

FEATURES

- ✧ 350 Watts peak pulse power per line ($t_p=8/20\mu s$)
- ✧ Protect for two I/O lines with bi-directional
- ✧ Low clamping voltage
- ✧ Working voltages: 5V
- ✧ Low leakage current
- ✧ ROHS compliant
- ✧ AEC-Q101 qualified
- ✧ Compliant to Halogen-free
- ✧ Suffix "-Q1" for AEC-Q101

MAIN APPLICATIONS

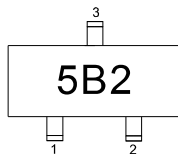
- ✧ RS-232, RS-422 & RS-485
- ✧ Servers, notebook, and desktop
- ✧ Cellular handsets and accessories
- ✧ Control & monitoring systems
- ✧ Portable electronics
- ✧ Wireless bus protection
- ✧ Set-top box

PROTECTION SOLUTION TO MEET

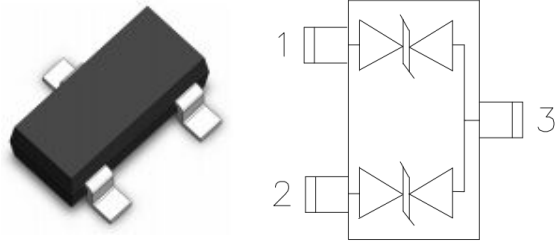
- ✧ IEC61000-4-2 (ESD) $\pm 15kV$ (air), $\pm 8kV$ (contact)
- ✧ IEC61000-4-4 (EFT) 40A (5/50ns)
- ✧ IEC61000-4-5 (Lightning) 18A (8/20 μs)

MECHANICAL CHARACTERISTICS

- ✧ SOT-23 package
- ✧ Molding compound flammability rating : UL 94V-0
- ✧ Quantity per reel : 3,000pcs
- ✧ Lead finish : lead free
- ✧ Marking code: 5B2



Pin Configuration



ABSOLUTE MAXIMUM RATINGS (T_A=25°C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 8/20 μs 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.)	°C
Operating junction temperature range	T _J	-55 to +125	°C
Storage temperature range	T _{STG}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse working voltage	V _{RWM}				5.0	V
Reverse breakdown voltage	V _{BR}	I _T = 1mA	6.0			V
Reverse leakage current	I _R	V _{RWM} = 5V			1	μA
Clamping voltage	V _C	I _{PP} ^① = 1A, t _p = 8/20μs			9.8	V
		I _{PP} ^① = 18A, t _p = 8/20μs			16.7	V
Junction capacitance	C _J ^②	V _{RWM} = 0V, f = 1MHz		75		pF

① Surge waveform: 8/20μs

② C_J measured @V_{RWM}=0V, 1MHz (pin 1 to pin3, pin 2 to pin3)

RATINGS AND V-I CHARACTERISTICS CURVES (T_A=25°C, unless otherwise noted)

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

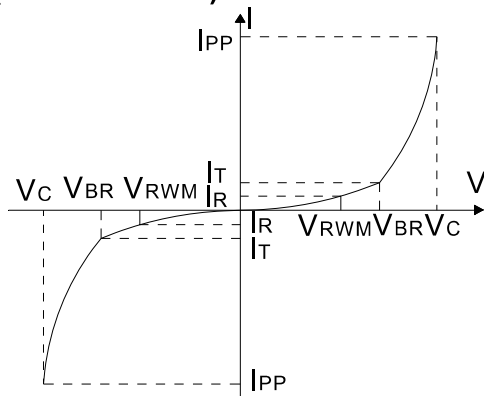


FIG.2: Pulse waveform (8/20μs)

