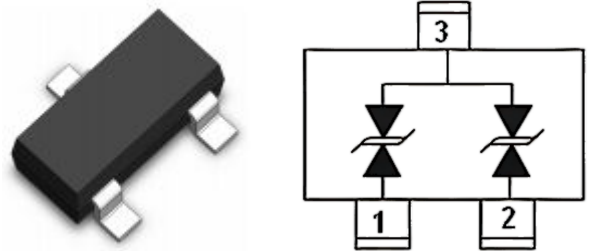


FEATURES

- 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 voltage: 12V
- Low leakage current
- RoHS compliant
- Compliant to Halogen - free
- Suffix "-Q1" for AEC-Q101

Pin Configuration



MAIN APPLICATIONS

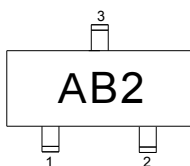
- RS-232, RS-422 & RS-485
- Servers, notebook, and desktop
- Cellular handsets and accessories
- Control & monitoring systems
- Portable electronics
- Wireless bus protection
- Set-top box

PROTECTION SOLUTION TO MEET

- IEC61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (Lightning) 12A (8/20 μs)

MECHANICAL CHARACTERISTICS

- SOT-23 package
- Molding compound flammability rating : UL 94V-0
- Lead finish : lead free
- Marking code : AB2



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 μs waveform	P_{PP}	350	W
ESD per IEC 61000-4-2 (Air)	V_{ESD}	+/- 30	kV
ESD per IEC 61000-4-2 (Contact)		+/- 30	
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}				12	V
Reverse breakdown voltage	V_{BR}	$I_T=1\text{mA}$	13.3			V
Reverse leakage current	I_R	$V_{RWM}=12\text{V}$			1	μA
Clamping voltage	V_C	$I_{PP}^{①}=1\text{A}$, $t_P=8/20\mu\text{s}$			19	V
		$I_{PP}^{①}=12\text{A}$, $t_P=8/20\mu\text{s}$			25	V
Junction capacitance	$C_J^{②}$	$V_{RWM}=0\text{V}$, $f=1\text{MHz}$		30		pF

① Surge waveform: 8/20 μs

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

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

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

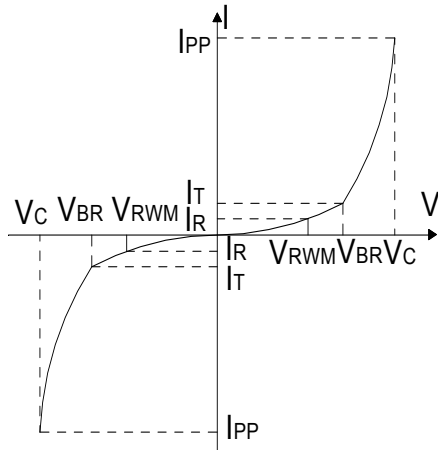


FIG.2: Pulse waveform (8/20 μs)

