	E480232

Features

- AEC-Q101 Qualified
- For Surface Mount Application in Order to Optimize Board Space
- Low Profile Package
- Low Inductance
- Excellent Clamping Capability
- Fast Response Time: Typical Less Than 1.0ps From 0 Volts to V_{BR} Minimum
- For Bidirectional Devices Add “C” To The Suffix of The Part Number: i.e.SMCJ1.5KE12CAHE3 for 5% Tolerance
- 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)

Mechanical Data

- Polarity: Color Band Denotes Positive End(cathode) Except Bi-Directional Types
- Maximum Soldering Temperature: 260°C/10 Seconds at Terminals
- Manufacturing Code Added for Better Tracking
- 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
- Typical Thermal Resistance: 15°C/W Junction to Lead
- Typical Thermal Resistance: 75°C/W Junction to Ambient

Electrical Characteristics @ 25°C Unless Otherwise Specified

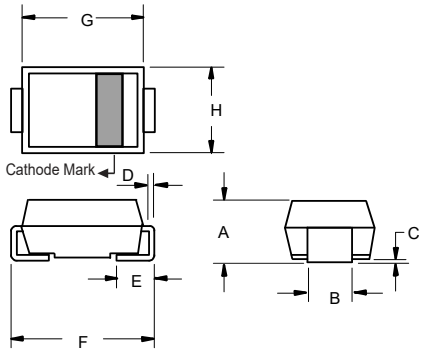
Peak Pulse Power Surge Current on 10/1000μs Waveform	I_{PP}	See the Table	Note 3
Peak Pulse Power Dissipation	P_{PP}	1500W(Min)	Note 3,4

Note: 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.1.
4. Mounted on 8.0mm^2 copper pads to each terminal.

