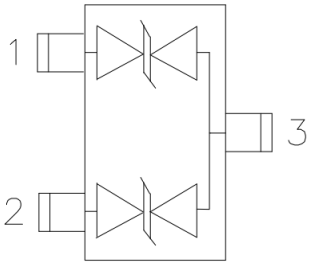
SM24CT3

2-Line Bi-directional TVS Diode Array

FEATURES

- ✧ Protect two I/O lines
- ✧ Low clamping voltage
- ✧ Working voltages :24V
- ✧ Low leakage current
- ✧ Transient protection for high-speed data lines
- ✧ Compliant to Halogen - free

Pin Configuration



MAIN APPLICATIONS

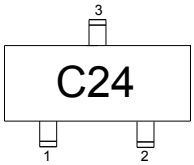
- ✧ High-Speed Data Transmission Interfaces
- ✧ Cellular Phones
- ✧ Portable Electronics
- ✧ Wireless Bus Protection

PROTECTION SOLUTION TO MEET

- ✧ IEC61000-4-2 (ESD) ±30kV (air),±30kV (contact)
- ✧ IEC61000-4-4 (EFT) 40A (5/50ns)
- ✧ IEC61000-4-5 (Lightning) 4A (8/20μs)

MECHANICAL CHARACTERISTICS

- ✧ Package: SOT-323
- ✧ Molding compound flammability rating : UL 94V-0
- ✧ Lead finish : lead free
- ✧ Marking code：C24



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ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 8/20 μs waveform	P_{PP}	200	W
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	+/- 30 +/- 30	kV
Lead soldering temperature	T_L	260	℃
Operating temperature	T_{OPT}	-55 to +150	℃
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}				24	V
Reverse breakdown voltage	V_{BR}	I_R = 1mA	26.7			V
Reverse leakage current	I_R	V_{RWM} =24V			1	μA
Clamping voltage	V_C	I_{PP} =1A, tp =8/20μs			43	V
		I_{PP} =4A, tp =8/20μs			50	V
Junction capacitance	C_J	V_{RWM} = 0V, f = 1MHz		12	18	pF

RATINGS AND V-I CHARACTERISTICS CURVES

Fig 1 8/20μs Waveform per IEC61000-4-5

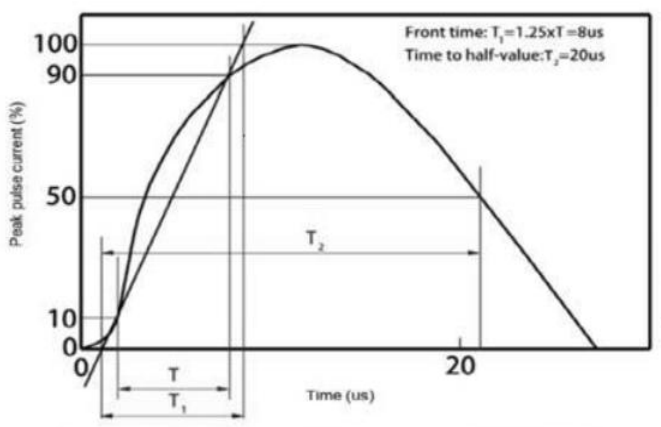

Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2)

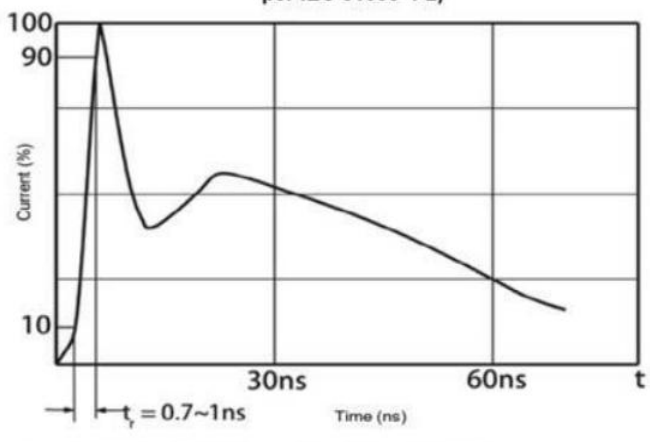

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Fig 3 Voltage vs Capacitance

