

■ Bidirectional ESD Protection Diodes
■ Features

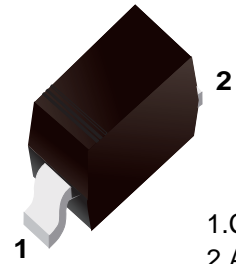
- Bidirectional ESD protection of one line.
- Max. peak pulse power : Ppp = 350W at tp = 8/20 us
- ESD protection >25 kV per MIL-STD-883C, Method 3015-6:Class3
- IEC 61000-4-2, level 4 (ESD), >15KV (air); >8KV (contact).

■ Application

- Computers and peripherals
- Communication system
- Notebooks. Desktops & Servers.
- Portable electronics
- Cellular handsets and accessories.

■ General Description

Electro Static Discharge (ESD) protection diodes in ultra small SMD Plastic packages designed to protect one signal line from the damage caused by ESD and other transients.



1.Cathode
2.Anode

■ Simplified outline(SOD-323)

Top View 

Marking Code	
ESD3Z12CA	WBC

■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Value	Unit
Peak Pulse Power(tp=8/20us)	P _{PPM}	350	W
Peak Pulse Current(tp=8/20us)	I _{PP}	15	A
Operating Junction Temperature	T _J	-55 to +150	°C
Storage Temperature	T _{STG}	-55 to +150	°C

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V _{DRM}				12.0	V
Reverse Breakdown Voltage	V _{BR}	I _T =1mA	13.3		15.5	V
Reverse Leakage Current	I _R	V _{RWM} =12V,Ta=25°C			1.0	uA
Clamping Voltage	V _C	I _{PP} =15A,tp=8/20us			24	V
Junction Capacitance	C _j	V _R =0V,f=1HMz			100	pF

