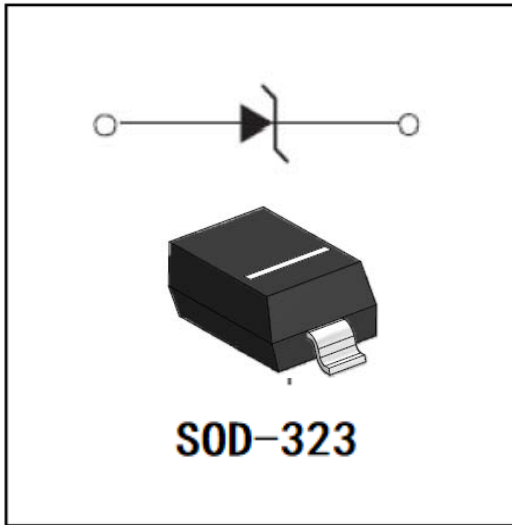


ESD Protection Diode



Features

- For sensitive ESD protection
- Low leakage
- Uni-directional ESD protection of one line
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Mechanical Data

- **Package:** SOD323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end
- **Marking:** ZM

Maximum Ratings

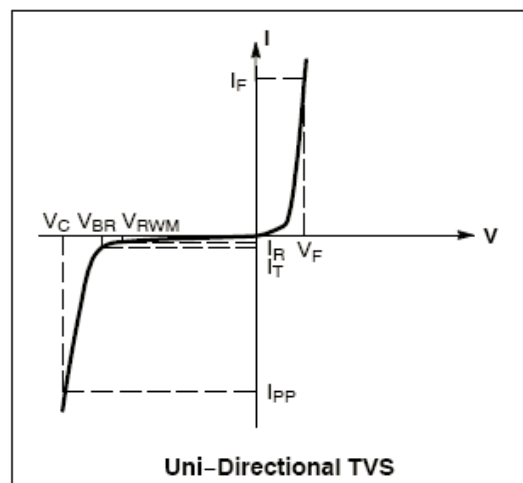
PARAMETER	SYMBOL	LIMITS	UNIT
Operating Junction & Storage Temperature	T_J & T_{STG}	-45 to +125	°C
IEC61000-4-2(ESD)Air	VESD ⁽¹⁾	± 15	KV
IEC61000-4-2(ESD)Contact		± 8	KV
Peak Pulse Current	I_{PP} ⁽²⁾	17	A

(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.

Electrical Parameter

PARAMETER	SYMBOL
Clamping Voltage@ I_{PP}	V_C
Breakdown Voltage@ I_T	V_{BR}
Peak Pulse Current	I_{PP}
Test Current	I_T
Reverse Leakage Current@ V_{RWM}	I_R
Reverse Standoff Voltage	V_{RWM}
Forward Voltage@ I_F	V_F
Forward Current	I_F
Peak Power Dissipation	P_{PK}
Max. Capacitance @ $V_R=0$ and $f=1$ MHz	C





ESD12VD3

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse Standoff Voltage	V _{RWM} ⁽¹⁾	V				12
Reverse Leakage Current	I _R	uA	V _{RWM} =12V			0.5
Breakdown Voltage	V _(BR)	V	I _T =1mA	13		16
Clamping Voltage	V _C ⁽²⁾	V	I _{PP} =17A			26
Forward voltage	V _F	V	I _F =100mA			1.2
Junction Capacitance	C _J	pF	V _R =0V, f=1MHz		120	

(1).Other voltages available upon request.

