

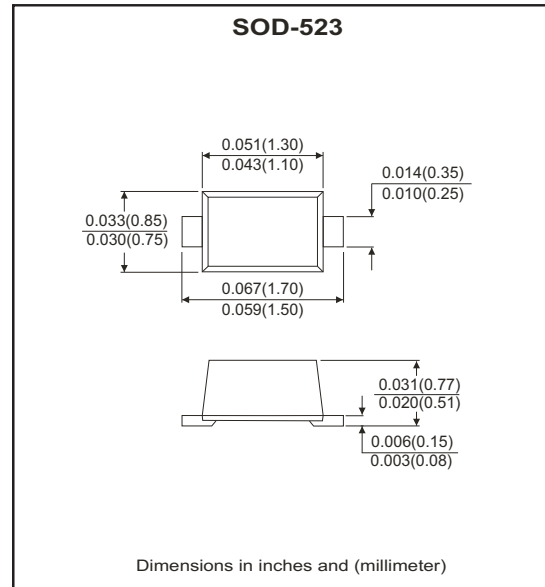
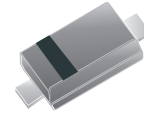
RoHS Device
Halogen Free

Features

- Bi-directional ESD protection of one line.
- IEC61000-4-2 Level 4 ESD protection.
- JESD22-A114-B ESD Rating of class 3B per human body model.
- Low capacitance: 12pF(Typ.)
- Low reverse stand-off voltage: 5.0V
- Low reverse clamping voltage.
- Low leakage current.
- Fast response time

Mechanical data

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



Circuit Diagram



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

Parameter	Conditions	Symbol	Value	Unit
ESD capability	IEC 61000-4-2(air)	$V_{ESD}^{(1)}$	±20	kV
	IEC 61000-4-2(contact)		±20	
JESD22-A114-B ESD voltage	per human body model		±16	
ESD voltage	Machine model		±0.4	
Peak pulse power	$T_P = 8/20\mu s$	$P_{PP}^{(2)}$	150	W
Peak pulse current	$T_P = 8/20\mu s$	$I_{PP}^{(2)}$	12	A
Lead solder temperature Maximum(10second duration)		T_L	260	°C
Junction temperature range		T_j	-40~+150	°C
Storage temperature range		T_{STG}	-55~+150	°C

Notes:

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

(2). Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5

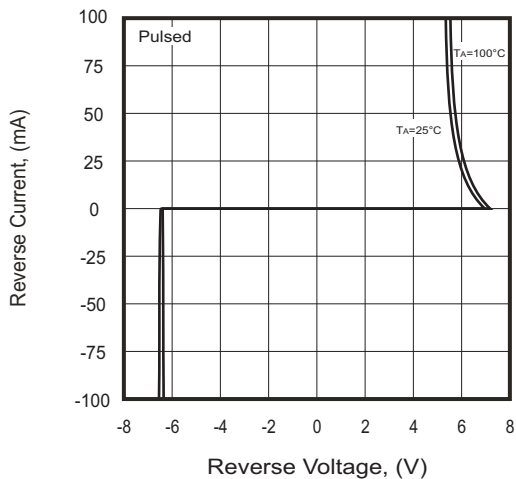
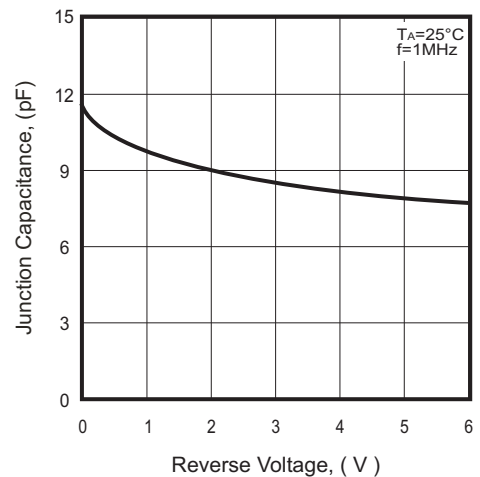
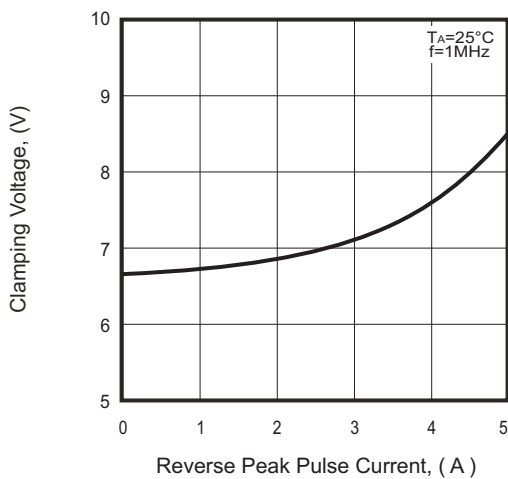
Electrical Characteristics (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand off voltage		$V_{RWM}^{(1)}$			5	V
Reverse leakage current	$V_{RWM} = 5V$	I_R			0.1	uA
Breakdown voltage	$I_T = 1mA$	$V_{(BR)}$	5.6		7.8	V
Clamping voltage	$I_{PP} = 5A$	$V_C^{(2)}$			10	V
Junction capacitance	$V_R = 0V, f = 1MHz$	C_J		12		pF

