

Applications

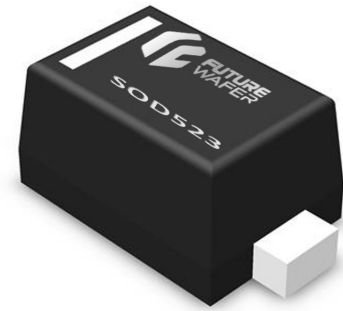
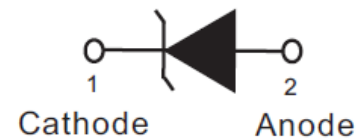
- Lan equipment
- Video
- DVI
- High Speed Data Line
- Ethernet
- USB 2.0 Power and Data line Protection

Feature

- With TVS Diode
- ESD Protection:Level 4
- Low clamping voltage
- 400 Watts peak pulse power per line(tp=8/20uS)
- Ultra low capacitance:130pf max.(any I/O to GND.)
- Protection one line I/O port

IEC Compatibility

- EN61000-4
- 61000-4-2(ESD):Level 4
- 61000-4-4(EFT):40A-5/50ns
- 61000-4-5(Surge):17A-8/20us


SOD523

Mechanical Characteristics

- Molded JEDEC SOD523 package
- Packing:Tape and Reel
- Flammability rating UL 94V-0
- Halogen Free

Device Characteristics

Maximum Ratings@25 unless otherwise specified			
Parameter	Symbol	Value	Units
Peak pulse power (tp=8/20us)	PPP	400	Watts
Operating Temperature	TJ	-55~150	°C
Storage Temperature	TSTG	-55~150	°C

Electrical Characteristics

Parameter	Symbol	Condition	min	max	Units
Reverse Stand-off Voltage	V_{RWM}			12	V
Reverse Breakdown Voltage	V_{BR}	$I_z=1mA$	12.7		V
Reverse Leakage Current	$I_{R(max)}$	@ V_{RWM}		0.9	μA
Forward Voltage	$V_{F(max)}$	$I_F=15mA$		1.15	V
Clamping Voltage	V_C	$I_{PP}=5A$ $t_p=8/20\mu s$		18.2	V
Peak Pulse Current	I_{PP}	$t_p=8/20\mu s$		17	A
Junction Capacitance	$C_{I/O}$	Pin capacitance to GND. $V_{dc}=0V, f=1MHz$		130	pf

Rating and characteristic curve

FIGURE 1
Power Derating Curve

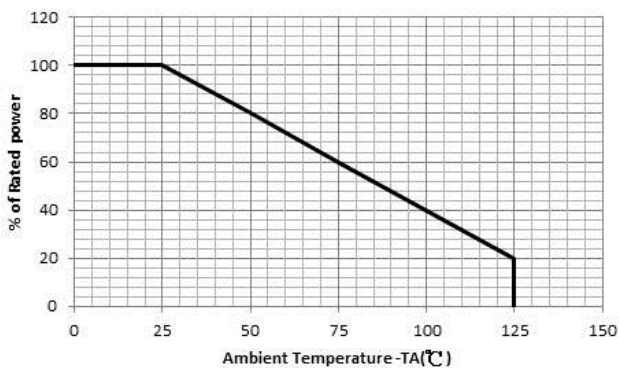
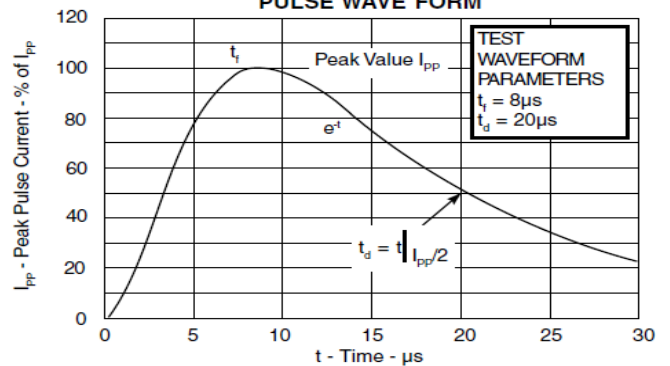


FIGURE 2
PULSE WAVE FORM



Vc (Clamping Voltage)

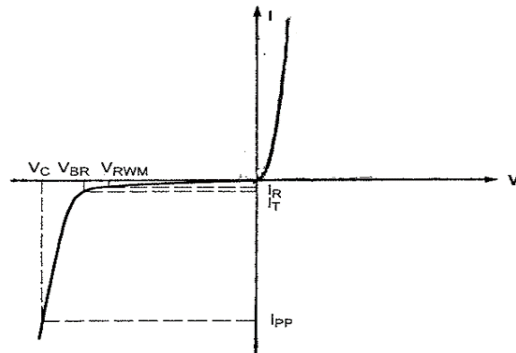
Voltage across the TVS diode at the I_{PP} (peak pulse current)

VBR (Reverse Break Down Voltage)

Voltage at which the TVS diode turns on (conducting state)

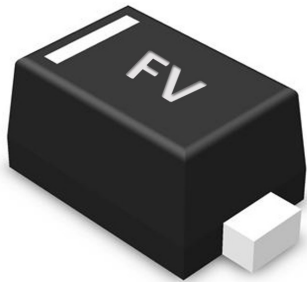
VRWM (Reverse Standoff Voltage)

Voltage at which the TVS diode turns off (high impedance state)



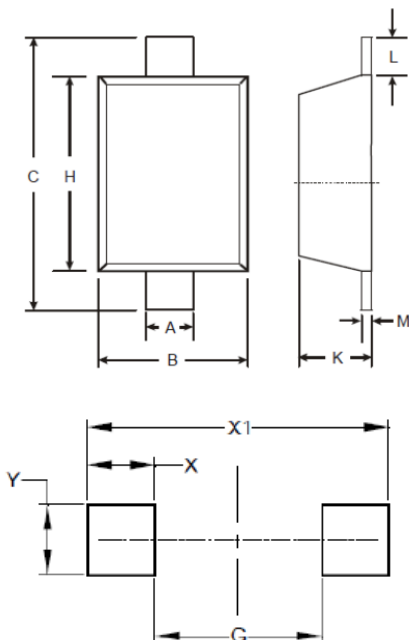
Ordering information

Marking codes



Part No.	Marking Code
FESD12UV	FV
Quantity	3,000pcs

Package Information



SOD523		
Dim	Min	Max
A	0.25	0.35
B	0.70	0.90
C	1.50	1.70
H	1.10	1.30
K	0.55	0.65
L	0.10	0.30
M	0.10	0.12
All Dimensions in mm		

Dimensions	Value (in mm)
G	0.80
X	0.60
X1	2.00
Y	0.70



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