	E480232

Features

- AEC-Q101 Qualified
- For Surface Mount Application in Order to Optimize Board Space
- Built-in Strain Relief
- Glass Passivated Junction
- Plastic Package Has Underwrites Laboratory Flammability
- Typical I_D less Than 1μA Above 10V
- High Temperature Soldering: 260°C/10 Seconds at Terminals
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- For Bidirectional Devices Add “C” To The Suffix of The Part Number: i.e.SMCJ10CAHE3 for 5% Tolerance

Mechanical Data

- Polarity: Color Band Denotes Positive End(Cathode) Except Bi-directional Types
- Weight: 0.007 ounce, 0.21 gram
- Manufacturing Code Added for Better Tracking
- Standard Packaging: 16mm Tape Per (EIA 481)
- Terminals: Solderable Per MIL-STD-750, Method 2026

Maximum Ratings

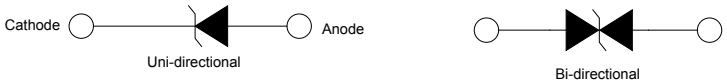
- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

Peak Pulse Power Surge Current on 10/1000μs Waveform	I_{PPM}	See the Table	Note 3,Fig4
Peak Pulse Power Dissipation on 10/1000μs Waveform	P_{PPM}	1500W(Min)	Note 3,4,Fig1

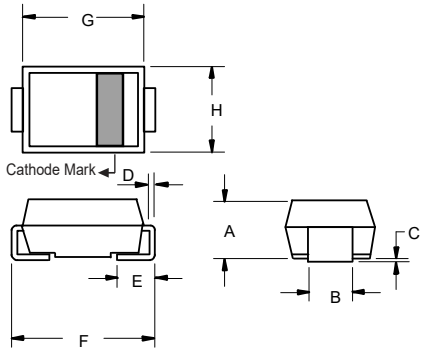
Notes:
1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.
3. Non-repetitive current pulse, per Fig.3 and derated above T_A=25 °C per Fig.4.
4. Mounted on 8.0mm^2 copper pads to each terminal.

Pin Configuration:



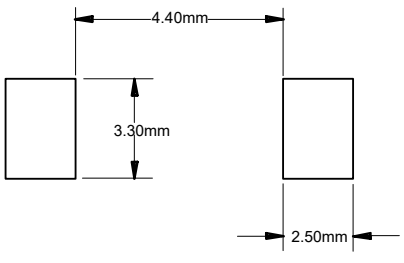
1500 Watt TVS
10 to 190 Volts

SMC (DO-214AB)
(LEAD FRAME)



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.079	0.103	2.00	2.62	
B	0.108	0.128	2.75	3.25	
C	0.002	0.008	0.051	0.203	
D	0.006	0.012	0.152	0.305	
E	0.030	0.060	0.76	1.52	
F	0.305	0.320	7.75	8.13	
G	0.260	0.280	6.60	7.11	
H	0.220	0.245	5.59	6.22	

