

Asymmetrical TVS Diode for Extended Common-Mode RS-485

APPLICATIONS

- ◆ Protection of RS-485 transceivers with extended common-mode range
- ◆ Security systems
- ◆ Automatic Teller Machines
- ◆ HFC systems
- ◆ Networks

IEC COMPATIBILITY

- ◆ IEC61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50 η s)
- ◆ IEC61000-4-5 (Lightning) 12A (8/20 μ s)

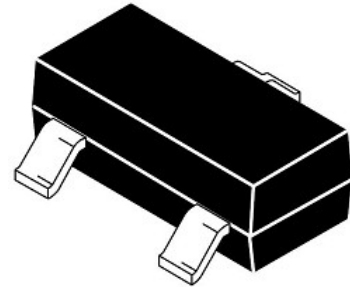
FEATURES

- ◆ 400 Watts Peak Pulse Power per Line ($t_p=8/20\mu$ s)
- ◆ Protects two +12V to -7V lines
- ◆ Low clamping voltage
- ◆ RoHS Compliant

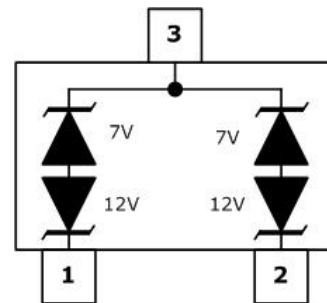
MECHANICAL CHARACTERISTICS

- ◆ JEDEC SOT-23 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Weight 8.0 Milligrams (Approximate)
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Reel Size : 7 inch
- ◆ Lead Finish : Lead Free

SOT-23



PIN CONFIGURATION



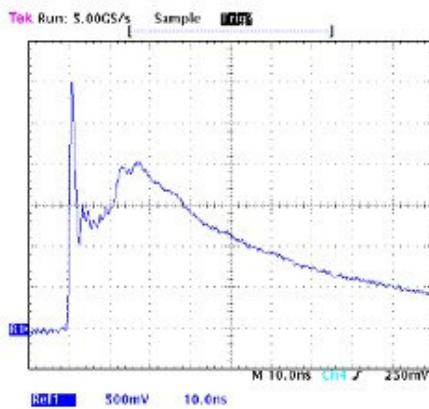
DEVICE CHARACTERISTICS

MAXIMUM RATINGS (@ 25°C Unless Otherwise Specified)

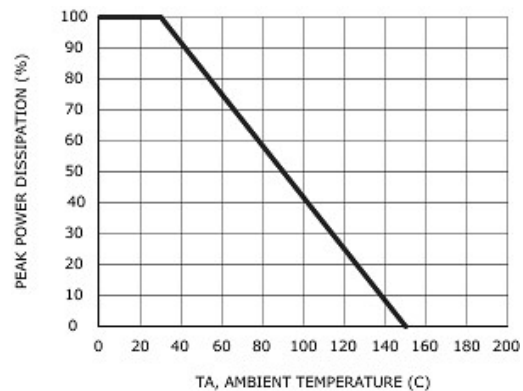
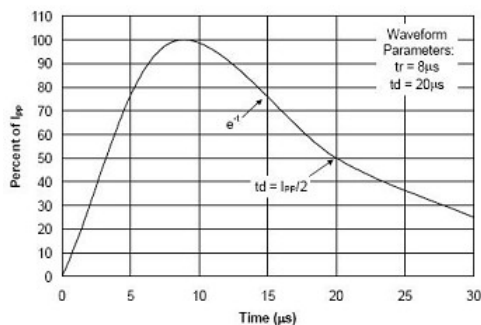
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp=8/20μs waveform)	P _{PP}	400	Watts
Lead Soldering Temperature	T _L	260 (10 sec.)	°C
Operating Temperature Range	T _J	-55 ~ 150	°C
Storage Temperature Range	T _{STG}	-55 ~ 150	°C

ELECTRICAL CHARACTERISTICS PER LINE (@ 25°C Unless Otherwise Specified)

PART NUMBER	DEVICE MARKING	V _{RWM}	V _B	I _T	V _C	V _C		I _R	C _T	
		(V) (max.)	(V) (min.)	(mA)	@5A (max.)	(max.)	(@A)	(μA) (max.)	(pF) (typ.)	
SM712	M72	Pin 3 to Pin 1 / Pin 2	7	7.5	1	10	12	17	10	55
		Pin 1 / Pin 2 to Pin 3	12	13.3	1	20	26	17	1	55

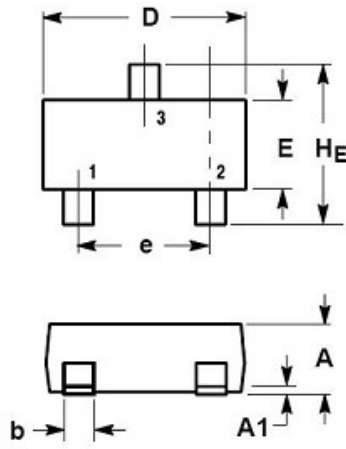


Pulse Waveform



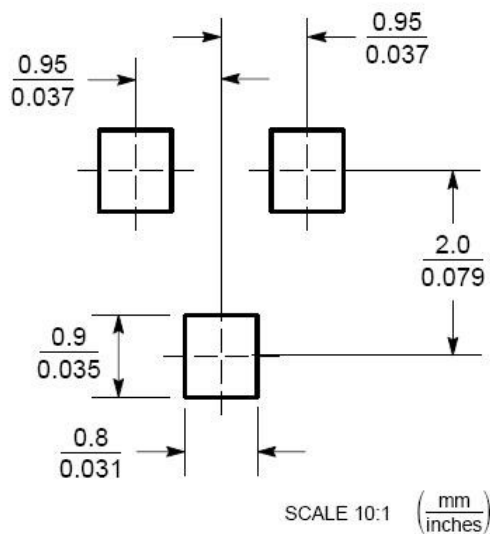
Power Derating Curve

SOT-23 PACKAGE OUTLINE & DIMENSIONS



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1.00	1.11	0.035	0.040	0.044
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.37	0.44	0.50	0.015	0.018	0.020
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.081
L	0.35	0.54	0.69	0.014	0.021	0.029
HE	2.10	2.40	2.64	0.083	0.094	0.104

* SOLDERING FOOTPRINT



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