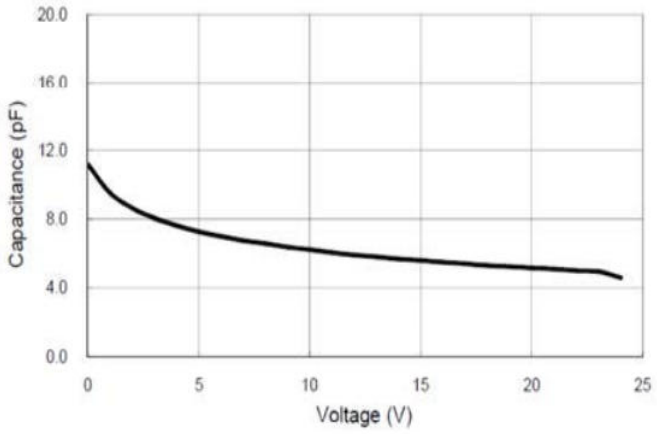
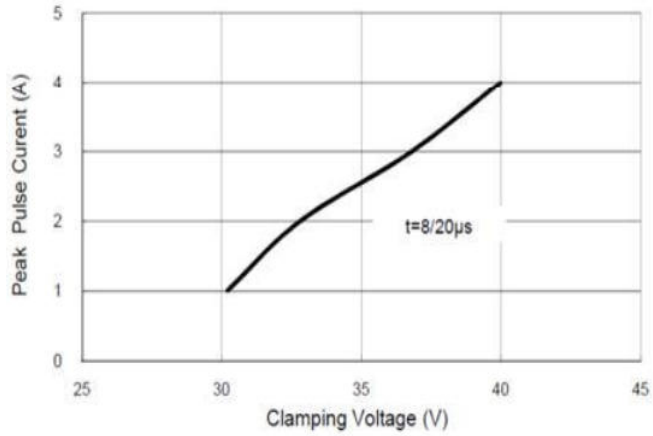
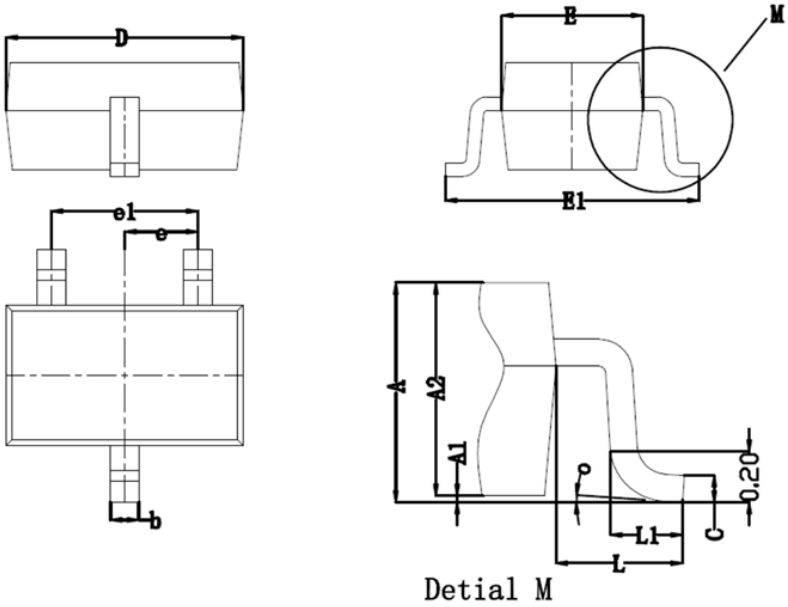


Fig 4 Clamping Voltage vs Peak Pulse Current

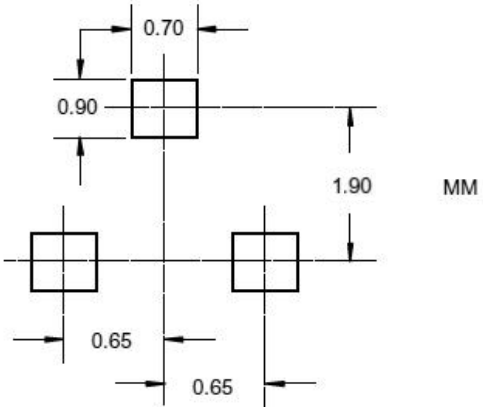


PACKAGE MECHANICAL DATA



Symbol	Dimensions In		Dimensions In	
	Min.	Max.	Min.	Max.
A	0.90	1.10	0.035	0.043
A1	0.00	0.10	0.000	0.004
A2	0.90	1.00	0.035	0.039
b	0.20	0.40	0.008	0.016
c	0.08	0.15	0.003	0.006
D	1.90	2.20	0.075	0.087
E	1.15	1.35	0.045	0.053
E1	2.00	2.45	0.079	0.096
e	0.650TYP		0.026TYP	
e1	1.20	1.40	0.047	0.055
L	0.525REF		0.021REF	
L1	0.26	0.46	0.010	0.018
o	0°	8°	0°	8°

Pad Layout



Note:

1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

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