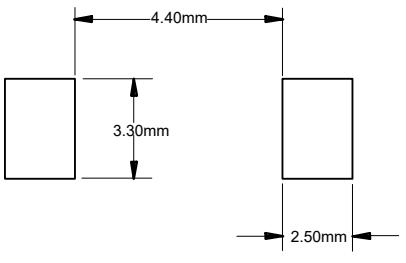
1500 Watt TVS
12 to 91 Volts

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
	V_{WM}(V)	Min	Max	I_T(mA)	V_C(V)	I_{PP}(A)	I_D(μA)	
SMCJ1.5KE12AHE3	10.20	11.40	12.60	1	16.7	91.0	5	12A
SMCJ1.5KE13AHE3	11.10	12.40	13.70	1	18.2	83.5	1	13A
SMCJ1.5KE15AHE3	12.80	14.30	15.80	1	21.2	71.7	1	15A
SMCJ1.5KE16AHE3	13.60	15.20	16.80	1	22.5	67.6	1	16A
SMCJ1.5KE18AHE3	15.30	17.10	18.90	1	25.5	60.3	1	18A
SMCJ1.5KE20AHE3	17.10	19.00	21.00	1	27.7	54.9	1	20A
SMCJ1.5KE22AHE3	18.80	20.90	23.10	1	30.6	49.7	1	22A
SMCJ1.5KE24AHE3	20.50	22.80	25.20	1	33.2	45.8	1	24A
SMCJ1.5KE27AHE3	23.10	25.70	28.40	1	37.5	40.5	1	27A
SMCJ1.5KE30AHE3	25.60	28.50	31.50	1	41.4	36.7	1	30A
SMCJ1.5KE33AHE3	28.20	31.40	34.70	1	45.7	33.3	1	33A
SMCJ1.5KE36AHE3	30.80	34.20	37.80	1	49.9	30.5	1	36A
SMCJ1.5KE39AHE3	33.30	37.10	41.00	1	53.9	28.2	1	39A
SMCJ1.5KE43AHE3	36.80	40.90	45.20	1	59.3	25.6	1	43A
SMCJ1.5KE47AHE3	40.20	44.70	49.40	1	64.8	23.5	1	47A
SMCJ1.5KE51AHE3	43.60	48.50	53.60	1	70.1	21.7	1	51A
SMCJ1.5KE56AHE3	47.80	53.20	58.80	1	77.0	19.7	1	56A
SMCJ1.5KE62AHE3	53.00	58.90	65.10	1	85.0	17.9	1	62A
SMCJ1.5KE68AHE3	58.10	64.60	71.40	1	92.0	16.5	1	68A
SMCJ1.5KE75AHE3	64.10	71.30	78.80	1	103.0	14.8	1	75A
SMCJ1.5KE82AHE3	70.10	77.90	86.10	1	113.0	13.5	1	82A
SMCJ1.5KE91AHE3	77.80	86.50	95.50	1	125.0	12.2	1	91A
SMCJ1.5KE12CAHE3	10.20	11.40	12.60	1	16.7	91.0	5	12C
SMCJ1.5KE13CAHE3	11.10	12.40	13.70	1	18.2	83.5	1	13C
SMCJ1.5KE15CAHE3	12.80	14.30	15.80	1	21.2	70.8	1	15C
SMCJ1.5KE16CAHE3	13.60	15.20	16.80	1	22.5	66.7	1	16C
SMCJ1.5KE18CAHE3	15.30	17.10	18.90	1	25.5	60.3	1	18C
SMCJ1.5KE20CAHE3	17.10	19.00	21.00	1	27.7	54.9	1	20C
SMCJ1.5KE22CAHE3	18.80	20.90	23.10	1	30.6	49.7	1	22C
SMCJ1.5KE24CAHE3	20.50	22.80	25.20	1	33.2	45.8	1	24C
SMCJ1.5KE27CAHE3	23.10	25.70	28.40	1	37.5	40.5	1	27C
SMCJ1.5KE30CAHE3	25.60	28.50	31.50	1	41.4	36.7	1	30C
SMCJ1.5KE33CAHE3	28.20	31.40	34.70	1	45.7	33.3	1	33C
SMCJ1.5KE36CAHE3	30.80	34.20	37.80	1	49.9	30.5	1	36C
SMCJ1.5KE39CAHE3	33.30	37.10	41.00	1	53.9	28.2	1	39C
SMCJ1.5KE43CAHE3	36.80	40.90	45.20	1	59.3	25.6	1	43C
SMCJ1.5KE47CAHE3	40.20	44.70	49.40	1	64.8	23.5	1	47C
SMCJ1.5KE51CAHE3	43.60	48.50	53.60	1	70.1	21.7	1	51C
SMCJ1.5KE56CAHE3	47.80	53.20	58.80	1	77.0	19.7	1	56C
SMCJ1.5KE62CAHE3	53.00	58.90	65.10	1	85.0	17.9	1	62C
SMCJ1.5KE68CAHE3	58.10	64.60	71.40	1	92.0	16.5	1	68C
SMCJ1.5KE75CAHE3	64.10	71.30	78.80	1	103.0	14.8	1	75C
SMCJ1.5KE82CAHE3	70.10	77.90	86.10	1	113.0	13.5	1	82C
SMCJ1.5KE91CAHE3	77.80	86.50	95.50	1	125.0	12.2	1	91C

For bi-directional type having V_{rwm} of 10 volts and less, the I_R limit is double.
The available parts are “A” type only, the parts without A (V_{BR} is ±10%) is not available.

