1SMAXXCAT3 Series

Zener Transient Voltage Suppressors

GENERAL DATA IS APPLICABLE TO ALL SERIES IN THIS GROUP

Specification Features:

- Reverse Stand–Off Voltage Range: 10 – 78 V
- Bidirectional Operation
- Peak Power — 400 Watts @ 1.0 ms
- ESD Rating of Class 3 (>16 kV) per Human Body Model
- Pico Seconds Response Time (0 V to BV)
- Flat Handling Surface for Accurate Placement
- Package Design for Top Side or Bottom Circuit Board Mounting
- Available in Tape and Reel
- Low Profile Package

Mechanical Characteristics:

CASE: Void-free, transfer-molded plastic
FINISH: All external surfaces are corrosion resistant with readily solderable leads
POLARITY: None
MOUNTING POSITION: Any
MAXIMUM CASE TEMPERATURE FOR SOLDERING PURPOSES: 260°C for 10 Seconds

ON Semiconductor
Formerly a Division of Motorola
http://onsemi.com

PLASTIC SURFACE MOUNT BIDIRECTIONAL ZENER OVERVOLTAGE TRANSIENT SUPPRESSORS 10–78 VOLTS V_R 400 WATTS PEAK POWER

SMA
PLASTIC
CASE 403B

ORDERING INFORMATION

Device	Package	Shipping
1SMAXXCAT3	CASE 403B	Tape and Reel 5000 Units/Reel

Devices listed in ***bold, italic*** are ON Semiconductor **Preferred** devices. **Preferred** devices are recommended choices for future use and best overall value.

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Power Dissipation @ T_L = 25°C, PW = 10/1000 μs (Note 1)	P_{pk}	400	Watts
Thermal Resistance from Junction to Lead	$R_{\theta JL}$	29	°C/W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	150	°C/W
Operating and Storage Junction Temperature Range	T_J, T_{stg}	150	°C

* FR4 Board, using ON Semiconductor minimum recommended footprint, as shown in case 403B outline dimensions spec.

NOTES: 1. Non–repetitive current pulse.

ELECTRICAL CHARACTERISTICS

Device	Reverse Stand–off Voltage V_{RWM} (Volts)	Breakdown Voltage		Maximum Reverse Voltage @ I_{RSM} (Clamping Voltage) V_{RSM} (Volts)	Maximum Reverse Surge Current I_{RSM} (Amps)	Maximum Reverse Leakage @ V_{RWM} I_R (μA)	Devlce Marking
		V_{BR} Volts (Min)	I_T mA				
1SMA10CAT3	10	11.1	1	17.0	23.5	2.5	QXC
1SMA11CAT3	11	12.2	1	18.2	22.0	2.5	QZC
1SMA12CAT3	12	13.3	1	19.9	20.1	2.5	REC
1SMA13CAT3	13	14.4	1	21.5	18.6	2.5	RGC
1SMA14CAT3	14	15.6	1	23.2	17.2	2.5	RKC
1SMA15CAT3	15	16.7	1	24.4	16.4	2.5	RMC
1SMA16CAT3	16	17.8	1	26.0	15.4	2.5	RPC
1SMA17CAT3	17	18.9	1	27.6	14.5	2.5	RRC
1SMA18CAT3	18	20	1	29.2	13.7	2.5	RTC
1SMA20CAT3	20	22.2	1	32.4	12.3	2.5	RVC
1SMA22CAT3	22	24.4	1	35.5	11.3	2.5	RXC
1SMA24CAT3	24	26.7	1	38.9	10.3	2.5	RZC
1SMA26CAT3	26	28.9	1	42.1	9.5	2.5	SEC
1SMA28CAT3	28	31.1	1	45.4	8.8	2.5	SGC
1SMA30CAT3	30	33.3	1	48.4	8.3	2.5	SKC
1SMA33CAT3	33	36.7	1	53.3	7.5	2.5	SMC
1SMA36CAT3	36	40	1	58.1	6.9	2.5	SPC
1SMA40CAT3	40	44.4	1	64.5	6.2	2.5	SRC
1SMA43CAT3	43	47.8	1	69.4	5.8	2.5	STC
1SMA45CAT3	45	50	1	72.2	5.5	2.5	SVC
1SMA48CAT3	48	53.3	1	77.4	5.2	2.5	SXC
1SMA51CAT3	51	56.7	1	82.4	4.9	2.5	SZC
1SMA54CAT3	54	60	1	87.1	4.6	2.5	TEC
1SMA58CAT3	58	64.4	1	93.6	4.3	2.5	TGC
1SMA60CAT3	60	66.7	1	96.8	4.1	2.5	TKC
1SMA64CAT3	64	71.1	1	103.0	3.9	2.5	TMC
1SMA70CAT3	70	77.8	1	113.0	3.5	2.5	TPC
1SMA75CAT3	75	83.3	1	121.0	3.3	2.5	TRC
1SMA78CAT3	78	86.7	1	126.0	3.2	2.5	TSC

* TOLERANCE AND VOLTAGE DESIGNATION Tolerance designation – The type number listed indicates a tolerance of ±5%.

