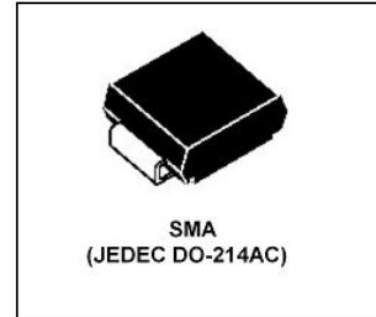


Thyristor Surge Protector

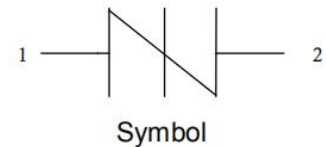
Features

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



Main Application

- Data lines and security systems.
- CATV line amplifiers and power inserters.
- Sprinkler systems.



Absolute Maximum Ratings (TA =25°C)

Parameter	Symbol	Value	Unit
Maximum rated peak impulse current 10/1000 μ s (Telcordia GR-1089-CORE)	I _{PPSM}	100	A
Maximum rated peak impulse voltage 10/700 μ s (ITU-T K.20, K.21 & K.44,K.45)	V _{PPSM}	6000	V

Electrical Parameters (TA =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	μ A	V	mA	V	A	pF	mA
WEOS4-100/25AS2	W03S2C	25	5	40	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/ μ s.

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.

V_{ppsm}: Peak pulse voltage, is a repetitive surge rating and is guaranteed for the life of the product.

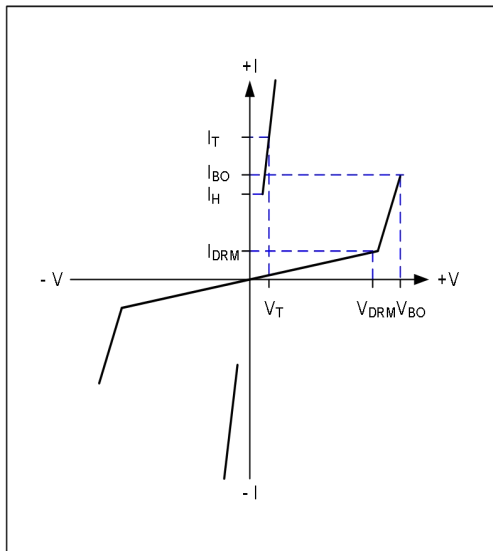
General Notes:

- 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.

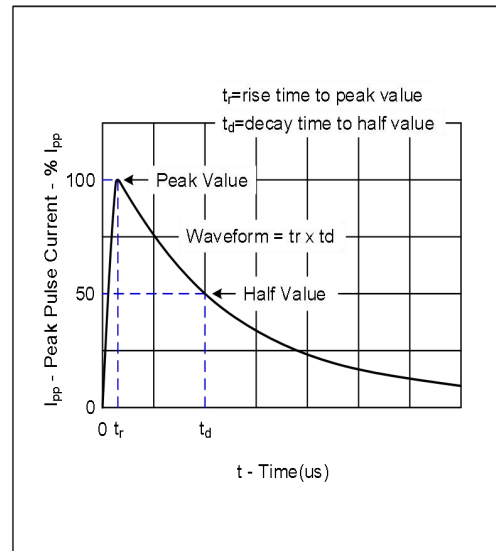
Thermal Resistances

Symbol	Parameter	Value	Unit
T_s	Storage temperature range	-55 to +150	°C
T_j	Maximum junction temperature	-40 to +125	°C

