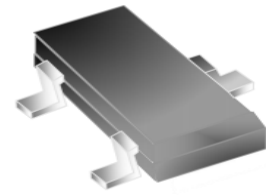


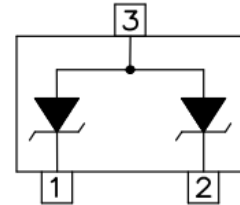


### FEATURES

- ◇ 350 watts peak pulse power per line ( $t_p=8/20\mu s$ )
- ◇ Protects two I/O lines with uni-directional
- ◇ Low clamping voltage
- ◇ Working voltages: 3.3V
- ◇ Low leakage current
- ◇ Meet MSL 1 requirements
- ◇ RoHS compliant
- ◇ AEC-Q101 qualified



SOT-23



PIN Configuration

### MAIN APPLICATIONS

- ◇ RS-232, RS-422 & RS-485
- ◇ Servers, notebook, and desktop
- ◇ Cellular handsets and accessories
- ◇ Control & monitoring systems
- ◇ Portable electronics
- ◇ Wireless bus protection
- ◇ Set-top box

### PROTECTION SOLUTION TO MEET

- ◇ IEC61000-4-2 (ESD)  $\pm 15kV$  (air),  $\pm 8kV$  (contact)
- ◇ IEC61000-4-4 (EFT) 40A (5/50ns)
- ◇ IEC61000-4-5 (lightning) 25A (8/20 $\mu s$ )

### MECHANICAL CHARACTERISTICS

- ◇ SOT-23 package
- ◇ Molding compound flammability rating: UL 94V-0
- ◇ Weight 8 milligrams (approximate)
- ◇ Quantity per reel: 3,000pcs
- ◇ Reel size: 7 inch
- ◇ Lead finish: lead free
- ◇ Marking code: 3M2

**ABSOLUTE MAXIMUM RATINGS** ( $T_A=25^{\circ}\text{C}$ , RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 8/20 $\mu\text{s}$ waveform	$P_{PP}$	350	W
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	+/- 15 +/- 8	kV
Lead soldering temperature	$T_L$	260 (10 sec.)	$^{\circ}\text{C}$
Operating junction temperature range	$T_J$	-55 to +125	$^{\circ}\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150	$^{\circ}\text{C}$

**ELECTRICAL CHARACTERISTICS** ( $T_A=25^{\circ}\text{C}$ )

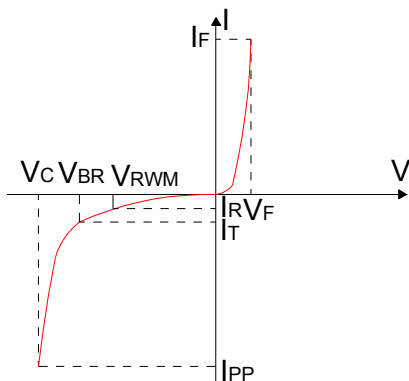
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse working voltage	$V_{RWM}$				3.3	V
Reverse breakdown voltage	$V_{BR}$	$I_T = 1\text{mA}$	4			V
Reverse leakage current	$I_R$	$V_{RWM} = 3.3\text{V}$			5	$\mu\text{A}$
Clamping voltage	$V_C$	$I_{PP}^{\textcircled{1}} = 1\text{A}$ , $t_p = 8/20\mu\text{s}$			8	V
		$I_{PP}^{\textcircled{1}} = 25\text{A}$ , $t_p = 8/20\mu\text{s}$			14	V
Junction capacitance	$C_J^{\textcircled{2}}$	$V_{RWM} = 0\text{V}$ , $f = 1\text{MHz}$		200	240	pF

