

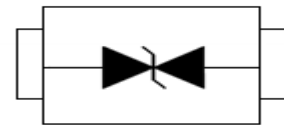


FEATURES

- ◇ Small body outline dimensions:
0.063" × 0.032" (1.6×0.8 mm)
- ◇ Protects one bi-directional I/O line
- ◇ Low clamping voltage
- ◇ Working voltage:5V
- ◇ Low leakage current
- ◇ RoHS compliant



SOD-523



Pin Configuration

MAIN APPLICATIONS

- ◇ Cell phone handsets and accessories
- ◇ Microprocessor based equipment
- ◇ Personal digital assistants (PDA's)
- ◇ Notebooks, desktops, and servers
- ◇ Portable instrumentation
- ◇ Peripherals
- ◇ Digital cameras

PROTECTION SOLUTION TO MEET

- ◇ IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- ◇ IEC61000-4-4 (EFT) 40A (5/50ns)
- ◇ IEC61000-4-5 (Lightning) 5A (8/20μs)

MECHANICAL CHARACTERISTICS

- ◇ SOD-523 package
- ◇ Molding compound flammability rating: UL 94V-0
- ◇ Weight 0.5 milligrams (approximate)
- ◇ Quantity per reel: 5,000pcs
- ◇ Lead finish: lead free
- ◇ Marking code: 5XB

ABSOLUTE MAXIMUM RATINGS (T_A=25°C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 8/20μs waveform	P _{PP}	100	W
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V _{ESD}	+/- 30 +/- 30	kV
Lead soldering temperature	T _L	260 (10 sec.)	°C
Operating junction temperature range	T _J	-55 to +125	°C
Storage temperature range	T _{STG}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse working voltage	V _{RWM}				5.0	V
Reverse breakdown voltage	V _{BR}	I _T =1mA	5.5			V
Reverse holding voltage	V _H	I _H =50mA	5.5			V
Reverse leakage current	I _R	V _{RWM} =5V			0.1	μA
Clamping voltage	V _C	I _{PP} =1A, t _p =8/20μs		9	10	V
		I _{PP} =5A, t _p =8/20μs		13	15.5	V
Junction capacitance	C _J	V _{RWM} =0V, f=1MHz		7.5	15	pF

RATINGS AND V-I CHARACTERISTICS CURVES (T_A=25°C, unless otherwise noted)

FIG.1: V- I curve characteristics (Bi-directional)

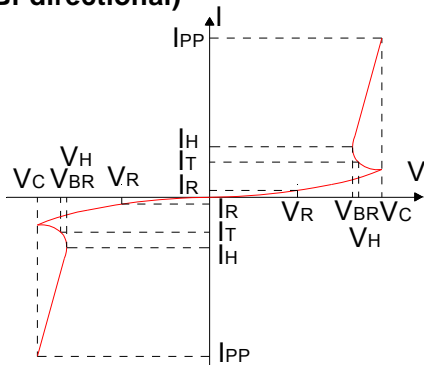


FIG.2: Pulse waveform (8/20μs)

