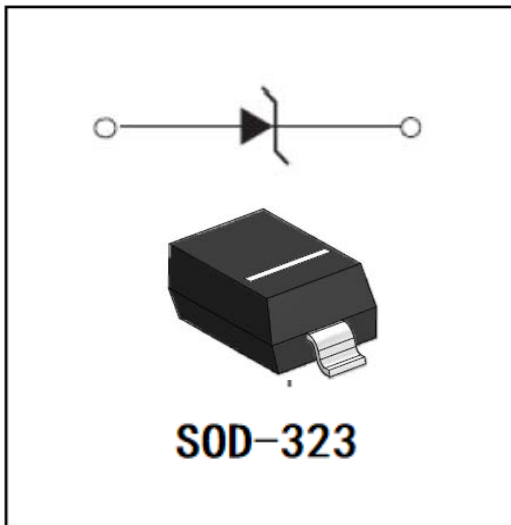


## ESD Protection Diode



### 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:** ZF

### Maximum Ratings

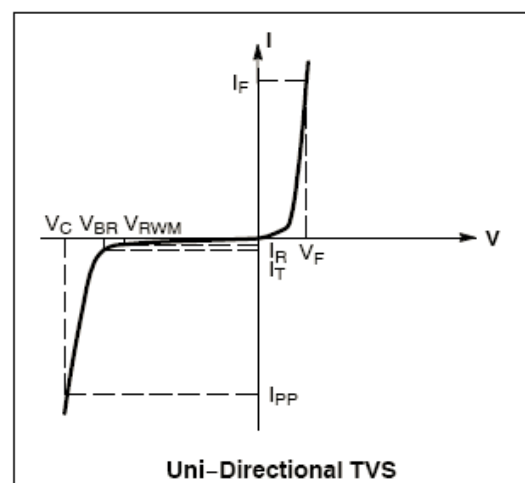
PARAMETER	SYMBOL	LIMITS	UNIT
Operating Junction & Storage Temperature	$T_J$ & $T_{STG}$	-45 to +125	°C
IEC61000-4-2(ESD)Air	$V_{ESD}^{(1)}$	± 15	KV
IEC61000-4-2(ESD)Contact		± 8	KV
Peak Pulse Current, $t_p=8/20\mu s$	$I_{PP}^{(2)}$	15	A
Peak Power Dissipation, $t_p=8/20\mu s$	$P_{PK}^{(2)}$	350	W

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

(2). Non-repetitive current pulse 8/20 $\mu s$  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	$P_{PK}$
Junction Capacitance @ $V_R=0$ and $f=1MHz$	$C_j$





# ESD5V0D3

## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse Standoff Voltage	V <sub>RWM</sub> <sup>(1)</sup>	V				5.0
Reverse Leakage Current	I <sub>R</sub>	μA	V <sub>RWM</sub> =5.0V			1
Breakdown Voltage	V <sub>(BR)</sub>	V	I <sub>T</sub> =1mA	6.2		7.3
Forward voltage	V <sub>F</sub>	V	I <sub>F</sub> =10mA			0.9
Clamping Voltage	V <sub>C</sub> <sup>(2)</sup>	V	I <sub>PP</sub> =5A , t <sub>p</sub> =8/20μs			9.8
Clamping Voltage	V <sub>C</sub> <sup>(2)</sup>	V	I <sub>PP</sub> =15A , t <sub>p</sub> =8/20μs			15.5
Junction Capacitance	C <sub>J</sub>	pF	V <sub>R</sub> =0V, f=1MHz		140	400

(1).Other voltages available upon request.

(2).Non-repetitive current pulse 8/20μs 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
ESD5V0D3	F2	Approximate 0.004	3000	30000	120000	7" reel