① Surge waveform: 8/20 $\mu\text{s}$

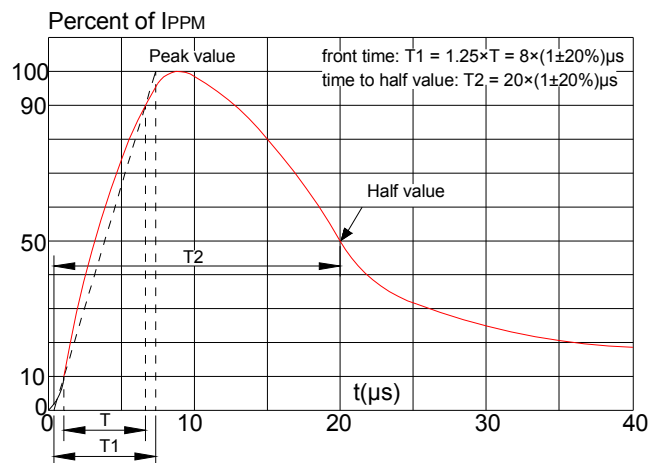
②  $C_J$  measured @  $V_{RWM}=0\text{V}$ , 1MHz (pin1 to pin3, pin2 to pin3)

**RATINGS AND V-I CHARACTERISTICS CURVES** ( $T_A=25^{\circ}\text{C}$ , unless otherwise noted)

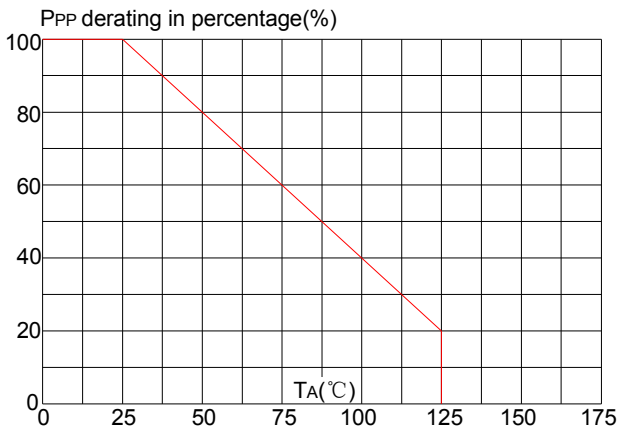
**FIG.1: V- I curve characteristics (Uni-directional)**



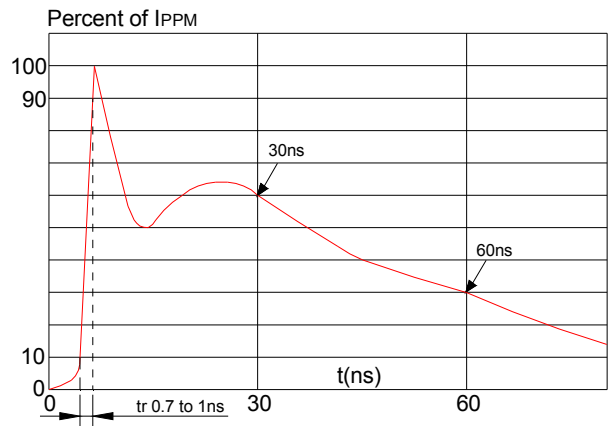
**FIG.2: Pulse waveform (8/20 $\mu\text{s}$ )**