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

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESD12VD3	F2	Approximate 0.004	3000	30000	120000	7" reel

■ Characteristics (Typical)

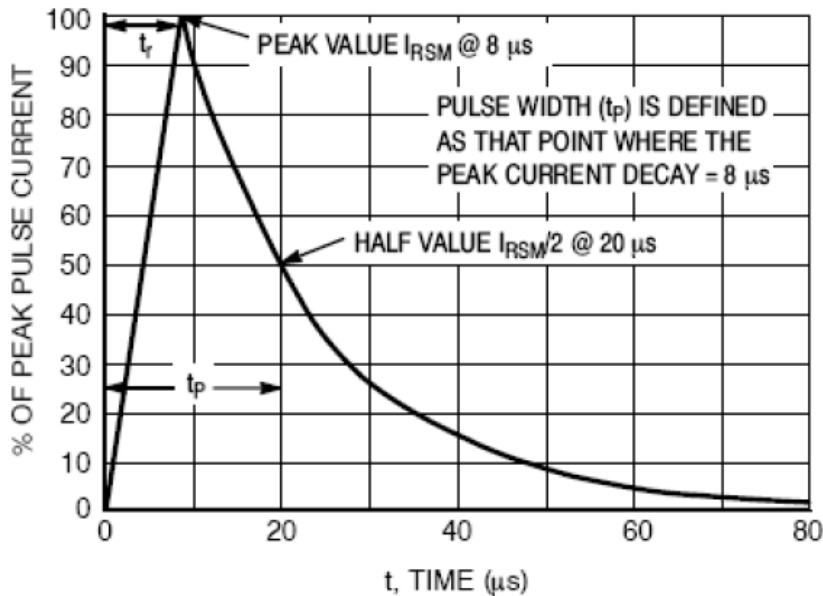
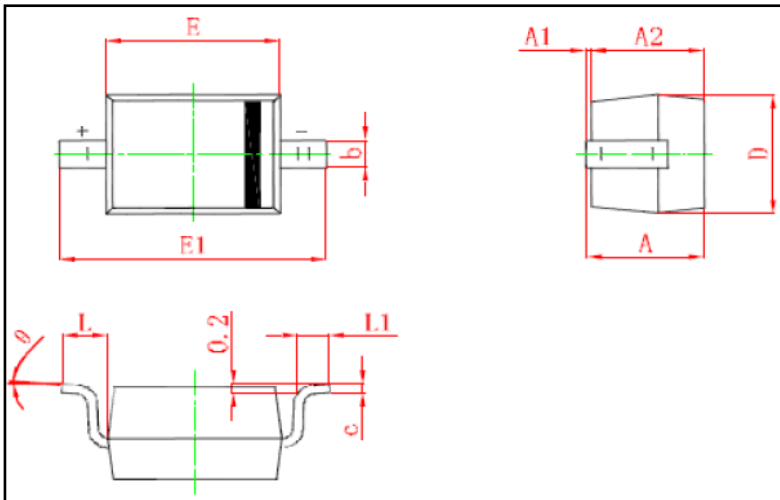


Figure 1. 8 x 20 μs Pulse Waveform



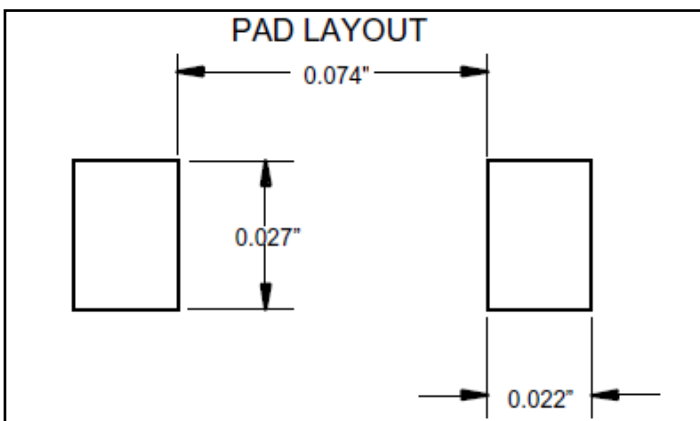
ESD12VD3

■ Outline Dimensions



Symbol	Min. (mm)	Max. (mm)
A		1.000
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.400
c	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
L	0.475REF	
L1	0.250	0.400
θ	0°	8°

■ Soldering Footprint



Unit: inches



ESD12VD3

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.