	150	75
WEOS4-100/75AD	09DC	75	5	98	800	2.2	5	150	70
WEOS4-100/90AD	11DC	90	5	130	800	2.2	5	150	70
WEOS4-100/120AD	13DC	120	5	160	800	2.2	5	150	60
WEOS4-100/140AD	15DC	140	5	180	800	2.2	5	150	55
WEOS4-100/170AD	18DC	170	5	220	800	2.2	5	150	50
WEOS4-100/190AD	23DC	190	5	260	800	2.2	5	150	50
WEOS4-100/220AD	26DC	220	5	300	800	2.2	5	150	45
WEOS4-100/275AD	31DC	275	5	350	800	2.2	5	150	45
WEOS4-100/320AD	35DC	320	5	400	800	2.2	5	150	40
WEOS4-100/400AD	45DC	400	5	530	800	2.2	5	50	45

Note: \* Current waveform in  $\mu\text{s}$       \*\* Voltage waveform in  $\mu\text{s}$

**$V_{\text{DRM}}$** : Stand-off voltage.

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

**$V_{\text{BO}}$** : Breakover voltage, is measured at  $100\text{V}/\mu\text{s}$ .

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

**$V_{\text{T}}$** : On-state voltage.

**$I_{\text{T}}$** : On-state current.

**Co**: Off-state capacitance.

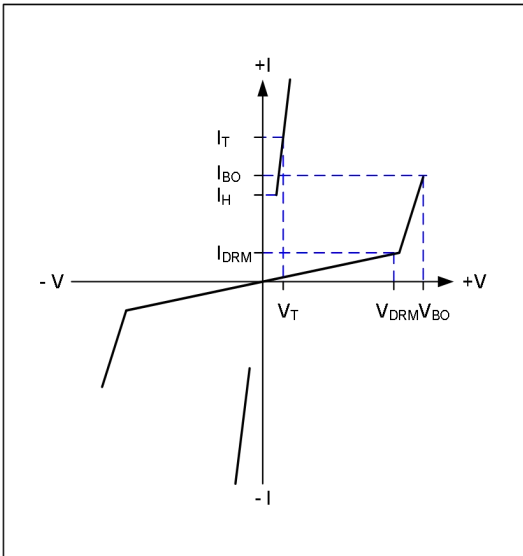
**$I_{\text{H}}$** : Holding current.

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

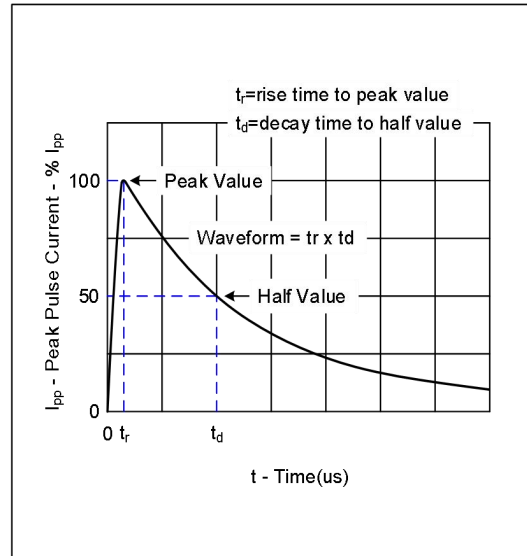
#### General Notes:

