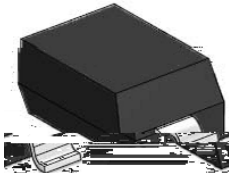
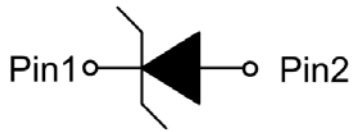


1- Line, Uni-directional, ESD protection diode

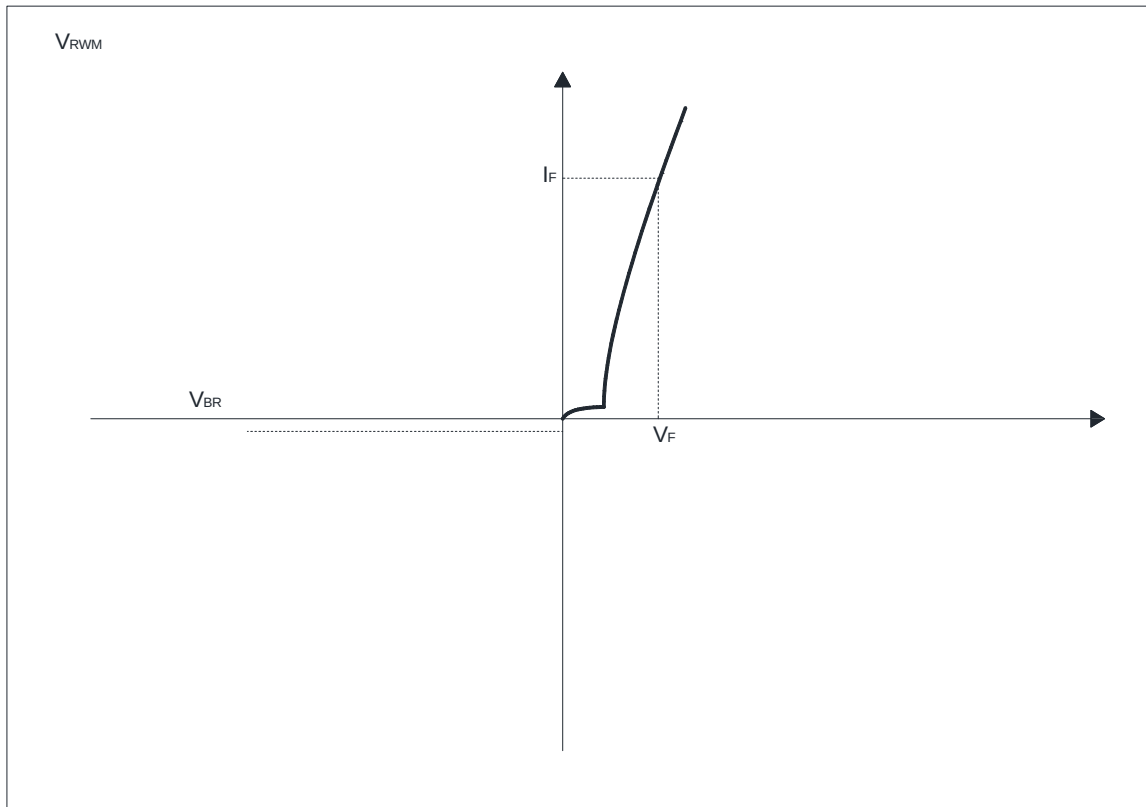
Features

- Transient protection for each line according to IEC61000-4-2(ESD): $\pm 30\text{kV}$ contact, $\pm 30\text{kV}$ air IEC61000-4-5:10A($t_p=8/20\mu\text{s}$)
- Low leakage current
- Ultra low clamping voltage
- RoHS Compliant
- Part no. w cf h ǒ M•e`l 6 lo2 6



SOD-323

■Definitions of electrical characteristics





ESD12VD3Q

■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power ($t_p = 8/20\mu s$)	P_{pk}	280	W
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 30	KV
ESD according to IEC61000-4-2 contact discharge		± 30	
Junction temperature	T_J	-55~150	
Storage temperature	T_{STG}	-55~150	

Notes:

CAUTION: Stresses above those listed in "Absolute Maximum Ratings" may cause permanent damage to the component. This is a stress only rating and operation of the component at these or any other conditions above those indicated in the operational sections of this specification is not implied.

