



E480232

Features

- AEC-Q101 Qualified
- Low Leakage
- Very Fast Response Time
- Glass Passivated Junction
- Excellent Clamping Capability
- 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.5.0SMLJ10CAHE3 for 5% Tolerance

Mechanical Data

- Polarity: Color Band Denotes Positive End (cathode) Except Bidirectional

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C

Peak Pulse Power Surge Current on 10/1000µs Waveform	I_{PPM}	See the Table	Note 3
Peak Pulse Power Dissipation on 10/1000µs Waveform	P_{PPM}	5000W(Min)	Note 3
Power Dissipation on infinite heat sink	P_D	6.5W	$T_L = 75^\circ\text{C}$.

Note:

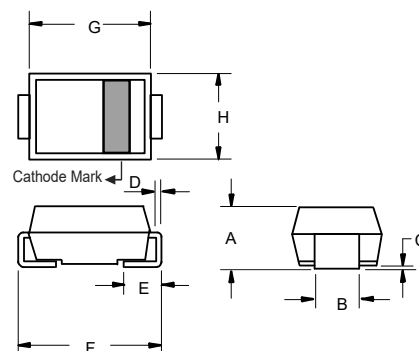
1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.
3. Non-repetitive current pulse per Fig.3 and derated above $T_A = 25^\circ\text{C}$ per Fig.4

Pin Configuration:



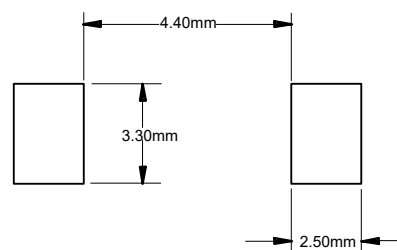
5000 Watt TVS
10 to 58 Volts

SMC (DO-214AB)
(LEAD FRAME)



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		Working Peak Reverse Voltage	Breakdown Voltage V_{BR} @ I_T			Maximum Clamping Voltage @ I_{PP}	Maximum Reverse Surge Current	Maximum Reverse Leakage @ V_{RWM}	Device Marking Code	
Uni	Bi	$V_{RWM}(V)$	Min (V)	Max (V)	I_T (mA)	$V_C(V)$	$I_{PP}(A)$	$I_R(\mu A)$	Uni	Bi
5.0SMLJ10AHE3	5.0SMLJ10CAHE3	10.0	11.10	12.30	1	17.0	294.12	5	5SAE	5DAE
5.0SMLJ11AHE3	5.0SMLJ11CAHE3	11.0	12.20	13.50	1	18.2	275.0	2	5SAF	5DAF
5.0SMLJ12AHE3	5.0SMLJ12CAHE3	12.0	13.30	14.70	1	19.9	252.0	2	5SAG	5DAG
5.0SMLJ13AHE3	5.0SMLJ13CAHE3	13.0	14.40	15.90	1	21.5	233.0	2	5SAK	5DAK
5.0SMLJ14AHE3	5.0SMLJ14CAHE3	14.0	15.60	17.20	1	23.2	216.0	2	5SAM	5DAM
5.0SMLJ15AHE3	5.0SMLJ15CAHE3	15.0	16.70	18.50	1	24.4	205.0	2	5SAP	5DAP
5.0SMLJ16AHE3	5.0SMLJ16CAHE3	16.0	17.80	19.70	1	26.0	193.0	2	5SAR	5DAR
5.0SMLJ17AHE3	5.0SMLJ17CAHE3	17.0	18.90	20.90	1	27.6	181.0	2	5SAT	5DAT
5.0SMLJ18AHE3	5.0SMLJ18CAHE3	18.0	20.00	22.10	1	29.2	172.0	2	5SAV	5DAV
5.0SMLJ19AHE3	5.0SMLJ19CAHE3	19.0	21.10	23.30	1	30.8	162.4	2	5SAX	5DAX
5.0SMLJ20AHE3	5.0SMLJ20CAHE3	20.0	22.20	24.50	1	32.4	155.0	2	5SAZ	5DAZ
5.0SMLJ22AHE3	5.0SMLJ22CAHE3	22.0	24.40	26.90	1	35.5	141.0	2	5SBE	5DBE
5.0SMLJ24AHE3	5.0SMLJ24CAHE3	24.0	26.70	29.50	1	38.9	129.0	2	5SBF	5DBF
5.0SMLJ26AHE3	5.0SMLJ26CAHE3	26.0	28.90	31.90	1	42.1	119.0	2	5SBG	5DBG/5BFE
5.0SMLJ28AHE3	5.0SMLJ28CAHE3	28.0	31.10	34.40	1	45.4	110.0	2	5SBK	5DBK
5.0SMLJ30AHE3	5.0SMLJ30CAHE3	30.0	33.30	36.80	1	48.4	103.0	2	5SBM	5DBM
5.0SMLJ33AHE3	5.0SMLJ33CAHE3	33.0	36.70	40.60	1	53.3	93.9	2	5SBP	5DBP
5.0SMLJ36AHE3	5.0SMLJ36CAHE3	36.0	40.00	44.20	1	58.1	86.1	2	5SBR	5DBR
5.0SMLJ40AHE3	5.0SMLJ40CAHE3	40.0	44.40	49.10	1	64.5	77.6	2	5SBT	5DBT
5.0SMLJ43AHE3	5.0SMLJ43CAHE3	43.0	47.80	52.80	1	69.4	72.1	2	5SBV	5DBV
5.0SMLJ45AHE3	5.0SMLJ45CAHE3	45.0	50.00	55.30	1	72.7	68.8	2	5SBX	5DBX
5.0SMLJ48AHE3	5.0SMLJ48CAHE3	48.0	53.30	58.90	1	77.4	64.7	2	5SBZ	5DBZ
5.0SMLJ51AHE3	5.0SMLJ51CAHE3	51.0	56.70	62.70	1	82.4	60.7	2	5SCE	5DCE
5.0SMLJ54AHE3	5.0SMLJ54CAHE3	54.0	60.00	66.30	1	87.1	57.5	2	5SCF	5DCF
5.0SMLJ58AHE3	5.0SMLJ58CAHE3	58.0	64.40	71.20	1	93.6	53.5	2	5SCG	5DCG

