

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

MSPESD5ZXX

Product specification

Features

- IEC61000-4-2 Level 4 ESD Protection
- Protects one directional I/O line
- Low clamping voltage
- Working voltages : 2.5V,3.3V, 5V,6V,7V,12V
- Low leakage current


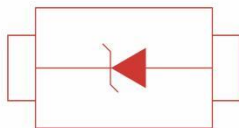
MACHANICAL DATA








- SOD-523 package
- Flammability Rating: UL 94V-0
- Packaging: Tape and Reel
- High temperature soldering guaranted:260°C/10s
- Reel size: 7 inch

APPLICATIONS

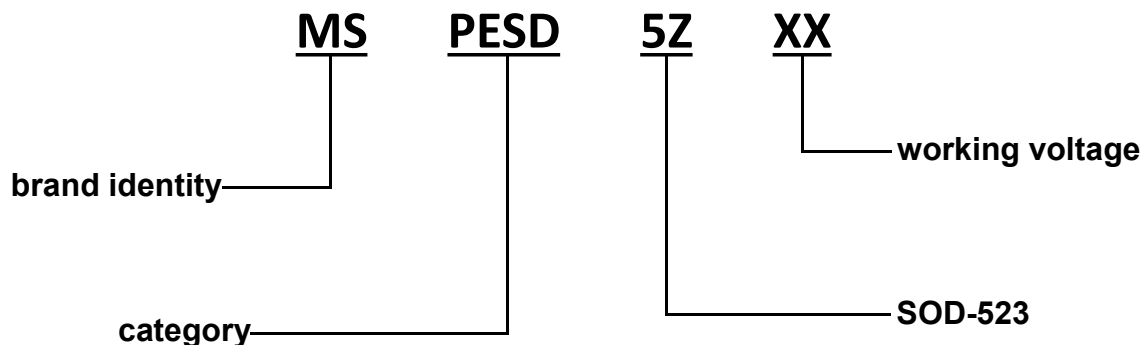
- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Peripherals
- Pagers

Reference News

PACKAGE OUTLINE	Circuit Diagram
	
SOD-523	

MSPE5D5Z2.5	MSPE5D5Z3.3	MSPE5D5Z5.0	MSPE5D5Z6.0
			
MSPE5D5Z7.0	MSPE5D5Z12	MSPE5D5Z15	
			

Part Number Code



ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	± 30 ± 22	kV
ESD	ESD Voltage per human body model ESD Voltage per machine model	16 400	kV V
P_D	Total Power Dissipation on FR-5 Board (Note 1) @ $T_a=25$	150	mW
T_J, T_{STG}	Junction and Storage Temperature	-55/+150	$^{\circ}C$
T_L	Lead Solder Temperature – Maximum (10 Second Duration)	260	$^{\circ}C$

These ratings are limiting values above which the serviceability of the diode may be impaired

Note 1. FR-5=1.0x0.75x0.62 in.

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$)

PART NUMBER	V_{RWM}	I_R	V_B	I_T	V_C		V_C		P_{PK}	C_J
	(V)	(μA)	(V)	(mA)	(V)		(V)		(W)	(pF)
	Max	Max	Min		Max	@A	Max	@A	Max	Max
MSPESD5Z2.5	2.5	1.0	4.0	1	9.0	5.0	20.0	13	150	110
MSPESD5Z3.3	3.3	1.0	5.0	1	10.0	5.0	18.0	12	150	100
MSPESD5Z5.0	5.0	1.0	6.2	1	11.6	5.0	17.0	11	150	95
MSPESD5Z6.0	6.0	0.50	6.8	1	13.5	5.0	20.0	10	150	90
MSPESD5Z7.0	7.0	0.50	7.5	1	14.0	5.0	21.0	9.0	150	80
MSPESD5Z12	12.0	0.50	14.1	1	20.0	1.0	28.0	7.0	150	45
MSPESD5Z15	15.0	0.50	16.0	1	23.0	1.0	35.0	5.0	150	35