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number		Reverse Stand-Off Voltage	Breakdown Voltage V_{BR}(V)		Test Current	Max. Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage Current@V_{WM}	Marking Code	
Uni-Polar	Bi-Polar	V_{WM}(V)	Min	Max	I_T(mA)	V_C(V)	I_{PP}(A)	I_D(μA)	UNI	BI
SMCJ10AHE3	SMCJ10CAHE3	10	11.1	12.3	1	17.0	88.3	5	GDX	BDX
SMCJ11AHE3	SMCJ11CAHE3	11	12.2	13.5	1	18.2	82.5	1	GDZ	BDZ
SMCJ12AHE3	SMCJ12CAHE3	12	13.3	14.7	1	19.9	75.4	1	GEE	BEE
SMCJ13AHE3	SMCJ13CAHE3	13	14.4	15.9	1	21.5	69.8	1	GEG	BEG
SMCJ14AHE3	SMCJ14CAHE3	14	15.6	17.2	1	23.2	64.7	1	GEK	BEK
SMCJ15AHE3	SMCJ15CAHE3	15	16.7	18.5	1	24.4	61.5	1	GEM	BEM
SMCJ16AHE3	SMCJ16CAHE3	16	17.8	19.7	1	26.0	57.7	1	GEP	BEP
SMCJ17AHE3	SMCJ17CAHE3	17	18.9	20.9	1	27.6	54.4	1	GER	BER
SMCJ18AHE3	SMCJ18CAHE3	18	20.0	22.1	1	29.2	51.4	1	GET	BET
SMCJ20AHE3	SMCJ20CAHE3	20	22.2	24.5	1	32.4	46.3	1	GEV	BEV
SMCJ22AHE3	SMCJ22CAHE3	22	24.4	26.9	1	35.5	42.3	1	GEX	BEX
SMCJ24AHE3	SMCJ24CAHE3	24	26.7	29.5	1	38.9	38.6	1	GEZ	BEZ
SMCJ26AHE3	SMCJ26CAHE3	26	28.9	31.9	1	42.1	35.7	1	GFE	BFE
SMCJ28AHE3	SMCJ28CAHE3	28	31.1	34.4	1	45.4	33.1	1	GFG	BFG
SMCJ30AHE3	SMCJ30CAHE3	30	33.3	36.8	1	48.4	31.0	1	GFK	BFK
SMCJ33AHE3	SMCJ33CAHE3	33	36.7	40.6	1	53.3	28.2	1	GFM	BFM
SMCJ36AHE3	SMCJ36CAHE3	36	40.0	44.2	1	58.1	25.9	1	GFP	BFP
SMCJ40AHE3	SMCJ40CAHE3	40	44.4	49.1	1	64.5	23.3	1	GFR	BFR
SMCJ43AHE3	SMCJ43CAHE3	43	47.8	52.8	1	69.4	21.7	1	GFT	BFT
SMCJ45AHE3	SMCJ45CAHE3	45	50.0	55.3	1	72.7	20.6	1	GFV	BFV
SMCJ48AHE3	SMCJ48CAHE3	48	53.3	58.9	1	77.4	19.4	1	GFX	BFX
SMCJ51AHE3	SMCJ51CAHE3	51	56.7	62.7	1	82.4	18.2	1	GFZ	BFZ
SMCJ54AHE3	SMCJ54CAHE3	54	60.0	66.3	1	87.1	17.3	1	GGE	BGE
SMCJ58AHE3	SMCJ58CAHE3	58	64.4	71.2	1	93.6	16.1	1	GGG	BGG
SMCJ60AHE3	SMCJ60CAHE3	60	66.7	73.7	1	96.8	15.5	1	GGK	BGK
SMCJ64AHE3	SMCJ64CAHE3	64	71.1	78.6	1	103.0	14.6	1	GGM	BGM
SMCJ70AHE3	SMCJ70CAHE3	70	77.8	86.0	1	113.0	13.3	1	GGP	BGP
SMCJ75AHE3	SMCJ75CAHE3	75	83.3	92.1	1	121.0	12.4	1	GGR	BGR
SMCJ78AHE3	SMCJ78CAHE3	78	86.7	95.8	1	126.0	11.9	1	GGT	BGT
SMCJ80AHE3	SMCJ80CAHE3	80	88.8	97.6	1	129.6	11.6	1	GGU	BGU
SMCJ85AHE3	SMCJ85CAHE3	85	94.4	104.0	1	137.0	11.0	1	GGV	BGV
SMCJ90AHE3	SMCJ90CAHE3	90	100.0	111.0	1	146.0	10.3	1	GGX	BGX
SMCJ100AHE3	SMCJ100CAHE3	100	111.0	123.0	1	162.0	9.3	1	GGZ	BGZ
SMCJ110AHE3	SMCJ110CAHE3	110	122.0	135.0	1	177.0	8.5	1	GHE	BHE
SMCJ120AHE3	SMCJ120CAHE3	120	133.0	147.0	1	193.0	7.8	1	GHG	BHG
SMCJ130AHE3	SMCJ130CAHE3	130	144.0	159.0	1	209.0	7.2	1	GHK	BHK
SMCJ150AHE3	SMCJ150CAHE3	150	167.0	185.0	1	243.0	6.2	1	GHM	BHM
SMCJ160AHE3	SMCJ160CAHE3	160	178.0	197.0	1	259.0	5.8	1	GHP	BHP
SMCJ170AHE3	SMCJ170CAHE3	170	189.0	209.0	1	275.0	5.5	1	GHR	BHR
SMCJ180AHE3	SMCJ180CAHE3	180	200.0	220.0	1	292.0	5.1	1	GHT	BHT
SMCJ190AHE3	SMCJ190CAHE3	190	211.0	232.0	1	307.8	4.9	1	GHX	BHX

For bi-directional type having V_{rwm} of 10volts and less, the I_R limit is double. For parts without A, the V_{BR} is ±10%