RATING AND TYPICAL CHARACTERISTIC CURVES

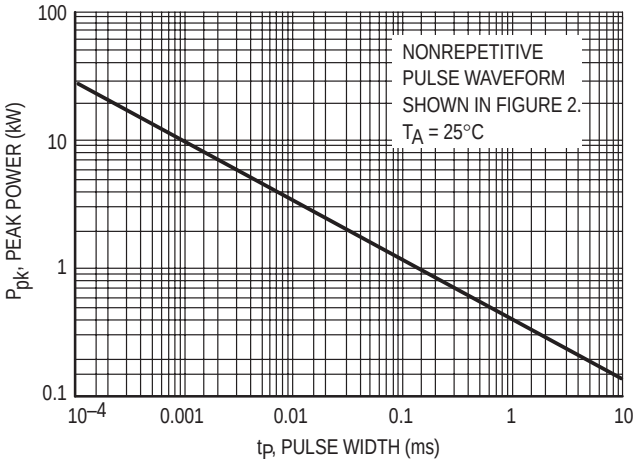


Figure 1. Pulse Rating Curve

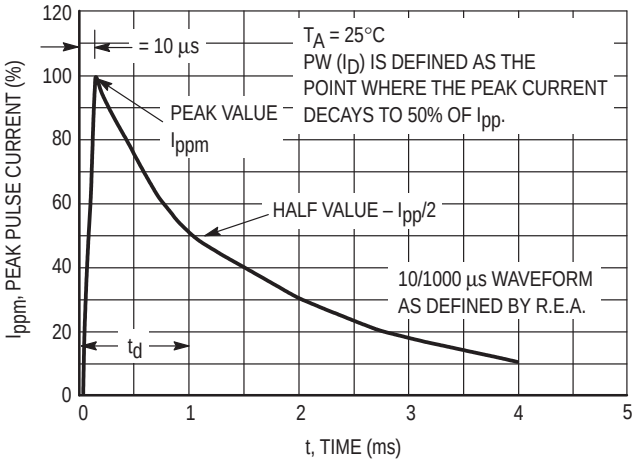


Figure 2. Pulse Waveform

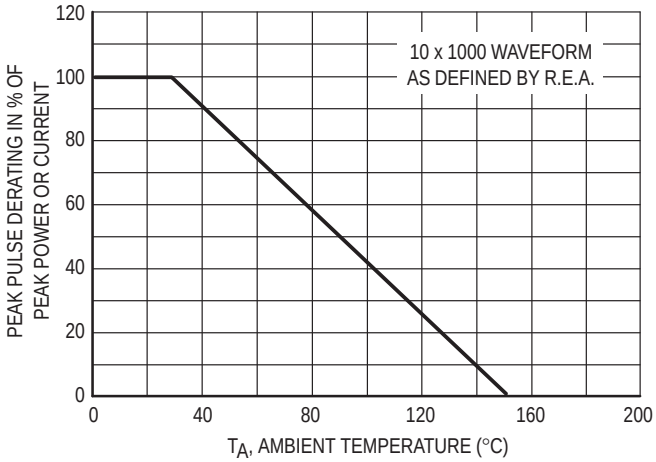
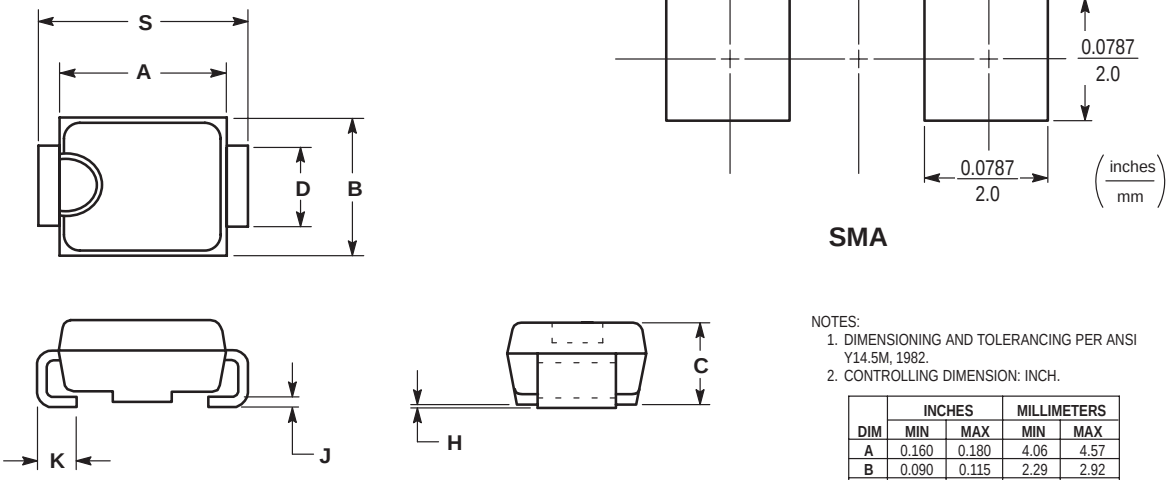


Figure 3. Pulse Derating Curve

OUTLINE DIMENSIONS

Transient Voltage Suppressors – Surface Mounted

400 Watt Peak Power



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NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.160	0.180	4.06	4.57
B	0.090	0.115	2.29	2.92
C	0.075	0.105	1.91	2.67
D	0.050	0.064	1.27	1.63
H	0.004	0.008	0.10	0.20
J	0.006	0.016	0.15	0.41
K	0.030	0.060	0.76	1.52
S	0.190	0.220	4.83	5.59

CASE 403B–01
PLASTIC

(Refer to Section 10 of the TVS/Zener Data Book (DL150/D) for Surface Mount, Thermal Data and Footprint Information.)

PUBLICATION ORDERING INFORMATION

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