

■ **Bidirectional ESD Protection Diodes**

■ **Features**

- Bidirectional ESD protection of one line.
- Max. peak pulse power : $P_{pp} = 350W$ at $t_p = 8/20 \mu s$
- ESD protection >25 kV per MIL-STD-883C, Method 3015-6:Class3
- IEC 61000-4-2, level 4 (ESD), >15KV (air) ; >8KV (contact).

■ **Application**

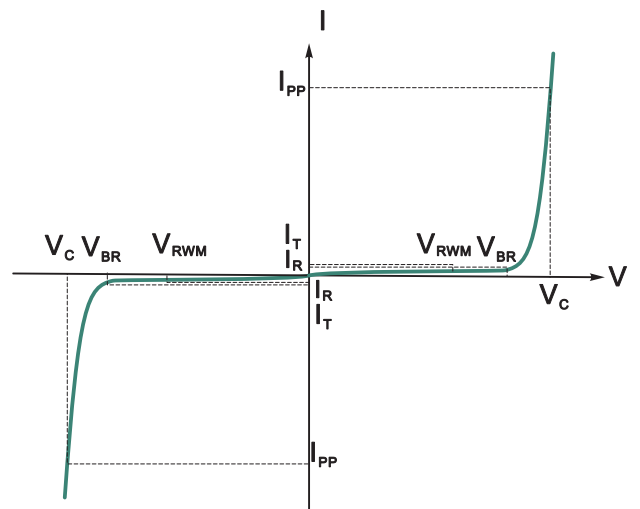
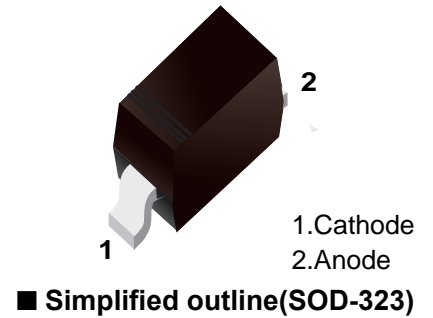
- Computers and peripherals
- Communication system
- Notebooks. Desktops & Servers.
- Portable electronics
- Cellular handsets and accessories.

■ **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.

■ **Electronics Parameter**

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



■ 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

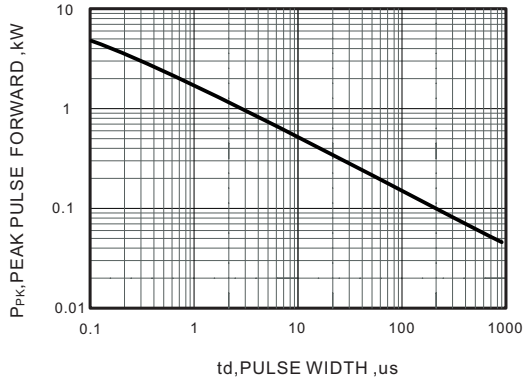


Fig.3 Waveform

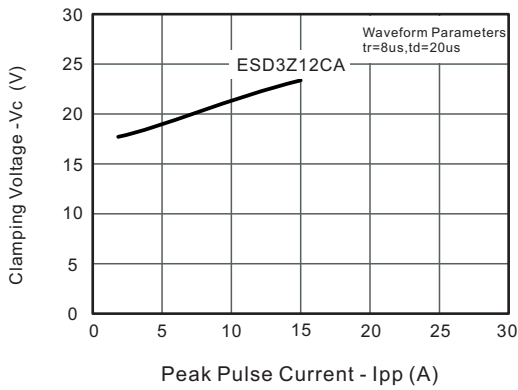


Fig.2 Forward Current Derating Curve

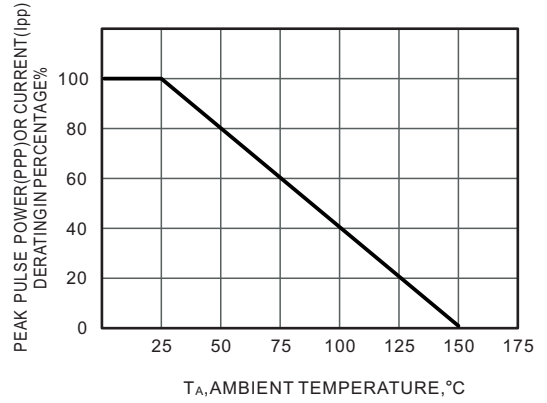


Fig.4 Power Derating Curve

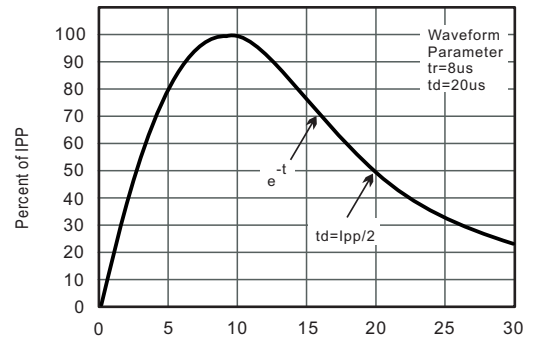
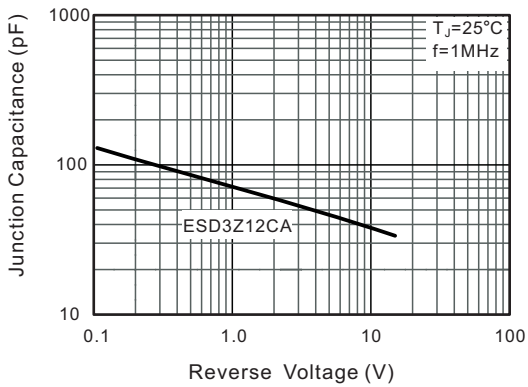
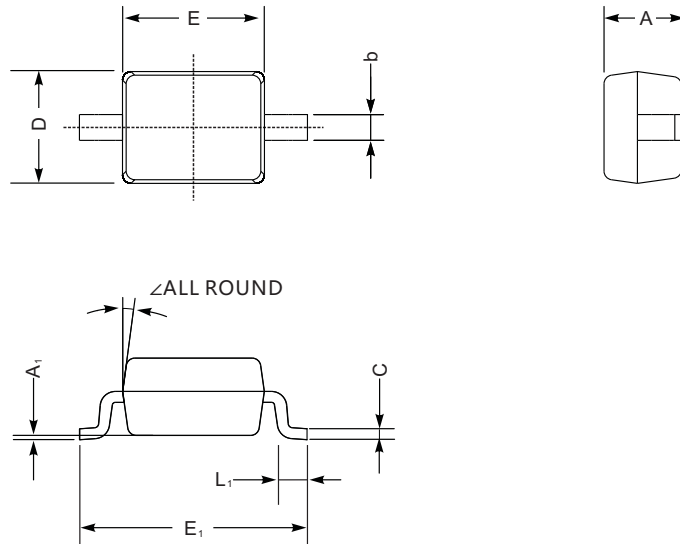


Fig.5 Typical Junction Capacitance



■ SOD-323



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

