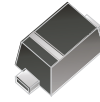


RoHS Device
Halogen Free

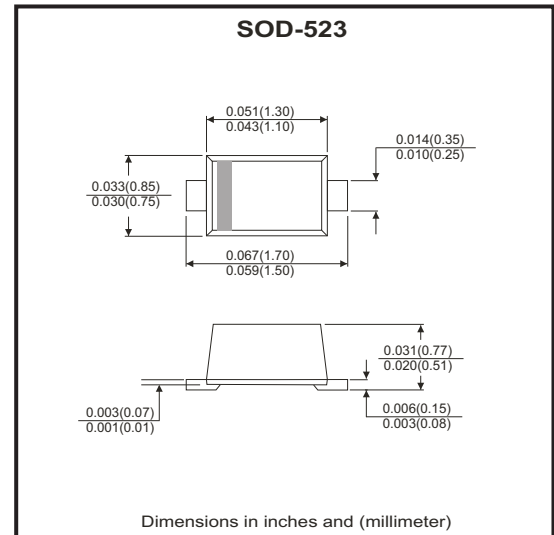


Features

- Uni-directional ESD protection.
- IEC 61000-4-2 (ESD) ; ±30KV(contact)
- Surface mount package.
- High component density.

Mechanical data

- Case: SOD-523 standard package ,
molded plastic.
- Terminals: Tin plated, solderable per
MIL-STD-750, method 2026.
- Mounting position: Any
- Weight: 0.0012 grams(approx.).



Circuit Diagram



Maximum Rating (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	T _P = 8/20us	P _{PP}	150	W
Peak pulse current	T _P = 8/20us	I _{PP}	5	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	±30	kV
Operation temperature range		T _J	-40~+125	°C
Storage temperature range		T _{STG}	-55~+150	°C

Electrical Characteristics (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Working peak reverse voltage		V _{RWM}			12	V
Forward voltage	I _F = 10mA	V _F		0.8	1.3	V
Breakdown voltage	I _T = 1mA	V _{BR}	13.5			V
Reverse leakage current	V _{RWM} = 5V	I _R		0.2	1	uA
Clamping voltage	I _{PP} = 1A, T _P = 8/20us I _{PP} = 5A, T _P = 8/20us I _{PP} = 15A, T _P = 8/20us	V _C		9 12	9.1 11 15	V
Junction capacitance	V _R = 0V, f = 1MHz	C _J		55		pF

RATING AND CHARACTERISTIC CURVES (PESD12VS1UB)