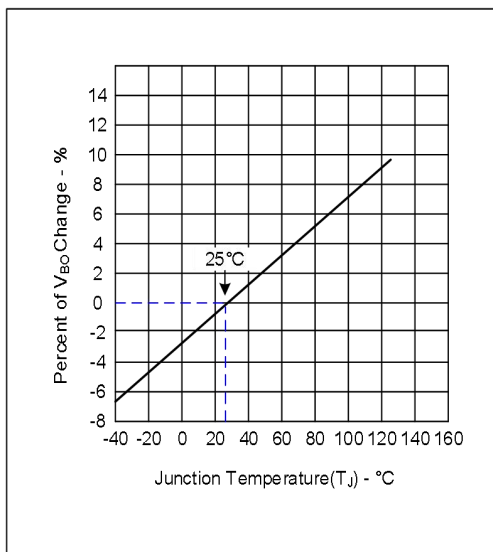
Electrical Characteristics Curves



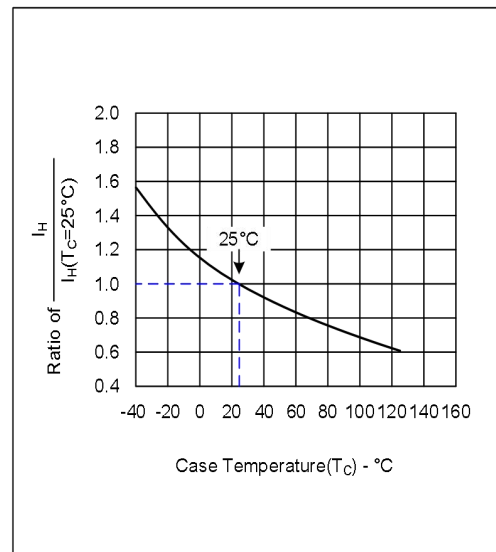
V - I Characteristics



$t_r \times t_d$ Pulse Waveform



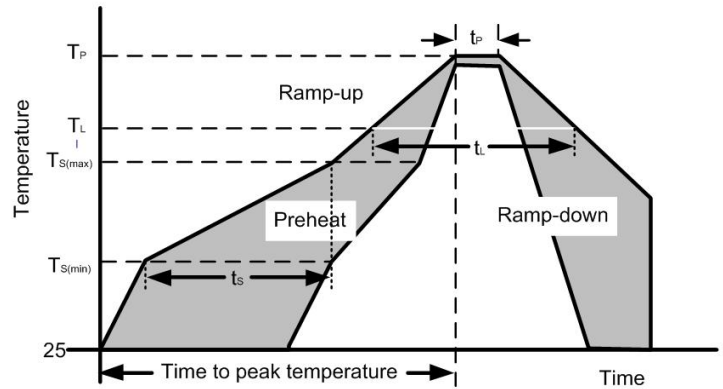
Normalized V_{BO} Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature

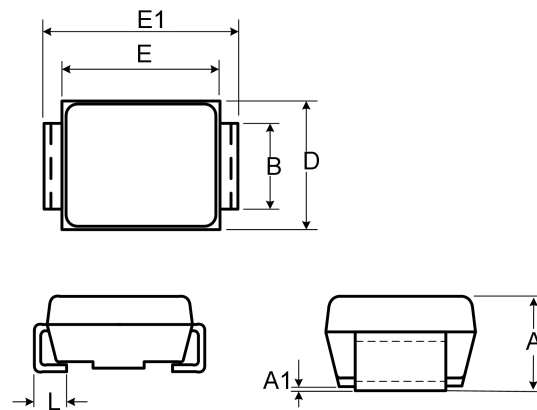
Soldering Parameters

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 ^{+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



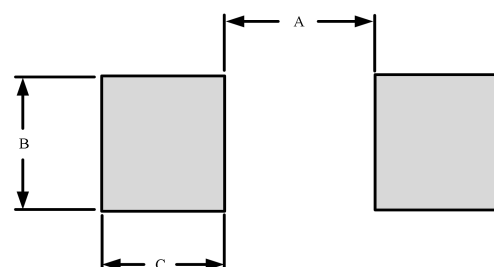
Product Dimensions

Ref. (mm)	Min.	Max.
A	1.980	2.290
A1	-	0.203
B	1.250	1.650
E	3.990	4.500
E1	4.930	5.280
D	2.540	2.790
L	0.780	1.520

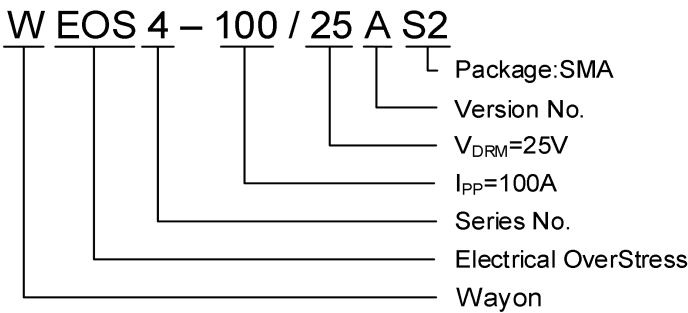


Recommended Solder Pad Layout

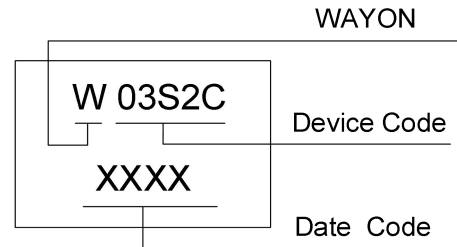
DIM(mm)	MILLIMETERS
A	2.3
B	1.8
C	2.1



Part Numbering System and Marking



Marking:



Package Information

Package Type	Description	Quantity (pcs)
SMA(DO-214AC)	Tape & Reel Pack	5000

Contact Information

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WAYON website: <http://www.way-on.com>

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.*