■Electrical Characteristics $T_J=25$

PARAMETER	Symbol	UNIT	Conditions		Typ	Max
Reverse Standoff Voltage	V_{RWM}	V	$I_R \leq 1\mu A$			12
Maximum Forward Voltage	V_F	V	$I_F=10mA$			1.1
Reverse breakdown voltage	V_{BR}	V	$I_{BR} = 1mA$	13.3		16.5
Reverse leakage current	I_R	μA	$V_{RWM} = 12V$			1.0
Forward Voltage	V_F	V	$I_F=10mA$			1.1
Clamping voltage ¹⁾	V_C	V	$I_{PP} = 1A, t_p = 8/20\mu s$			18.5
			$I_{PP} = 10A, t_p = 8/20\mu s$			28
Dynamic resistance ²⁾	R_{DYN}	Ω	TLP, $t_p=100ns$, I/O to Ground		0.18	
Peak Pulse Current	I_{PP}	A	$t_p = 8/20\mu s$			10
Junction capacitance	C_J	pF	$V_R = 0V, f = 1MHz$		55	70

Notes:

(1). Non-repetitive current pulse, according to IEC61000-4-5.

(2). TLP parameter: $Z_0 = 50\Omega$, $t_p = 100ns$, $t_r = 2ns$, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.

■Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM
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■ Characteristics (Typical)

Fig.1: Non-Repetitive Peak Pulse

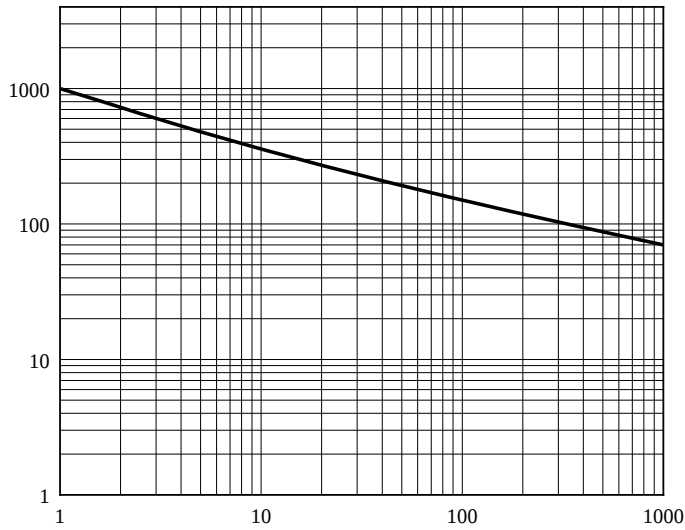


Fig.3: Power Derating Curve

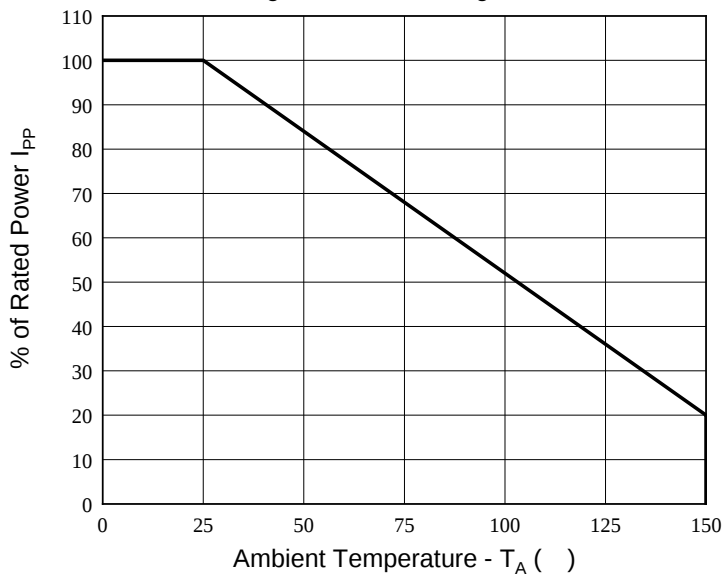
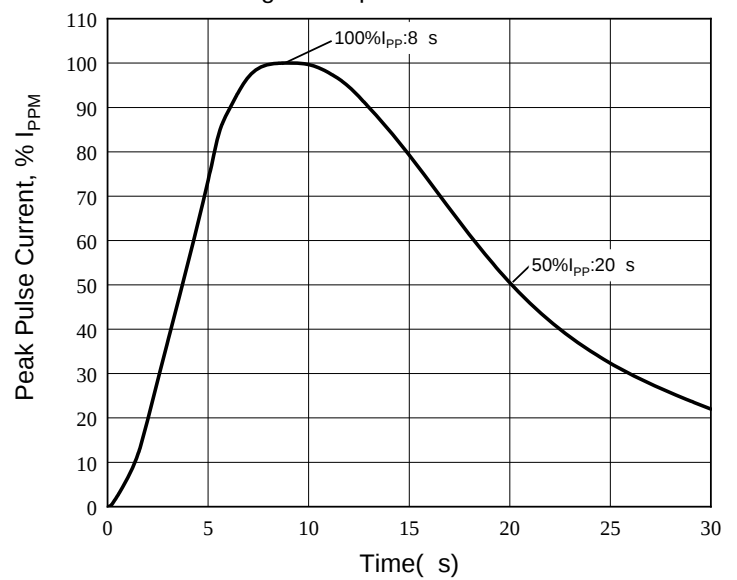