Curve Characteristics

Fig. 1 - Peak Pulse Power Rating Curve

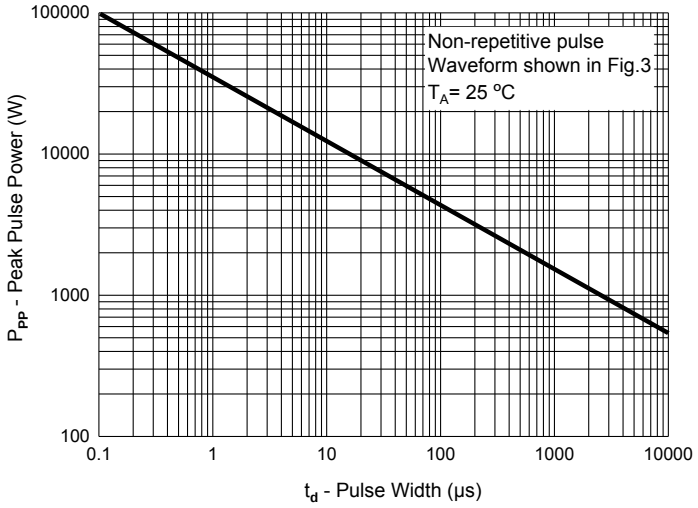


Fig. 2 - Typical Junction Capacitance

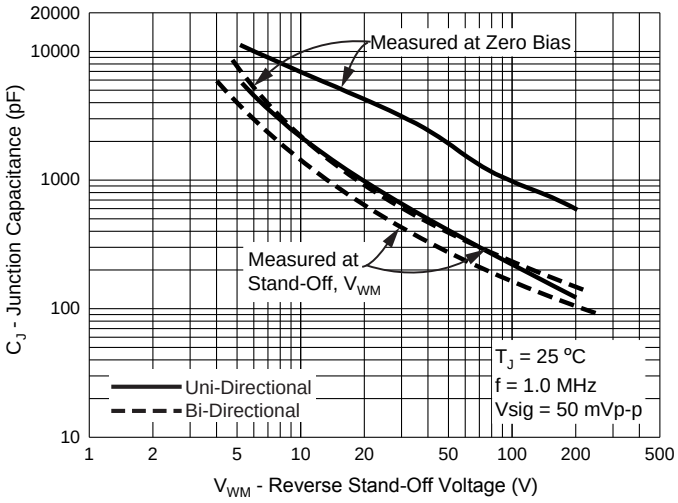


Fig. 3 - Pulse Waveform

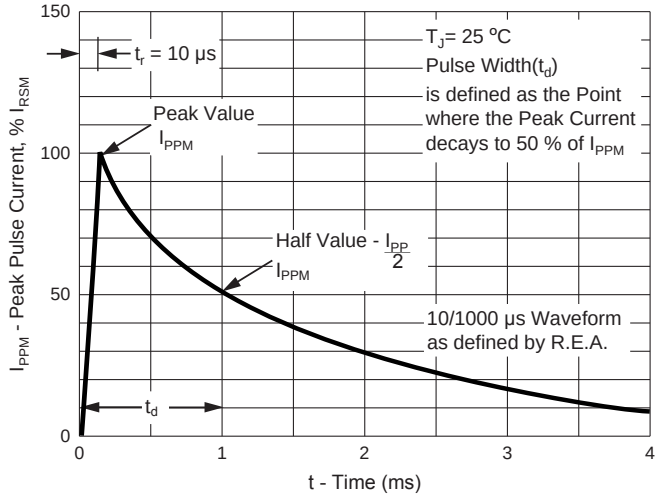
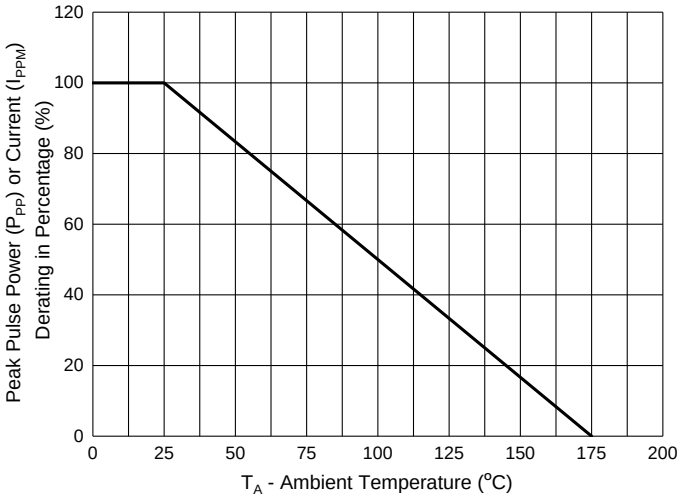


Fig. 4 - Pulse Derating Curve



Ordering Information

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

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