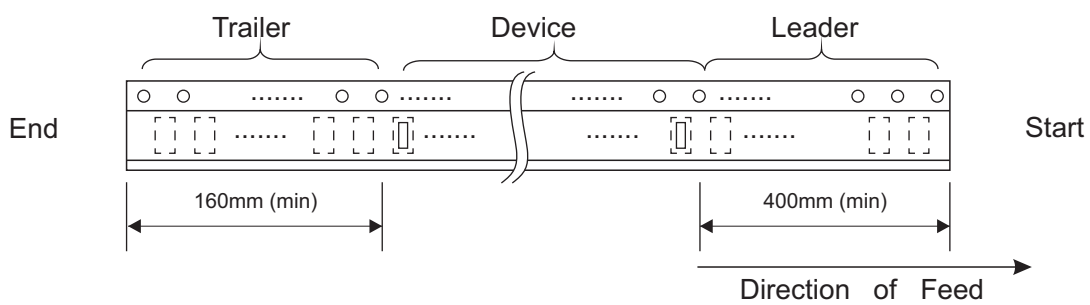
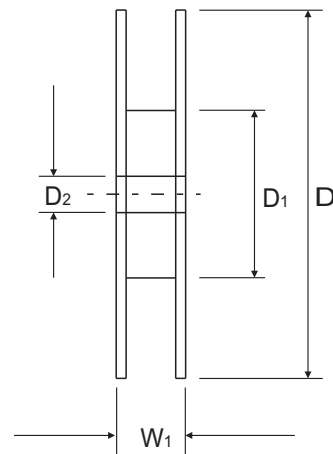
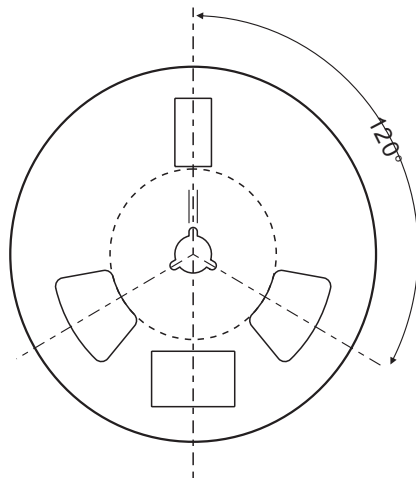
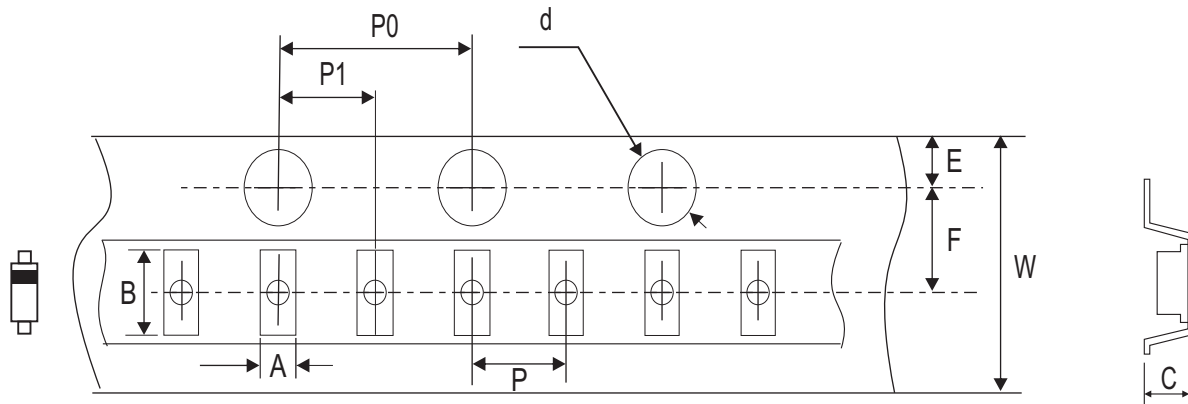
Notes:

(1). Other voltages available upon request

(2). Non-repetitive current pulse 8/20µs exponential decay waveform according to IEC61000-4-5

RATING AND CHARACTERISTIC CURVES (PESD5V0S1BB)
Fig.1 - Reverse Characteristics

Fig.2 - Capacitance Characteristics

Fig.3 - V_C — I_{PP}


Reel Taping Specification

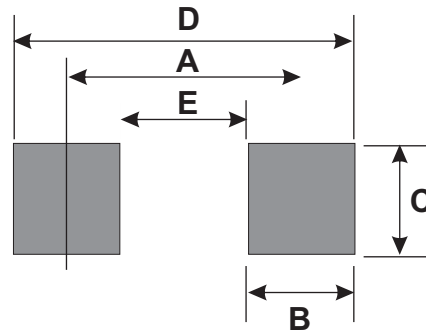


SOD-523	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	0.90 ± 0.05	1.94 ± 0.05	0.73 ± 0.05	1.50 ± 0.10	178 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.035 ± 0.002	0.076 ± 0.002	0.029 ± 0.002	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.511 ± 0.039

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