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

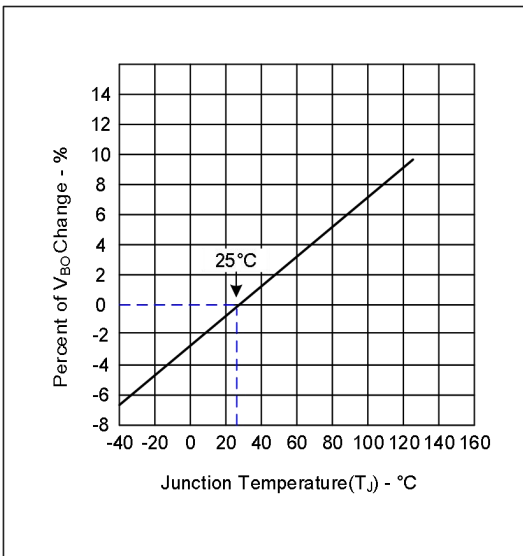
Electrical Characteristics Curves



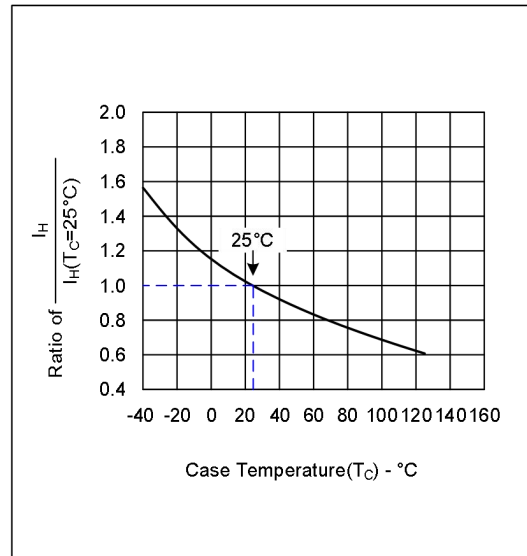
V - I Characteristics



$t_r \times t_d$  Pulse Waveform



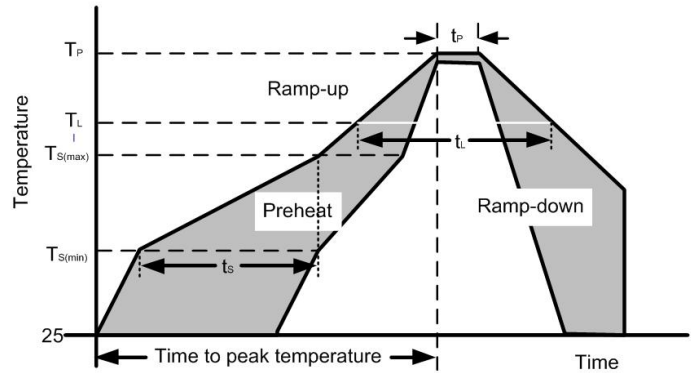
Normalized  $V_{BO}$  Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature

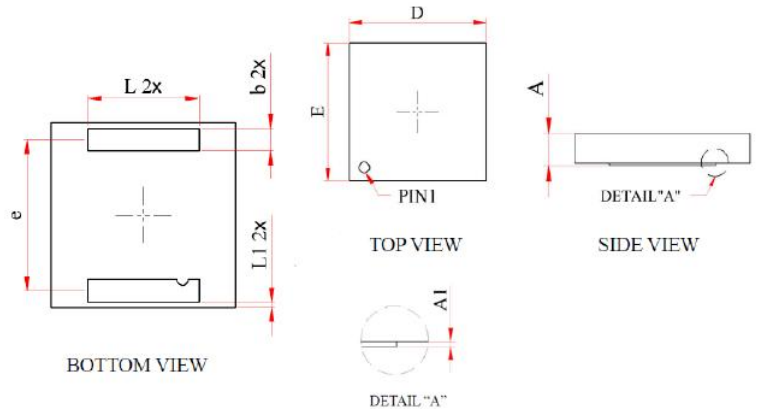
Soldering Parameters

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 <sup>+0/-5</sup> °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



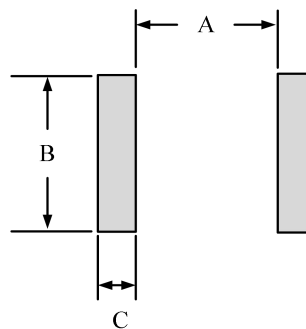
Product Dimensions

Ref. (mm)	Min.	Typ.	Max.
A	0.500	--	1.050
A1	--	--	0.005
D	3.250	3.300	3.350
e	2.70BSC		
E	3.250	3.300	3.350
b	0.350	0.400	0.450
L	1.950	2.000	2.050
L1	0.100REF		



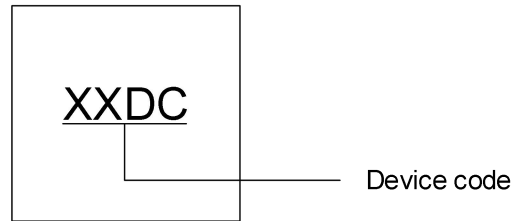
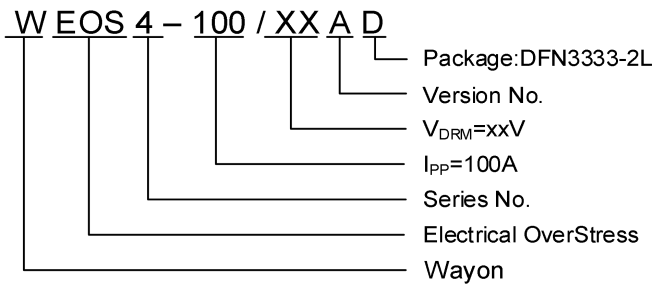
Recommended Solder Pad Layout

DIM(mm)	MILLIMETERS
A	2.10
B	2.50
C	1.00



**Part Numbering System:**

**Marking:**



**Package Information**

Package Type	Description	Quantity (pcs)
DFN3333-2L	Tape & Reel Pack	5000

**Contact Information**

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For additional information, please contact your local Sales Representative.

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*Specifications are subject to change without notice.  
 The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
 Users should verify actual device performance in their specific applications.*

单击下面可查看定价，库存，交付和生命周期等信息

[>>WAY-ON\(维安\)](#)