Fig.1 Non-Repetitive Peak Pulse Power vs. Pulse Time

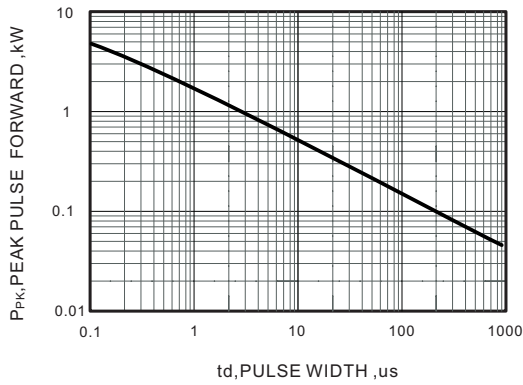


Fig.2 Forward Current Derating Curve

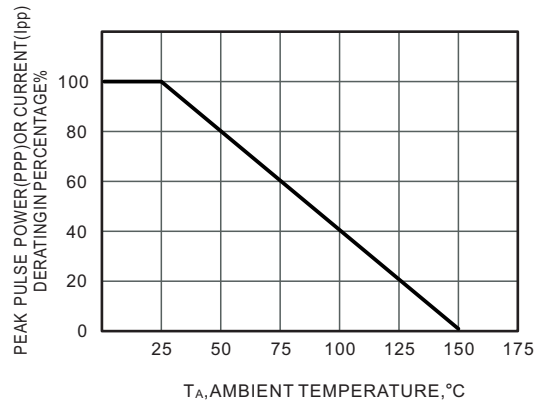


Fig.3 Waveform

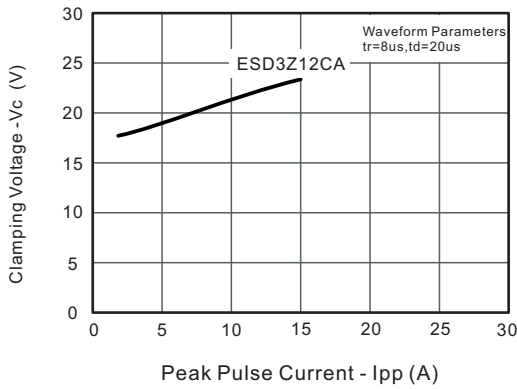


Fig.4 Power Derating Curve

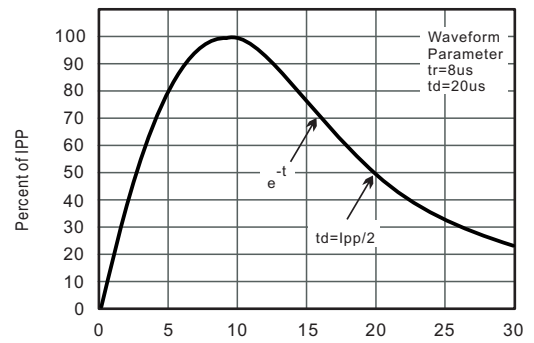
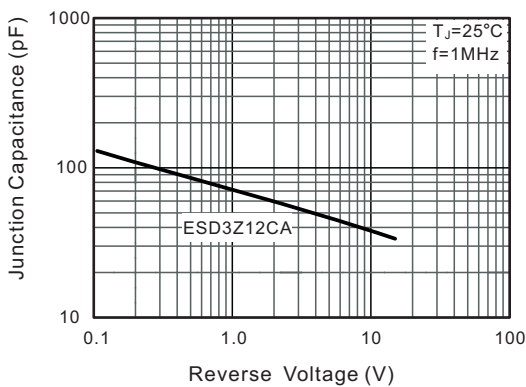
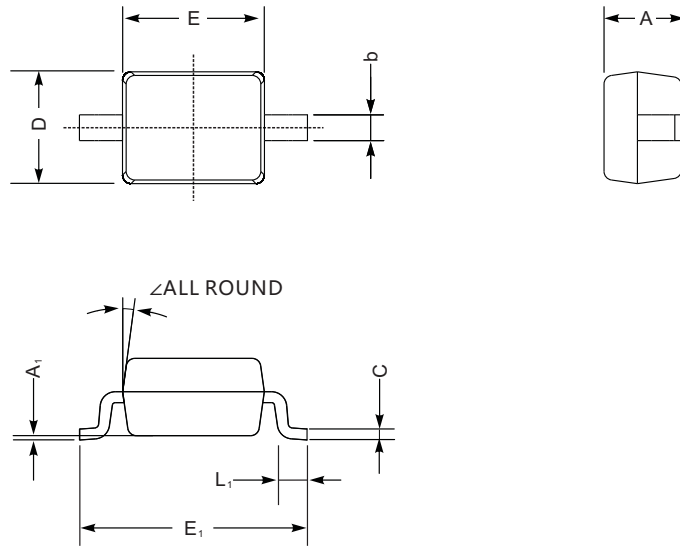


Fig.5 Typical Junction Capacitance

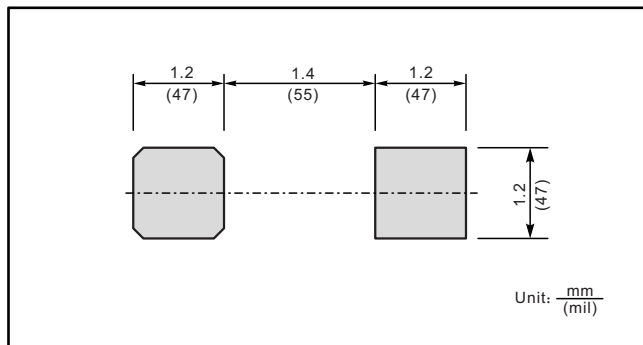




SOD-323 mechanical data

UNIT		A	C	D	E	E ₁	b	L ₁	A ₁	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	63	100	9.8	7.9	—	

■ The recommended mounting pad size



Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOD-323	Tape/Reel, 7" reel	3000	EIA-481-1