Note:

4. Add suffix 'C' after part number to specify Bi-directional devices

5. For Bi-Directional devices having V_R of 10 volts, the I_R limit is double

Curve Characteristics

Fig. 1 - Peak Pulse Power Rating Curve

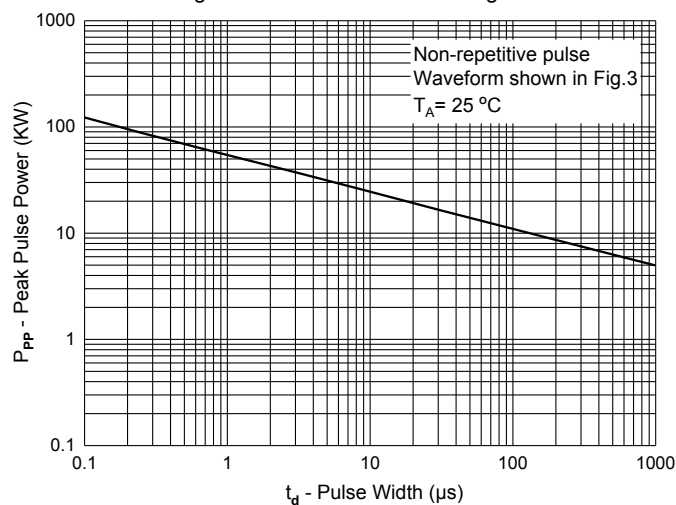


Fig. 2 - Typical Junction Capacitance

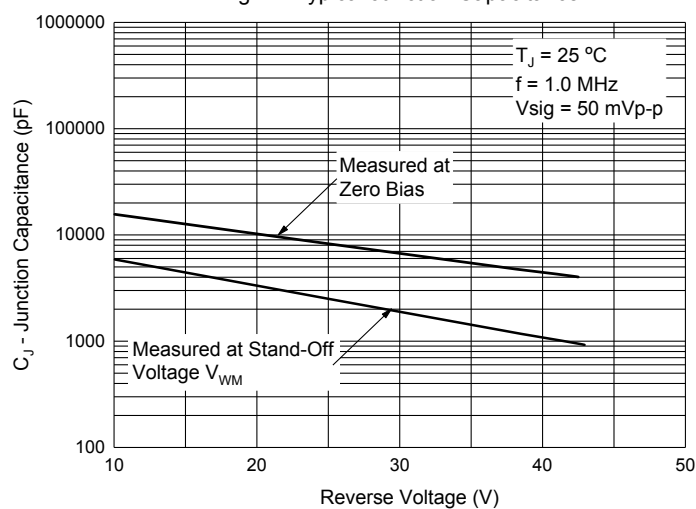


Fig. 3 - Pulse Waveform

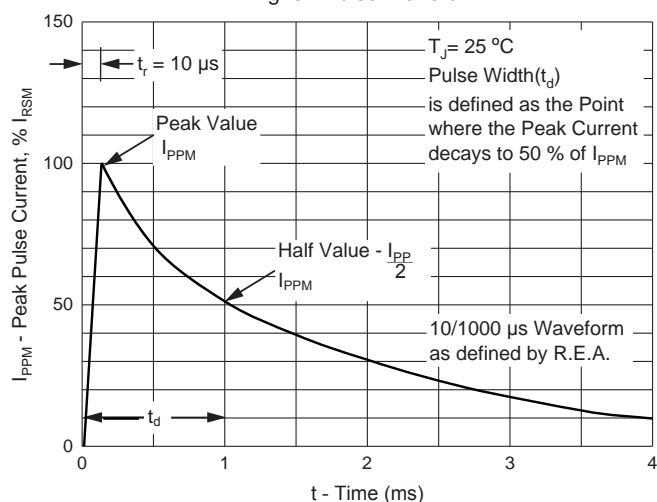
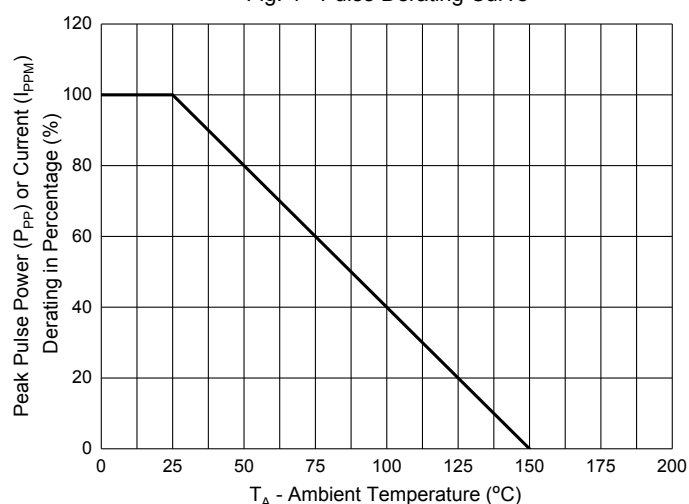


Fig. 4 - Pulse Derating Curve



Ordering Information

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

IMPORTANT NOTICE

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp** . does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp** . and all the companies whose products are represented on our website, harmless against all damages. **Micro Commercial Components Corp**. products are sold subject to the general terms and conditions of commercial sale, as published at <https://www.mccsemi.com/Home/TermsAndConditions>.

LIFE SUPPORT

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

CUSTOMER AWARENESS

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Micro Commercial Components (MCC):

