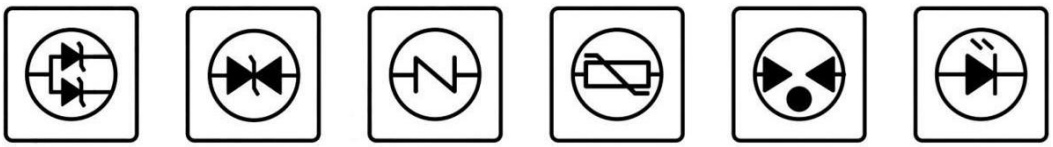
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SEMICONDUCTOR



ESD5ZXXXT1G-MS

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 ,15V
- Low leakage current

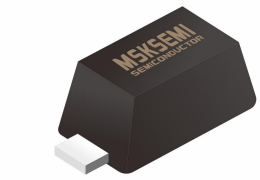
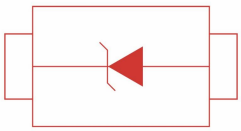
MACHANICAL DATA

- SOD-523 package
- Flammability Rating: UL 94V-0
- Packaging: Tape and Reel
- High temperature soldering guaranted:260℃/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

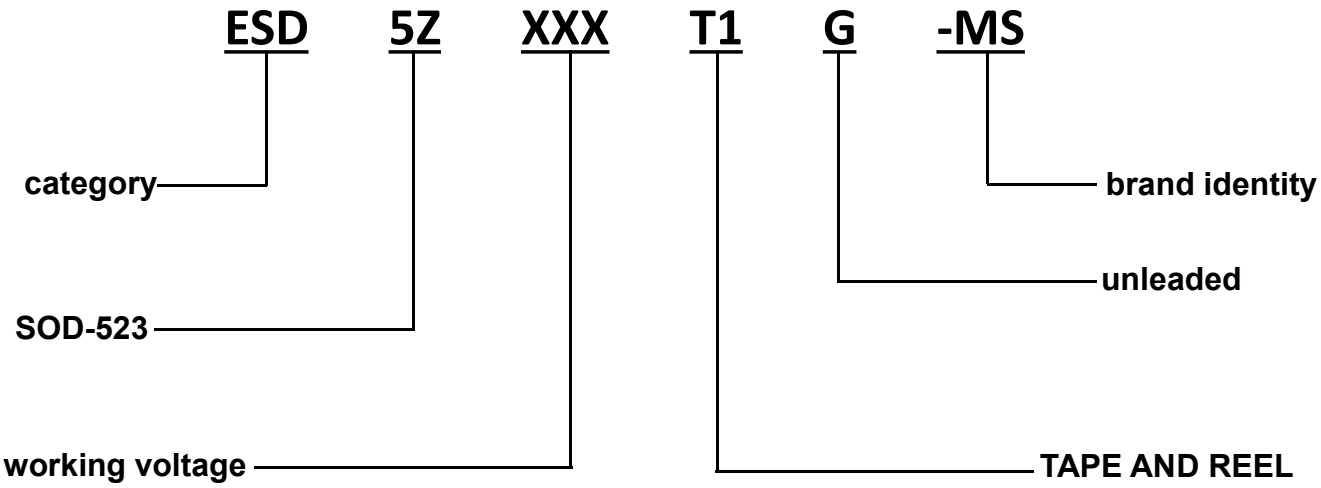
Reference News

PACKAGE OUTLINE	Circuit Diagram
	
SOD-523	

ESD5Z2.5T1G-MS	ESD5Z3.3T1G-MS	ESD5Z5.0T1G-MS	ESD5Z6.0T1G-MS
ZD*	ZE*	ZF*	ZG*
ESD5Z7.0T1G-MS	**ESD5Z12T1G-MS**	**ESD5Z15T1G-MS**	
ZH*	ZM*	ZN*	

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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) @ Ta=25℃	150	mW
T_J, T_{STG}	Junction and Storage Temperature	-55/+150	℃
T_L	Lead Solder Temperature – Maximum (10 Second Duration)	260	℃

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 (Tamb=25℃)