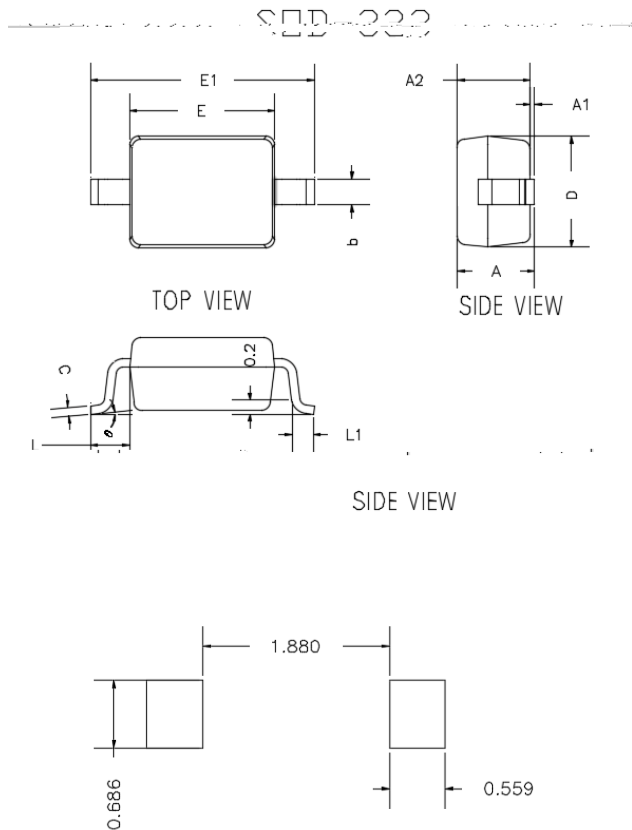
Fig.4: 8/20μs Pulse Waveform





ESD12VD3Q

■ Outline Dimensions

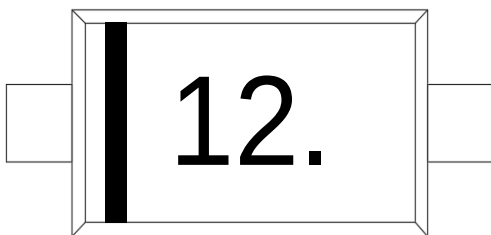


UNIT: mm

SUGGESTED SOLDER PAD LAYOUT

DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	---	0.0393	---	1.0000
A1	0.0000	0.0039	0.0000	0.1000
A2	0.0314	0.0354	0.8000	0.9000
b	0.0098	0.0157	0.2500	0.4000
C	0.1500	0.1550	3.8100	3.9375
D	1.4000	1.4000	35.4100	35.4100
E	1.8000	1.8000	45.7000	45.7000
E1	2.7000	2.7000	68.5800	68.5800
L	0.4000	0.4000	10.1600	10.1600
L1	0.4000	0.4000	10.1600	10.1600
L2	0.4000	0.4000	10.1600	10.1600
θ	8°	8°	8°	8°

■ Marking Information



Note:

1. All marking is at middle of the product body
2. All marking is in laser marking
3. Body color: Black



ESD12VD3Q

Disclaimer

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