

# MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

**CESDXXXD1-MS**

**Product specification**

**FEATURES**

- IEC61000-4-4 (EFT) 40A (5/50qs)
- 350 Watts Peak Pulse Power per (tp=8/20ps)
- Protects one I/O line (unidirectional)
- Low clamping voltage
- Working voltages : 3.3V to 36V
- Low leakage current


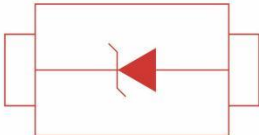
**MACHANICAL DATA**

- SOD-323 package
- Flammability Rating: UL 94V-0
- Packaging: Tape and Reel
- High temperature soldering guaranteed:260°C/10s
- Reel size: 7 inch
- MSL 1

**APPLICATIONS**

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

**Reference News**

PACKAGE OUTLINE	PIN CONFIGURATION
	
SOD-323	

**Marking for the SDXX-MS series**

<b>VRWM</b>	3.3V	5V	8V	12V	15V	18V	20V	24V	36V
<b>Marking</b>	03W	05W	08W	12W	15W	18W	20W	24W	36W

**ABSOLUTE MAXIMUM RATING**

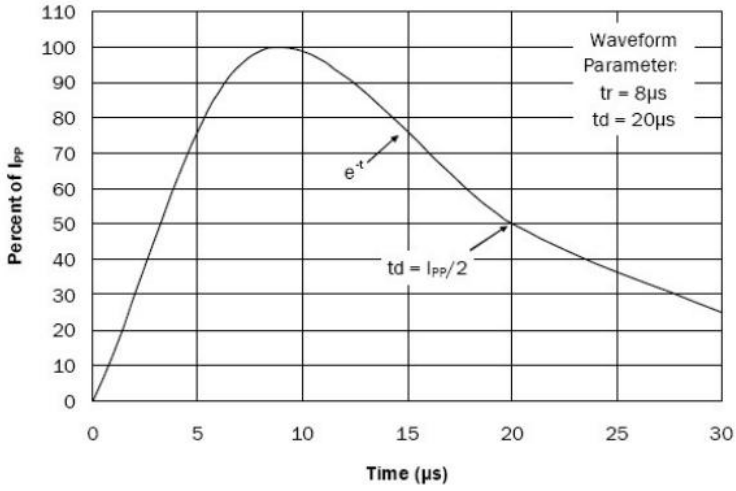
Symbol	Parameter	Value	Units
VESD	ESD per IEC 61000-4-2 (Air)	±15	kV
	ESD per IEC 61000-4-2 (Contact)	±8	
Ppp	Peak Pulse Power (8/20 $\mu$ s)	350	W
T <sub>OPT</sub>	Operating Temperature	-55/+150	°C
T <sub>STG</sub>	Storage Temperature	-55/+150	°C
TL	Lead Soldering Temperature	260 (10 sec.)	°C

**ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25 °C)**

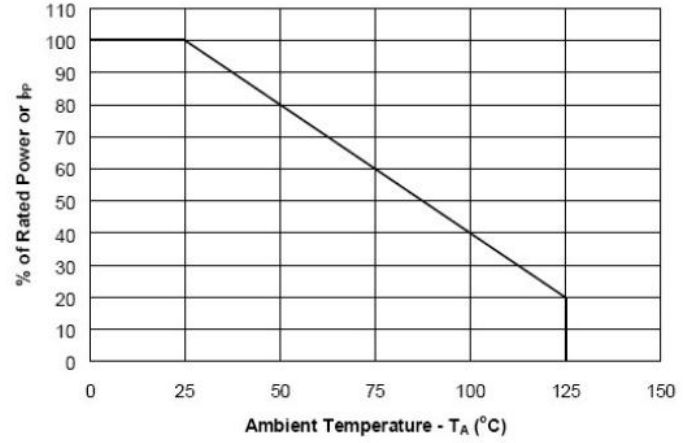
PART NUMBER	DEVICE MARKING	V <sub>RWM</sub> (V) (max.)	V <sub>B</sub> (V) (min.)	I <sub>T</sub> (mA)	V <sub>c@1A</sub> (V) (max.)	V <sub>c</sub> (V)		I <sub>R</sub> (mA) (max.)	C <sub>T</sub> (pF) (max.)
						(max.)	(@A)		
CESD3V0D1-MS	03W	3.3	4	1	6.5	14	20	40	450
CESD5V0D1-MS	05W	5	6	1	9.8	18	17	10	300
CESD8V0D1-MS	08W	8	8.5	1	10.5	24	15	1	240
CESD12VD1-MS	12W	12	13.3	1	19	32	11	1	130
CESD15VD1-MS	15W	15	16.7	1	24	38	10	1	120
CESD18VD1-MS	18W	18	20.0	1	29	45	9	1	100
CESD20VD1-MS	20W	20	22.3	1	35	50	8	1	90
CESD24VD1-MS	24W	24	26.7	1	43	52	7	1	80
CESD36VD1-MS	36W	36	40	1	60	75	5	1	60

**ELECTRICAL CHARACTERISTICS CURVE**

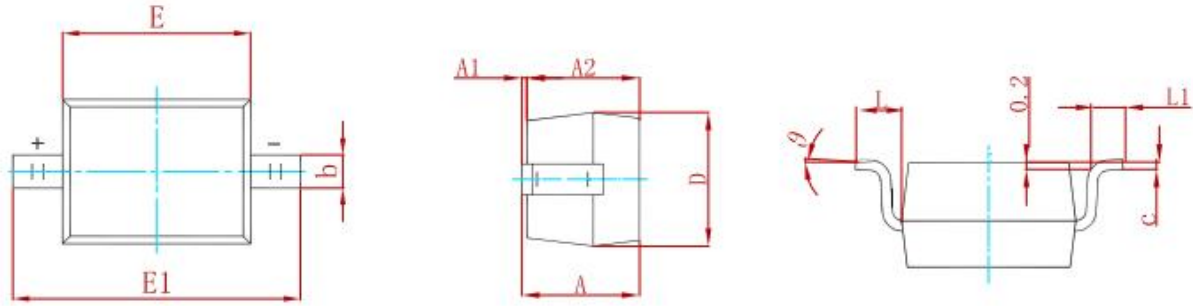
**Pulse Waveform**



**Power Derating Curve**

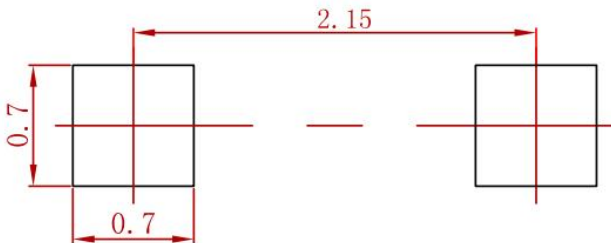


**PACKAGE MECHANICAL DATA**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min.	Max
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
C	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475 REF		0.019 REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

**Suggested Pad Layout**



**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

P/N	PKG	QTY
CESDXXXD1-MS	SOD-323	3000

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