SM15C

TVS Diode Array

FEATURES

- ✧ 350 Watts peak pulse power per line (t_P=8/20μs)
- ✧ Protect for two I/O lines with bi-directional
- ✧ Low clamping voltage
- ✧ Working voltages: 15V
- ✧ Low leakage current
- ✧ ROHS compliant

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

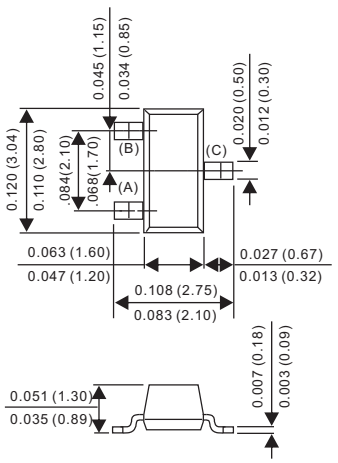
- ✧ IEC61000-4-2 (ESD) ±15kV (air),±8kV (contact)
- ✧ IEC61000-4-4 (EFT) 40A (5/50ns)
- ✧ IEC61000-4-5 (Lightning) 10A (8/20μs)

MECHANICAL CHARACTERISTICS

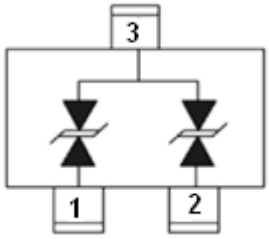
- ✧ SOT-23 package
- ✧ Molding compound flammability rating : UL 94V-0
- ✧ Weight 8 milligrams (approximate)
- ✧ Quantity per reel : 3,000pcs
- ✧ Lead finish : lead free
- ✧ Marking code：BB2

Package outline

SOT-23



Dimensions in inches and (millimeters)



PIN Configuration

ABSOLUTE MAXIMUM RATINGS (T_A=25ºC, 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.)	℃
Operating junction temperature range	T_J	-55 to +125	℃
Storage temperature range	T_{STG}	-55 to +150	℃

ELECTRICAL CHARACTERISTICS (T_A=25℃)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse working voltage	V_{RWM}				15	V
Reverse breakdown voltage	V_{BR}	I_T = 1mA	16.7			V
Reverse leakage current	I_R	V_{RWM} =15V			1	μA
Clamping voltage	V_C	I_{PP}①=1A, tp =8/20μs			24	V
		I_{PP}①=10A, tp =8/20μs			35	V
Junction capacitance	C_J②	V_{RWM} = 0V, f = 1MHz		25		pF

② 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=25ºC, unless otherwise noted)

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

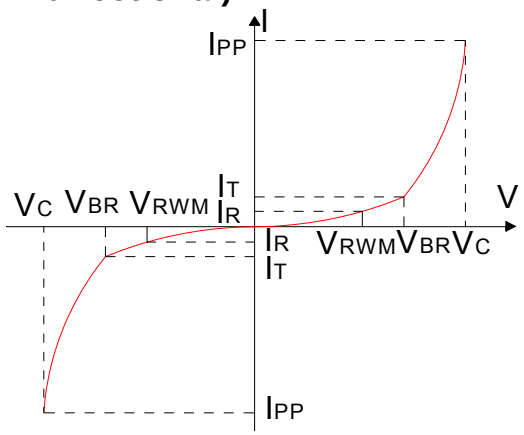
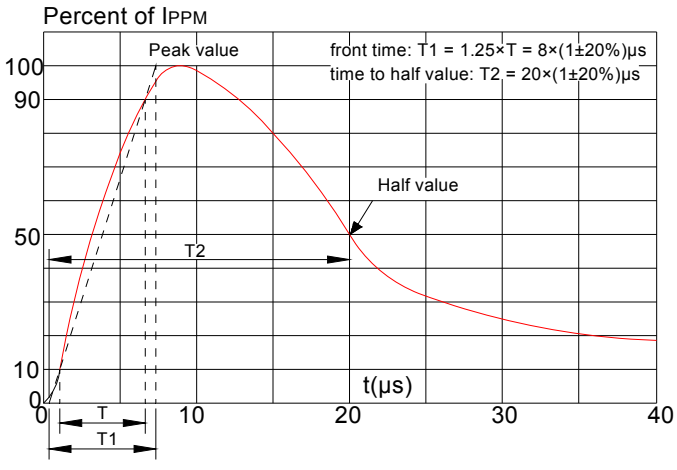


FIG.2: Pulse waveform (8/20μs)



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