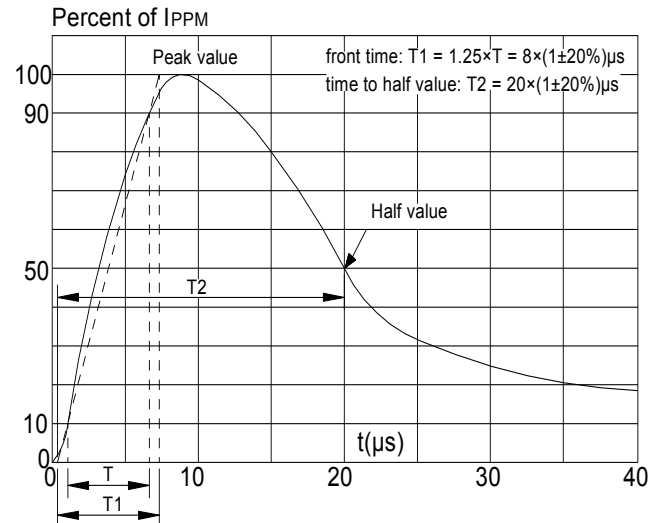


FIG.3: Pulse derating curve

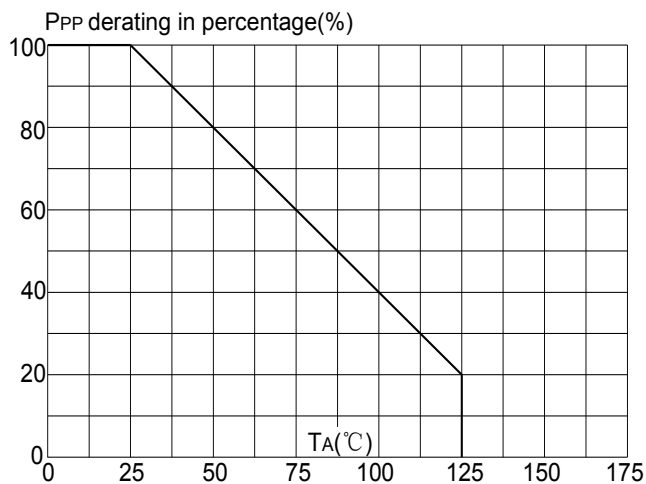
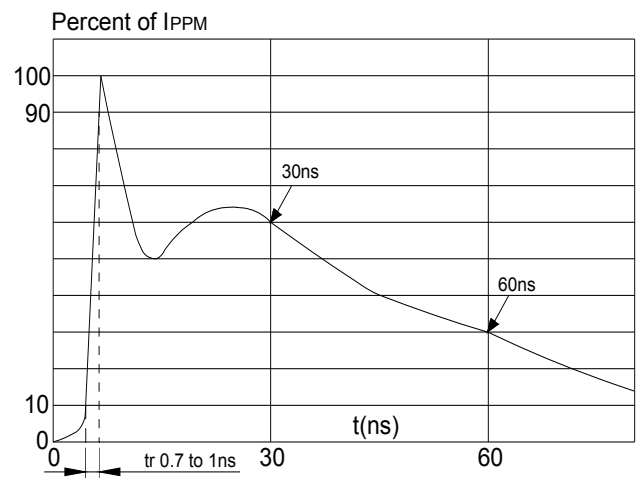
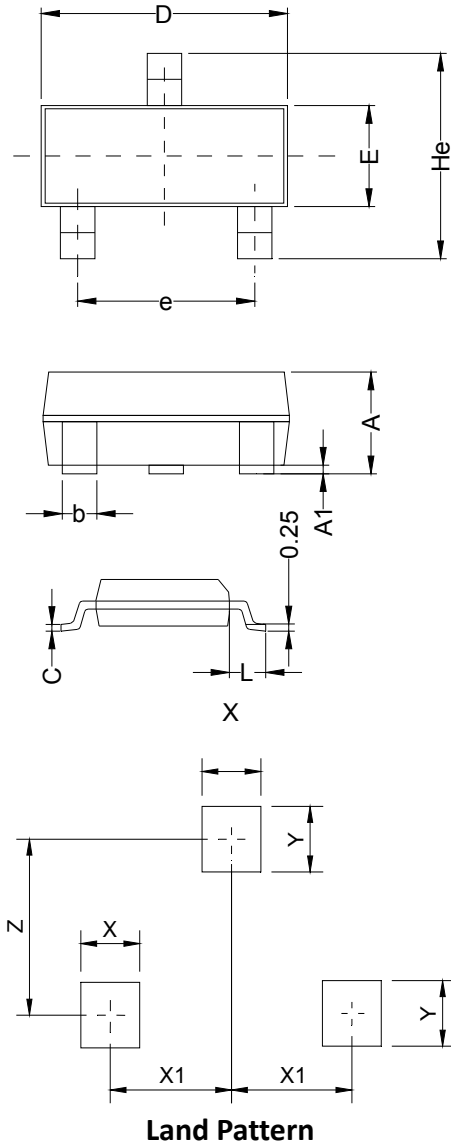


FIG.4: ESD clamping (30kV contact)



SOT-23 PACKAGE INFORMATION



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.140	0.000	0.006
b	0.300	0.500	0.012	0.020
C	0.070	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
e	1.800	2.000	0.071	0.079
E	1.200	1.400	0.047	0.055
L	0.550REF		0.022REF	
He	2.250	2.550	0.089	0.100
X	0.800		0.031	
X1	0.950		0.037	
Y	0.800		0.031	
Z	2.020		0.080	