ELECTRICAL CHARACTERISTICS CURVE

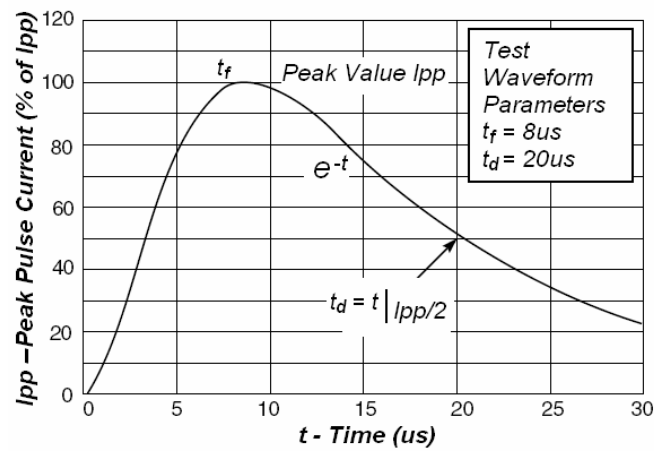


Fig1. Pulse Waveform

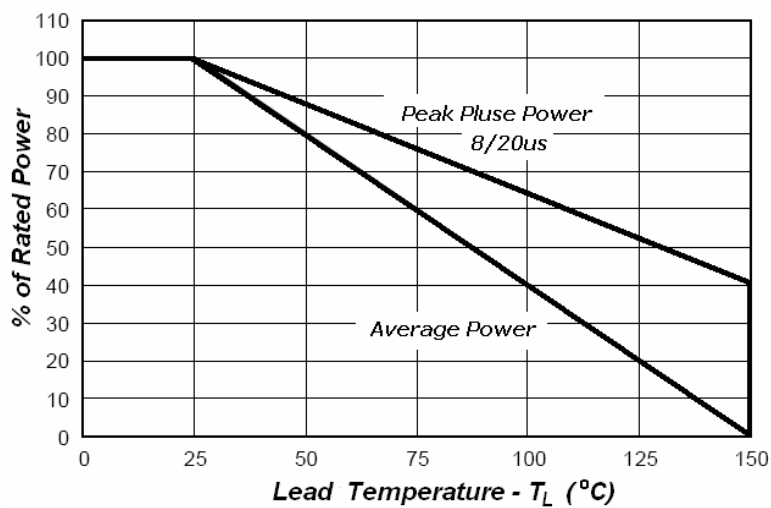
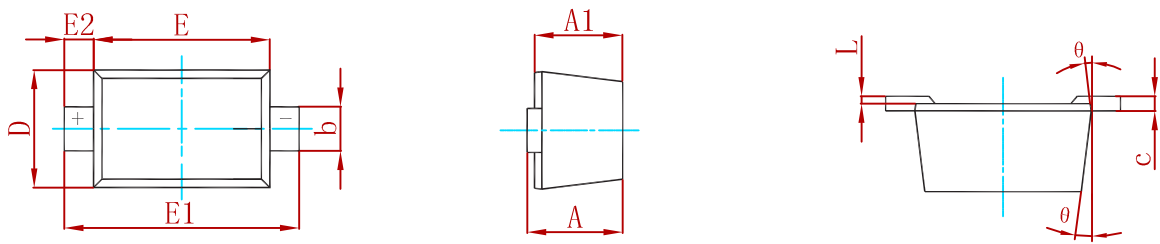


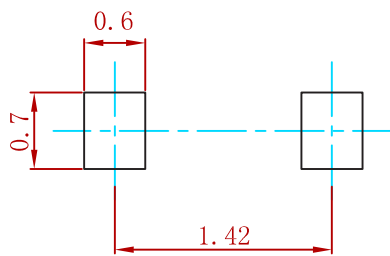
Fig3. Power Derating

PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

REELSPECIFICATION

P/N	PKG	QTY
MSPESD5ZXX	SOD-523	3000

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