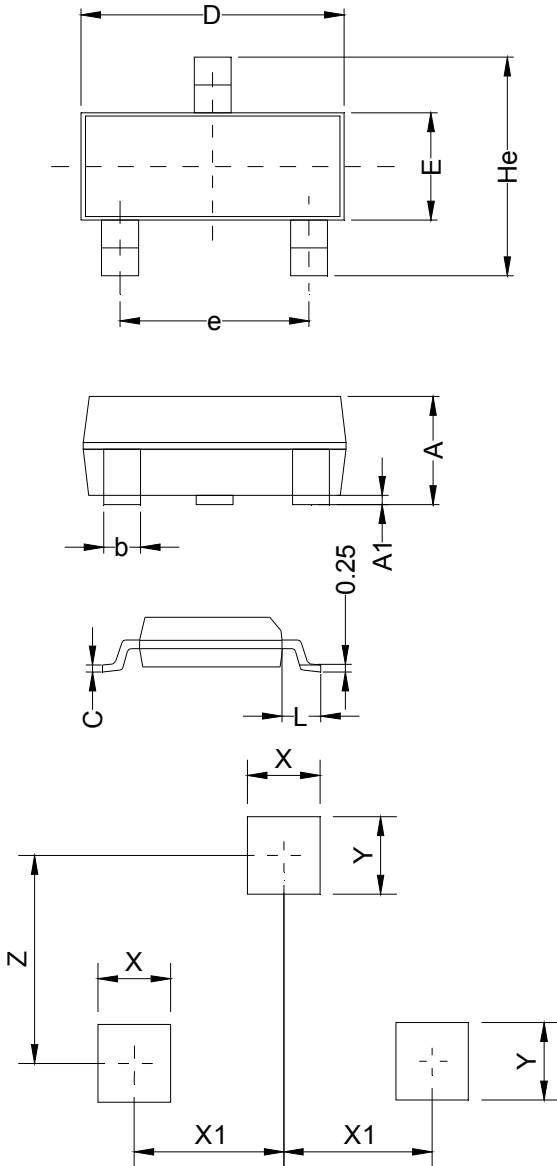
**FIG.3: Pulse derating curve**



**FIG.4: ESD clamping (8KV contact)**



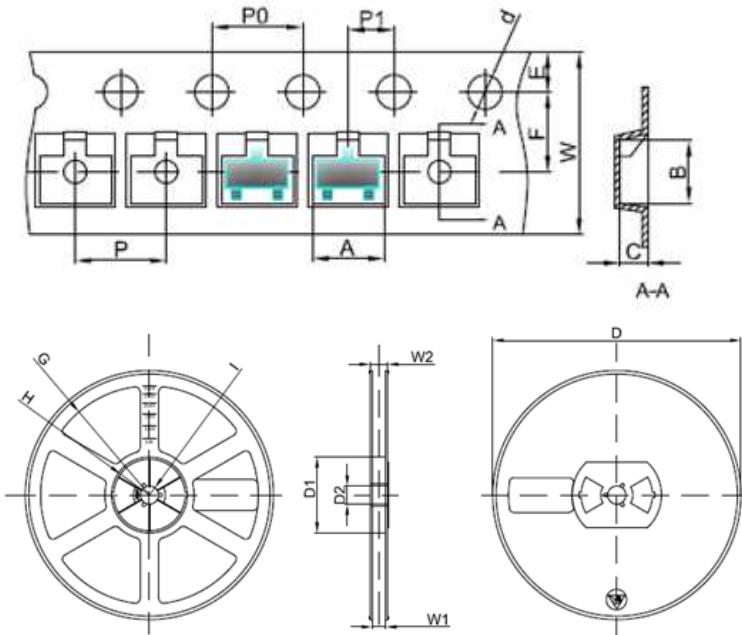
**PACKAGE MECHANICAL DATA**



**Land Pattern**

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	0.9	1.15	0.035	0.045
A1	0.00	0.10	0.000	0.004
b	0.25	0.325	0.01	0.013
C	0.22	0.25	0.009	0.01
D	2.8	3.0	0.11	0.118
e	1.8	1.9	0.071	0.075
E	1.2	1.4	0.047	0.055
L	0.30	0.50	0.012	0.02
He	2.25	2.55	0.089	0.1
X	0.8		0.0315	
X1	0.95		0.037	
Y	0.80		0.0315	
Z	2.02		0.0795	

**TAPE AND REEL SPECIFICATION-SOT-23**



Symbol	Millimeter	Inches
	Typ.	Typ.
A	3.15	0.124
B	2.77	0.109
C	1.22	0.048
d	∅1.50	∅0.059
E	1.75	0.069
F	3.50	0.138
P0	4.00	0.157
P	4.00	0.157
P1	2.00	0.079
W	8.00	0.315
D	∅178	∅7.008
D1	54.40	2.142
D2	13.00	0.512
G	R78.00	R3.071
H	R25.60	R1.008
I	R6.50	R0.256
W1	9.50	0.374
W2	12.30	0.484

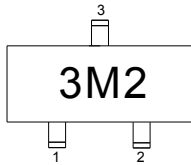
**Packaging Description:**

SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative(carbon filled) polycarbonate resin. The cover tape is a multilayer film(heat activated adhesive in nature)primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000units per 7" or 17.8cm diameter reel. The reels are clear in color and made of polystyrene plastic(anti-static coated).

**ORDERING INFORMATION**

OUTLINE	PACKAGE TYPE	QUANTITY REEL	DESCRIPTION
TAPING	SOT-23	3,000	7 inch reel pack

**MARKING CODE**

Part Number	Marking Code
JEU03T2B	

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