Fig.1 - 8/20us Peak Pulse Current Waveform Acc. IEC 61000-4-5

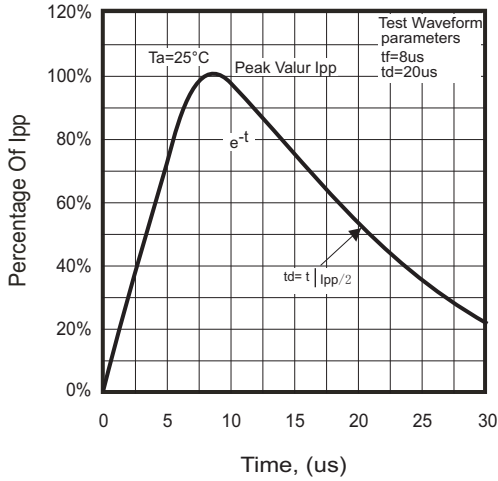


Fig. 2 - Power Rating Derating Curve

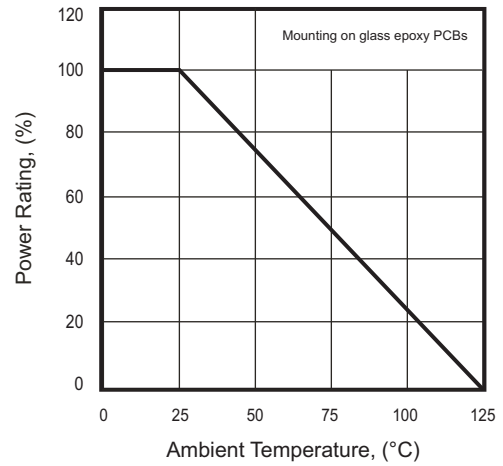


Fig.3 - Clamping Voltage Vs. Peak Pulse Current

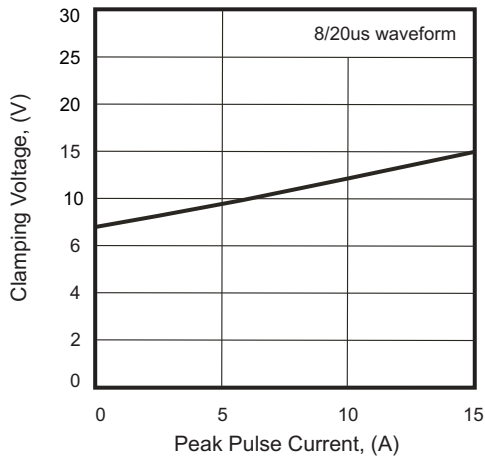
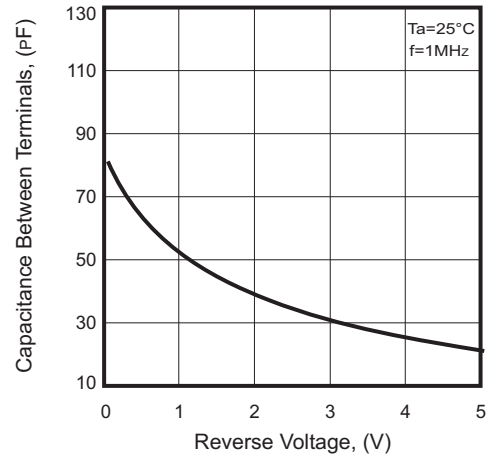
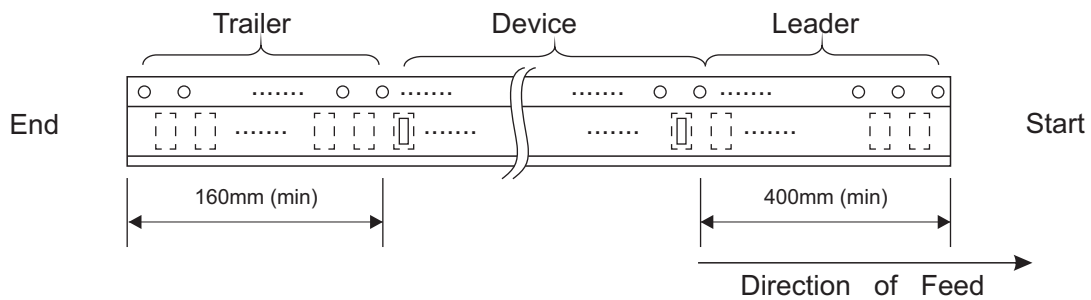
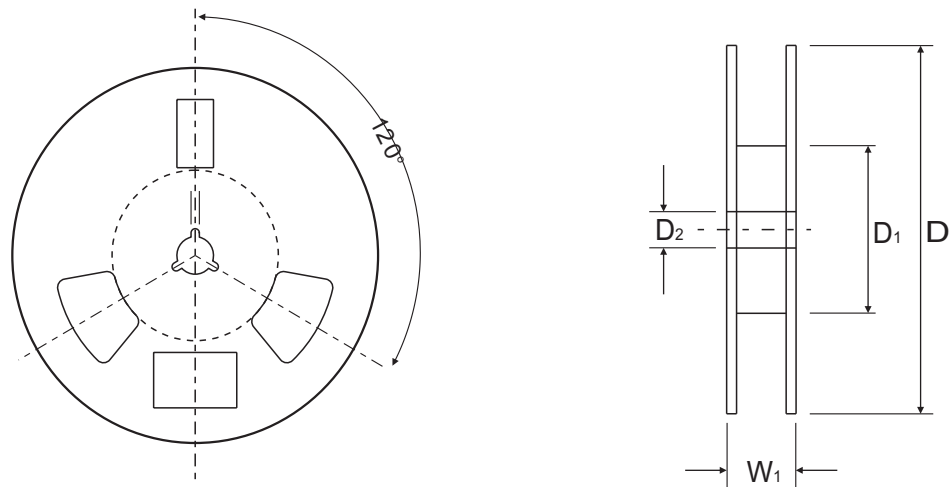
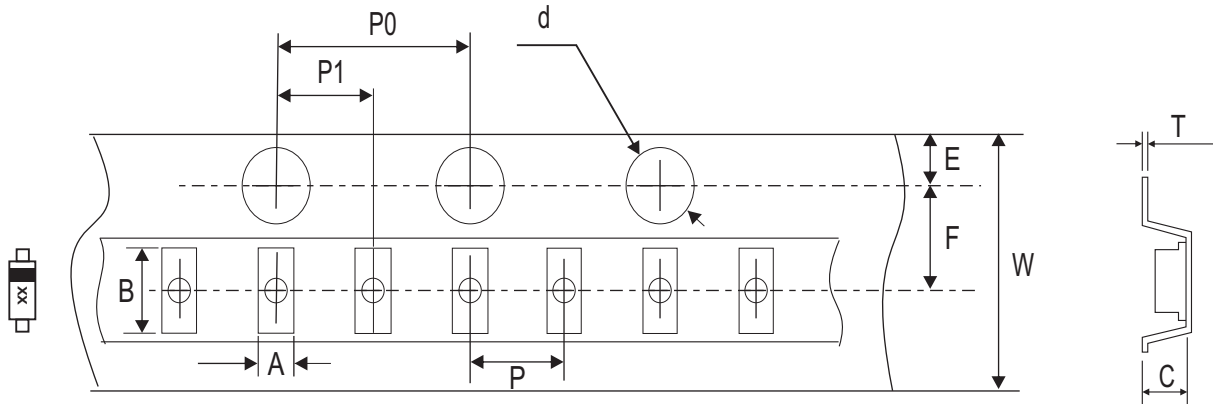


Fig.4 - Capacitance Between Terminals Characteristics



Reel Taping Specification

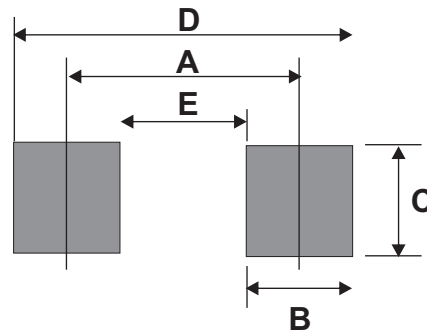


SOD-523	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	0.90 ± 0.05	1.94 ± 0.05	0.73 ± 0.05	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.035 ± 0.002	0.076 ± 0.002	0.029 ± 0.002	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.511 ± 0.039

SOD-523	SYMBOL	E	F	P	P ₀	P ₁	W	W ₁
	(mm)	1.75 ± 0.10	3.50 ± 0.10	2.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 + 0.30 / - 0.10	12.30 ± 1.0
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.315 + 0.012 / - 0.004	0.484 ± 0.039

Suggested PAD Layout

SIZE	SOD-523	
	(mm)	(inch)
A	1.42	0.055
B	0.60	0.024
C	0.70	0.028
D	2.02	0.079
E	0.82	0.031



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-523	3,000	7