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
ESD5Z2.5T1G-MS	2.5	1.0	4.0	1	9.0	5.0	20.0	13	150	110
ESD5Z3.3T1G-MS	3.3	1.0	5.0	1	10.0	5.0	18.0	12	150	100
ESD5Z5.0T1G-MS	5.0	1.0	6.2	1	11.6	5.0	17.0	11	150	95
ESD5Z6.0T1G-MS	6.0	0.50	6.8	1	13.5	5.0	20.0	10	150	90
ESD5Z7.0T1G-MS	7.0	0.50	7.5	1	14.0	5.0	21.0	9.0	150	80
ESD5Z12T1G-MS	12.0	0.50	14.1	1	20.0	1.0	28.0	7.0	150	45
ESD5Z15T1G-MS	15.0	0.50	16.0	1	23.0	1.0	35.0	5.0	150	35

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ELECTRICAL CHARACTERISTICS CURVE

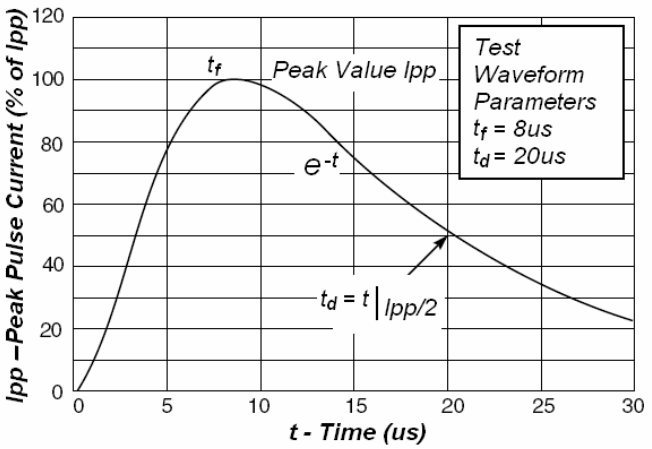


Fig1. Pulse Waveform

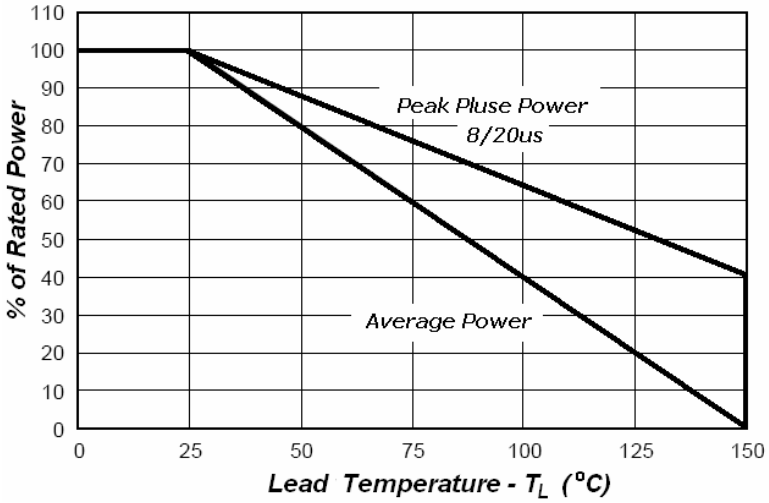
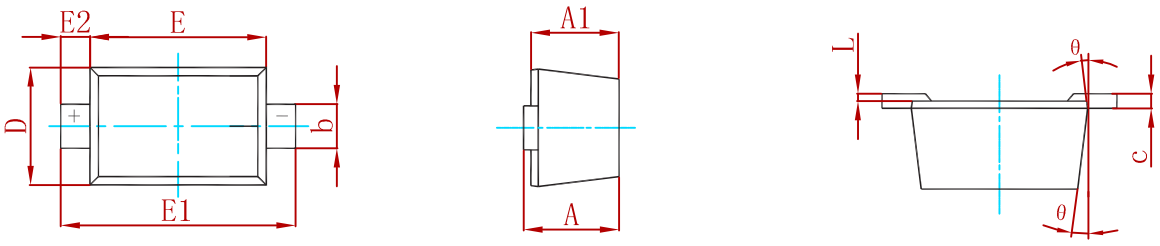


Fig3.Power Derating

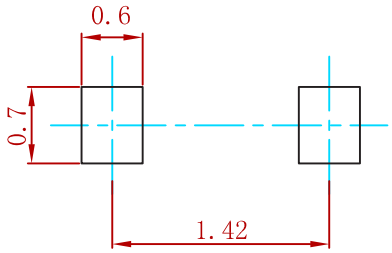
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PACKAGE MECHANICAL DATA



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
ESD5ZXXXT1G-MS	SOD-523	3000

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