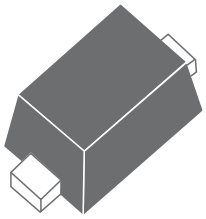
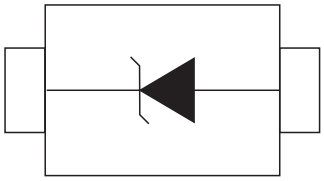
Electro-Static Discharge
TESD12EU
Unidirectional TVS Diode

SOD-523



Pin Configuration



Features

- 150 Watts Peak Pulse Power per Line (tp=8/20μs)
- Protects one I/O line
- Low clamping voltage
- Working voltages :12V
- Low leakage current

IEC Compatibility

- IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ηs)

Applications

- Cellular Handsets and Accessories
- Portable Electronics
- Industrial Controls
- Set-Top Box
- Instrumentation
- Servers, Notebook, and Desktop PC
- Display Ports

Mechanical Characteristics

- SOD-523 Package
- Molding Compound Flammability Rating:L 94V-O
- Quantity Per Reel:5000pcs
- Reel Size:7 inch
- Lead Finish:Lead Free

Maximum Ratings(T_A=25℃ unless otherwise noted)

Maximum Ratings(@25℃ Unless Otherwise Specified)			
Parameter	**Symbol**	**Value**	**Units**
Peak Pulse Power(tp=8/20μs waveform)	P_{PP}	150	Watts
Lead Soldering Temperature	T_L	260(10 sec.)	℃
Operating Temperature Range	T_J	-55~150	℃
Storage Temperature Range	T_{STG}	-55~150	℃

Electrical Characteristics(Ta=25℃ unless otherwise specified)

TESD12EU(Marking:ZM)					
Parameter	**Symbol**	**Conditions**	**Min.**	**Max.**	**Units**
Reverse Stand-off Voltage	V_{RWM}			12	V
Breakdown Voltage	V_{BR}	I_T=1mA	13.3		V
Clamping Voltage	V_C	I_{PP}=1A,tp=8/20μs		16.5	V
		I_{PP}=6A,tp=8/20μs		28	V
Reverse Leakage Current	I_R	@V_{RWM}		1	μA
Junction Capacitance	$C_{I/O}$	0Vdc,f=1MHz Between I/O Pins and GND		60	pF

Ratings and Characteristic Curves

Fig.1 Power Derating Curve

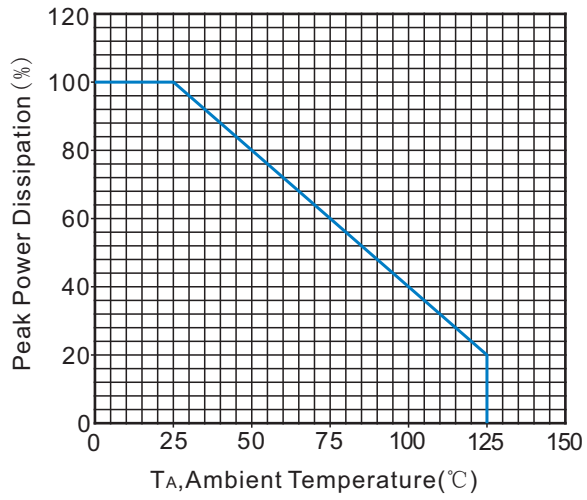
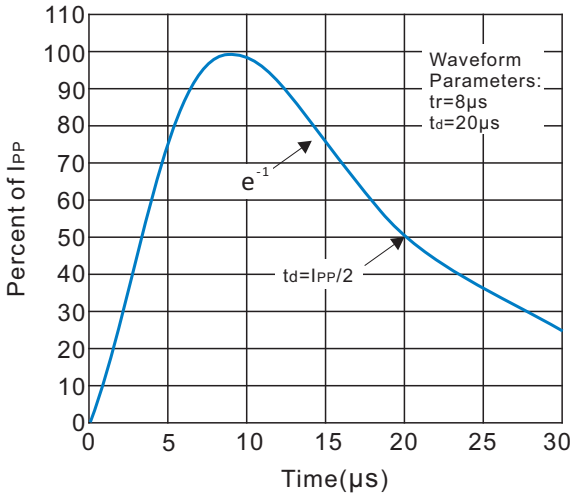
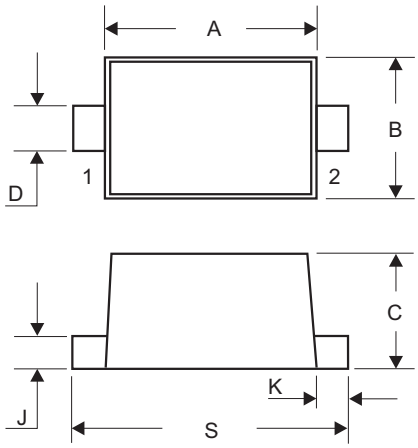


Fig.2 Pulse Waveform



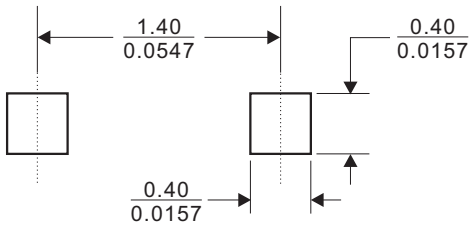
Dimensions(SOD-523)

SOD-523



DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	1.10	1.30	0.043	0.051
B	0.70	0.90	0.028	0.035
C	0.50	0.70	0.020	0.028
D	0.25	0.35	0.010	0.014
J	0.07	0.20	0.0028	0.0079
K	0.15	0.25	0.006	0.010
S	1.50	1.70	0.059	0.067

Recommended Mounting Pad Layout



Dimensions in (millimeters / inches)