[5.0SMLJ51AHE3-TP](#) [5.0SMLJ51CAHE3-TP](#) [5.0SMLJ54AHE3-TP](#) [5.0SMLJ54CAHE3-TP](#) [5.0SMLJ58AHE3-TP](#)
[5.0SMLJ58CAHE3-TP](#) [5.0SMLJ43AHE3-TP](#) [5.0SMLJ43CAHE3-TP](#) [5.0SMLJ45AHE3-TP](#) [5.0SMLJ45CAHE3-TP](#)
[5.0SMLJ48AHE3-TP](#) [5.0SMLJ48CAHE3-TP](#) [5.0SMLJ33AHE3-TP](#) [5.0SMLJ33CAHE3-TP](#) [5.0SMLJ36AHE3-TP](#)
[5.0SMLJ36CAHE3-TP](#) [5.0SMLJ40AHE3-TP](#) [5.0SMLJ40CAHE3-TP](#) [5.0SMLJ26AHE3-TP](#) [5.0SMLJ26CAHE3-TP](#)
[5.0SMLJ28AHE3-TP](#) [5.0SMLJ28CAHE3-TP](#) [5.0SMLJ30AHE3-TP](#) [5.0SMLJ30CAHE3-TP](#) [5.0SMLJ18CAHE3-TP](#)
[5.0SMLJ19CAHE3-TP](#) [5.0SMLJ20CAHE3-TP](#) [5.0SMLJ22AHE3-TP](#) [5.0SMLJ22CAHE3-TP](#) [5.0SMLJ24CAHE3-TP](#)
[5.0SMLJ12CAHE3-TP](#) [5.0SMLJ13CAHE3-TP](#) [5.0SMLJ14CAHE3-TP](#) [5.0SMLJ15CAHE3-TP](#) [5.0SMLJ16CAHE3-TP](#)
[5.0SMLJ17CAHE3-TP](#) [5.0SMLJ10CAHE3-TP](#) [5.0SMLJ11CAHE3-TP](#) [5.0SMLJ18AHE3-TP](#) [5.0SMLJ10AHE3-TP](#)
[5.0SMLJ11AHE3-TP](#) [5.0SMLJ12AHE3-TP](#) [5.0SMLJ13AHE3-TP](#) [5.0SMLJ14AHE3-TP](#) [5.0SMLJ15AHE3-TP](#)
[5.0SMLJ16AHE3-TP](#) [5.0SMLJ17AHE3-TP](#) [5.0SMLJ19AHE3-TP](#) [5.0SMLJ20AHE3-TP](#) [5.0SMLJ24AHE3-TP](#)