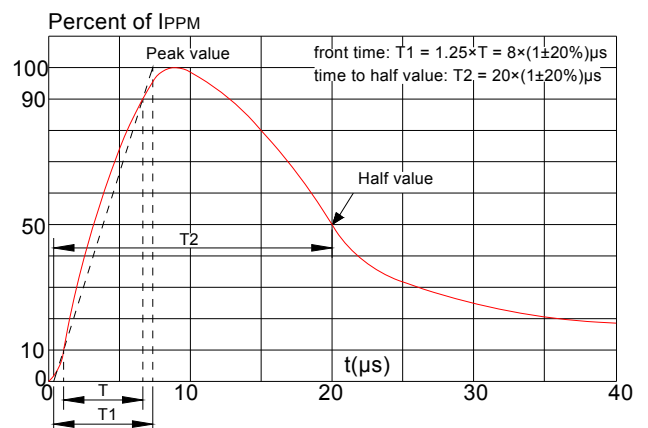


FIG.3: Pulse derating curve

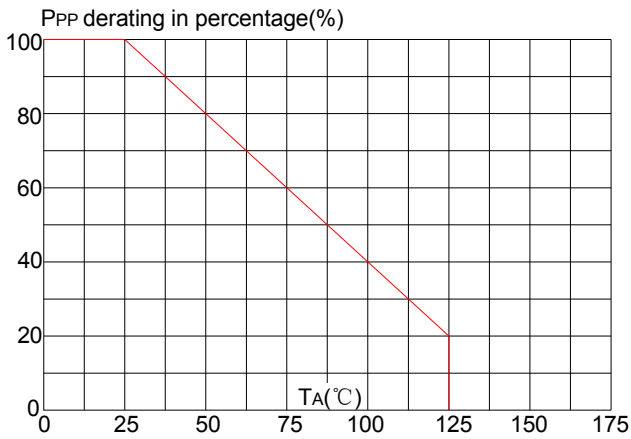
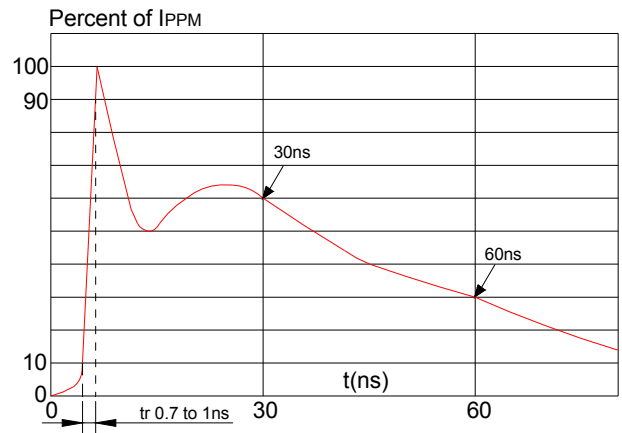
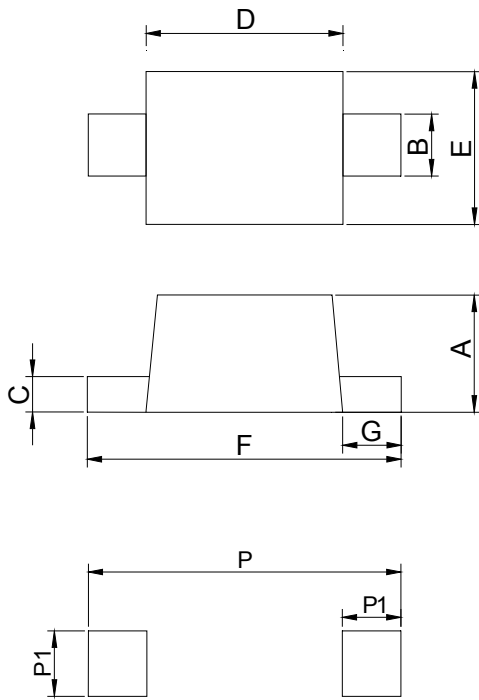


FIG.4: ESD clamping (30kV contact)



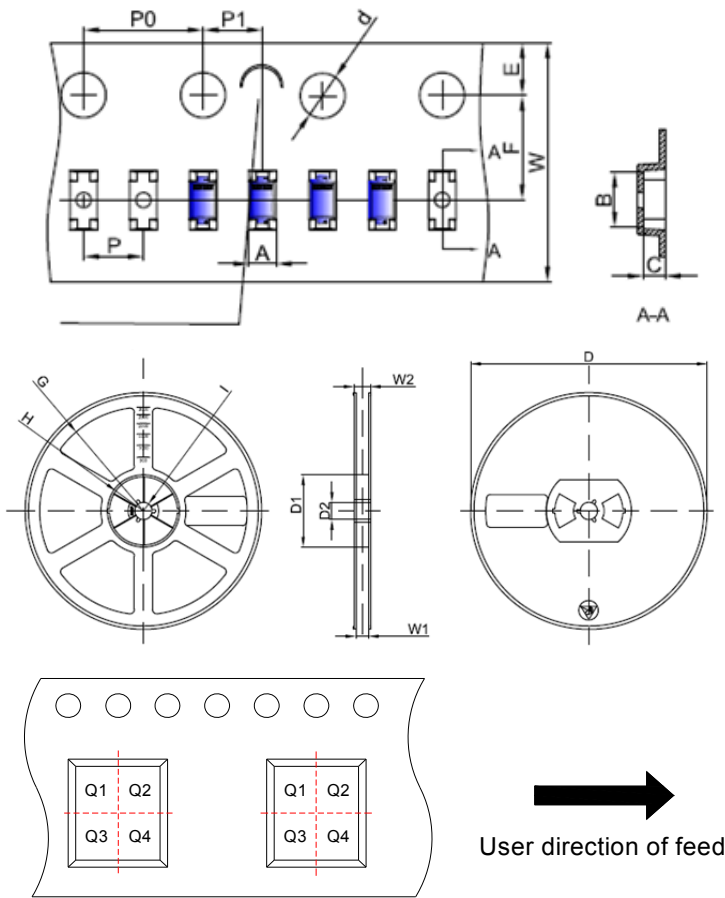
PACKAGE MECHANICAL DATA



Land Pattern

Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	0.50	0.70	0.020	0.028
B	0.25	0.35	0.010	0.014
C	0.07	0.20	0.0028	0.0079
D	1.10	1.30	0.043	0.051
E	0.70	0.90	0.028	0.035
F	1.50	1.70	0.059	0.067
G	0.15	0.25	0.006	0.010
P1	0.40		0.016	
P	1.80		0.072	

TAPE AND REEL SPECIFICATION-SOD-523



Pin 1 quadrant:Q1&Q2

Packaging Description:


SOD-523 parts are shipped in tape. The carrier tape is made from a dissipative(carbon filled) polycarbonate resin. The cover tape is a multilayer film(heat activated adhesive in nature)primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 5,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and made of polystyrene plastic(anti-static coated).

Symbol	Millimeters	Inches
	Typ.	Typ.
A	0.90	0.035
B	1.94	0.076
C	0.73	0.029
d	Φ1.50	Φ0.059
E	1.75	0.069
F	3.50	0.138
P0	4.00	0.157
P	2.00	0.079
P1	2.00	0.079
W	8.00	0.315
D	Φ178	Φ7.008
D1	54.40	2.142
D2	13.00	0.512
G	R78.00	R3.071
H	R25.60	R1.008
I	R6.50	R0.256
W1	9.50	0.374
W2	12.30	0.484

ORDERING INFORMATION

PART No.	PACKAGE TYPE	QUANTITY(PCS) REEL	DESCRIPTION
JEB05D5	SOD-523	5,000	7 inch reel pack
JEB05D5-T1G	SOD-523	3,000	7 inch reel pack

MARKING CODE

Part Number	Marking Code
JEB05D5	

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