## ■ Characteristics (Typical)

Fig. 1 - 8 X 20μs Pulse Waveform

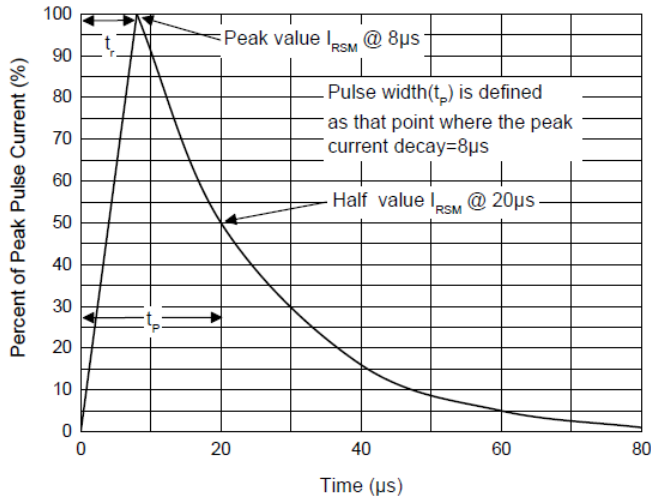
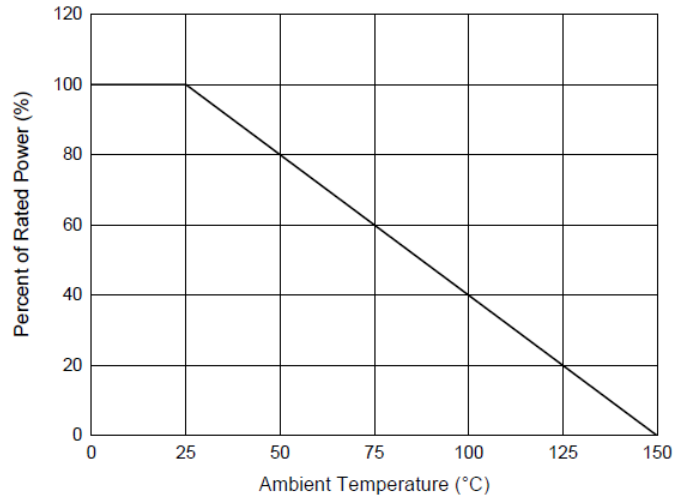


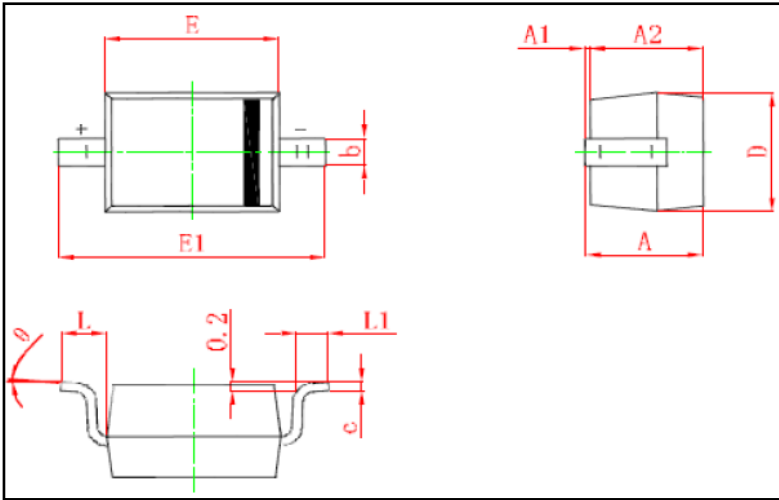
Fig. 2 - Pulse Derating Curve





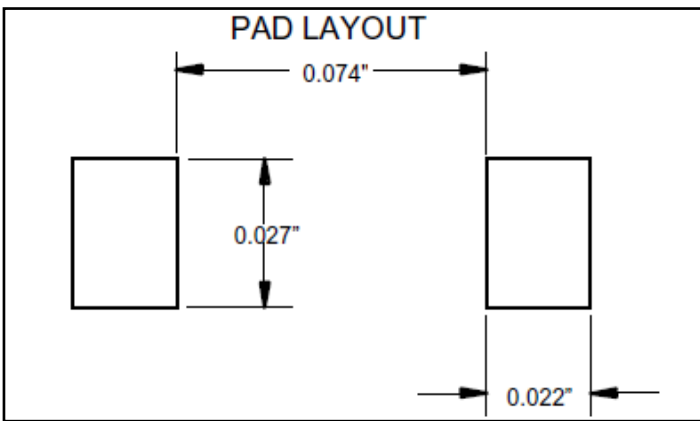
# ESD5V0D3

## ■ 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
$\theta$	0°	8°

## ■ Soldering Footprint



Unit: inches



## ESD5V0D3

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