



ESDH12VD1

12Volts ESD Protection Devices

Features

- Halogen free available upon request by adding suffix "-HF"
- Uni-directional ESD protection of one line
- Low reverse clamping voltage
- Low leakage current
- Fast response ,response time less than 1ns.
- Fast response time
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Maximum Ratings

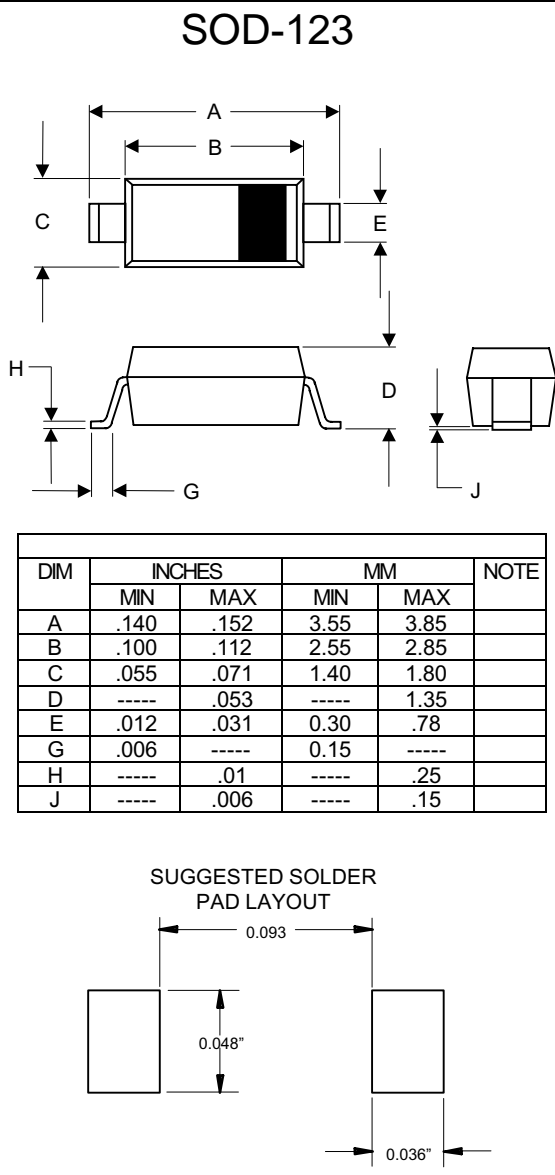
- Operating Junction & Storage Temperature: -55°C to +150°C

Parameter	Symbol	Limits	unit
IEC61000-4-2(ESD) Air Contact	$V_{ESD}^{(1)}$	± 25	KV
ESD Voltage Per Human Body Model		± 25	KV
Machine Model		± 16	KV
Peak Pulse Power	$P_{PP}^{(2)}$	4200	W
Peak Pulse Current	$I_{PP}^{(2)}$	120	A

(1).Device stressed with ten non-repetitive ESD pulses.

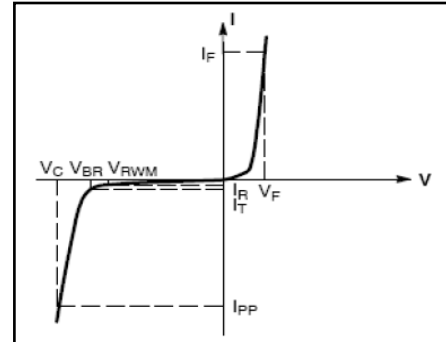
(2).Non-repetitive current pulse 8/20 μ s exponential decay waveform according to IEC61000-4-5.

Marking:



ELECTRICAL PARAMETER

Symbol	Parameter
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Peak Pulse Current
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_R	Reverse Leakage Current @ V_{RWM}
V_{RWM}	Reverse Standoff Voltage
V_F	Forward Voltage @ I_F
I_F	Forward Current