Curve Characteristics

Fig. 1 - Peak Pulse Power Rating Curve

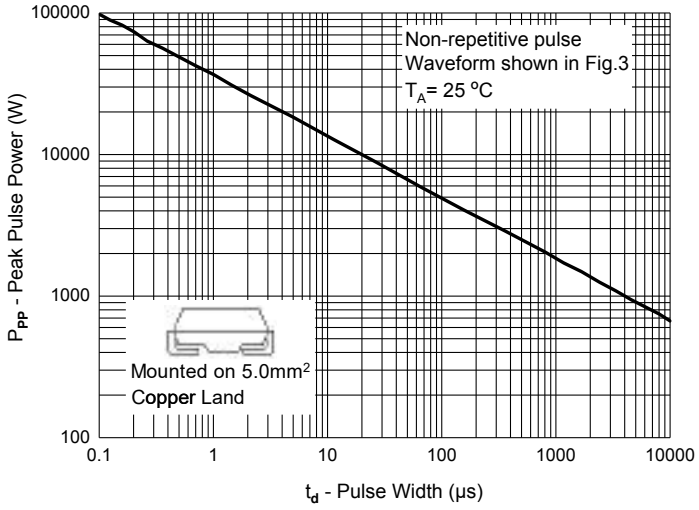


Fig. 2 - Typical Junction Capacitance

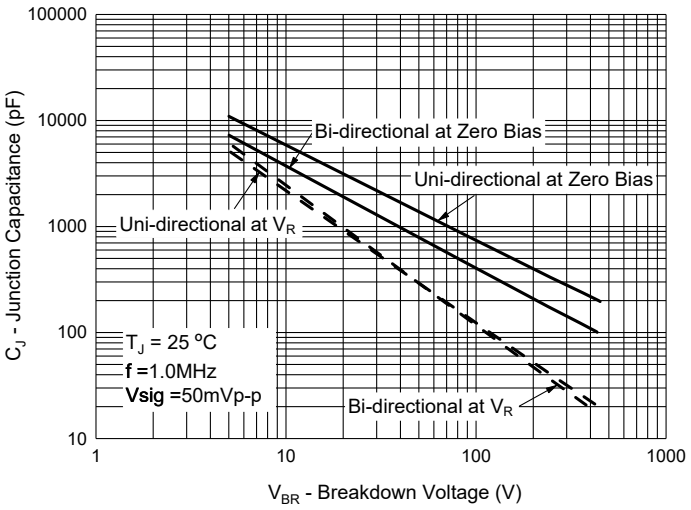


Fig. 3 - Pulse Waveform

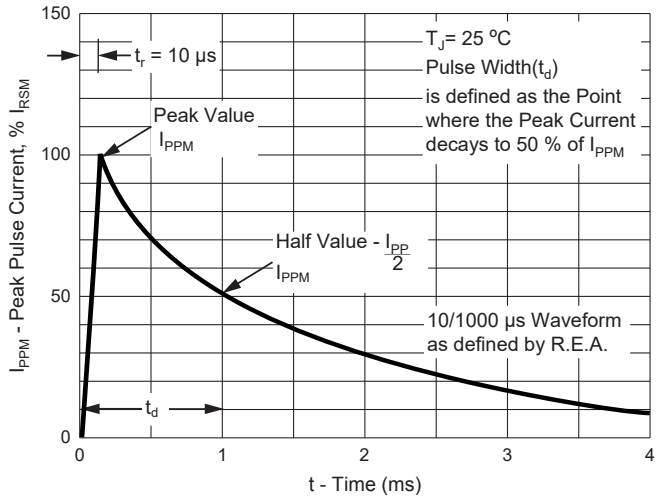
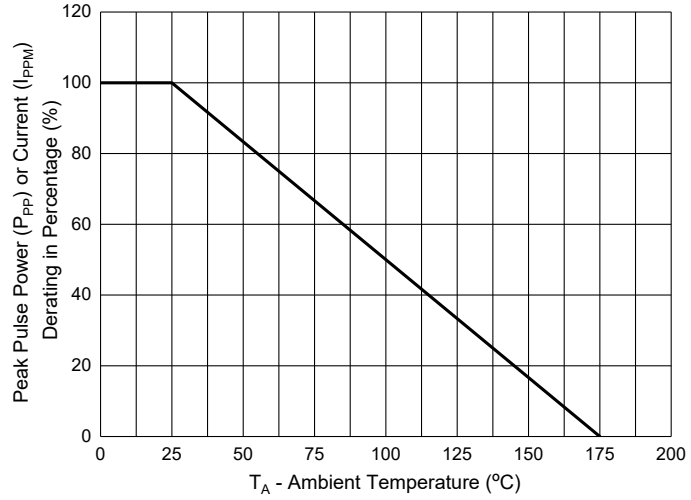


Fig. 4 - Pulse Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:3Kpcs/Reel