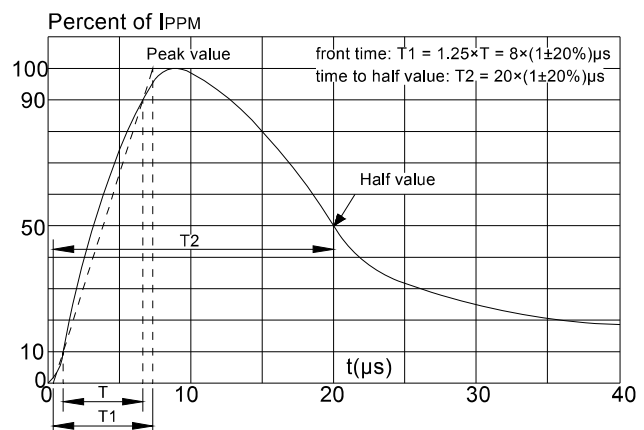


FIG.3: Pulse derating curve

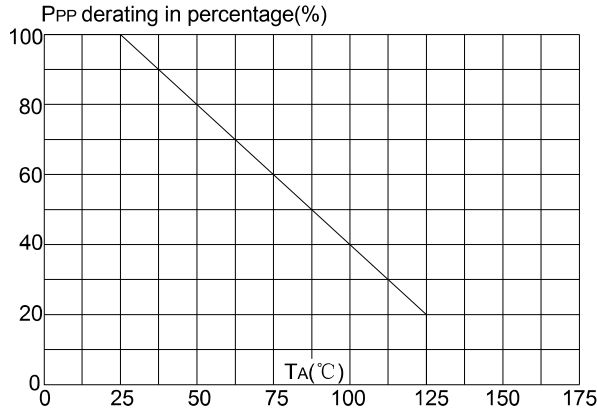
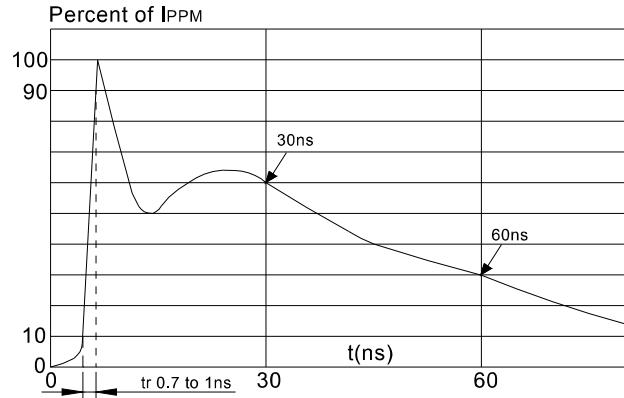
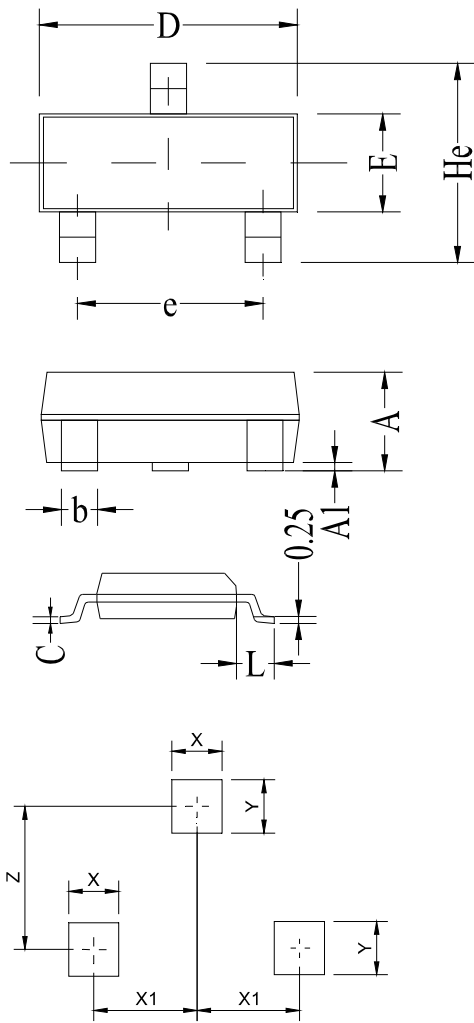


FIG.4: ESD clamping (8KV contact)



PACKAGE MECHANICAL DATA



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	