V-I characteristics for a uni-directional TVS

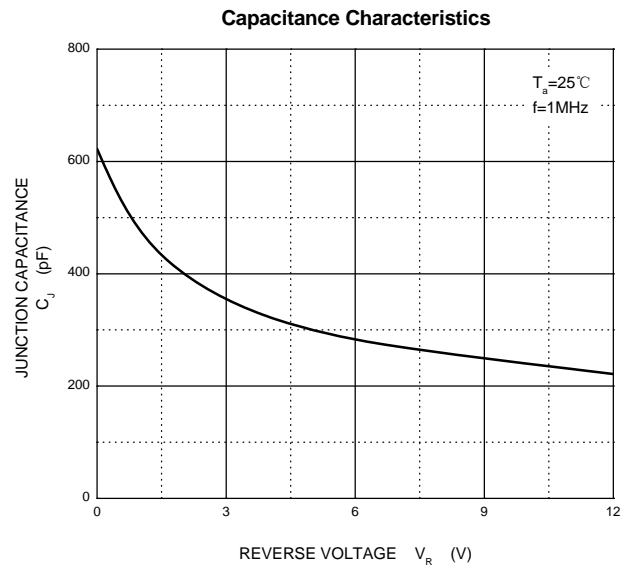
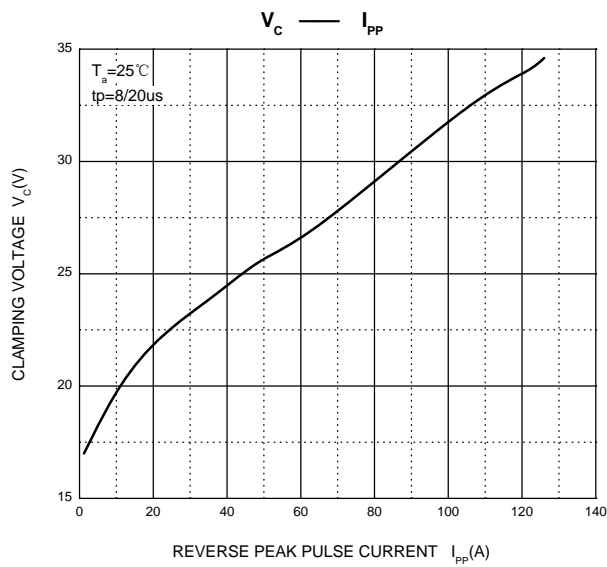
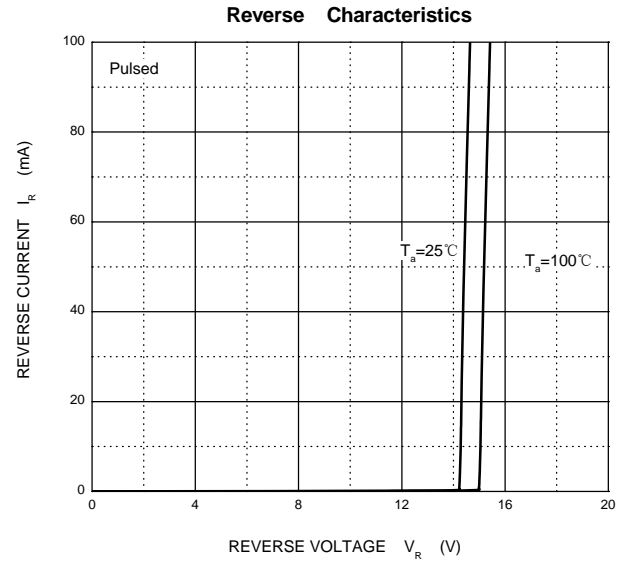
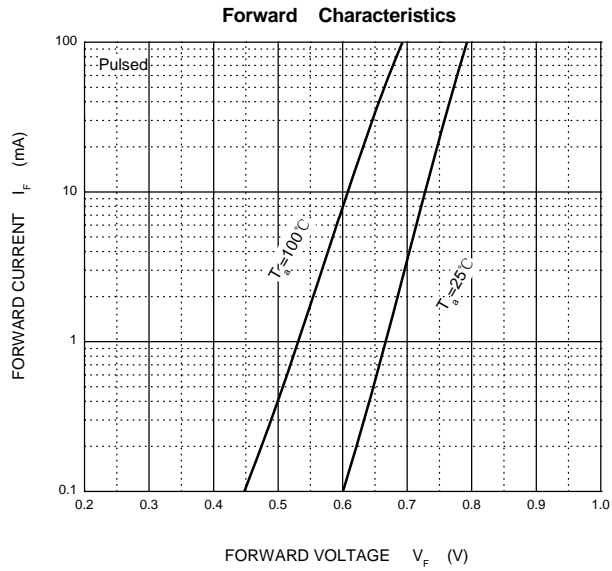
ELECTRICAL CHARACTERISTICS($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse stand off voltage	$V_{RWM}^{(1)}$				12	V
Reverse leakage current	I_R	$V_{RWM}=12\text{V}$			1	μA
Breakdown voltage	$V_{(BR)}$	$I_T=1\text{mA}$	13		16	V
Clamping voltage	$V_C^{(2)}$	$I_{PP}=120\text{A}$			35	V
Forward voltage	V_F	$I_F=10\text{mA}$			0.9	V
Junction capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}$		620		pF

(1).Other voltages available upon request.

(2).Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5

TYPICAL CHARACTERISTICS



Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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