	E480232

Features

- Low Inductance
- Built in Strain Relief
- For Surface Mount Application in Order to Optimize Board Space
- High Temperature Soldering: 260°C/10 Seconds at Terminals
- Low Profile Package
- Repetition Rate(duty cycle): 0.01%
- Glass Passivated Junction
- Excellent Clamping Capability
- Halogen Free. “Green” Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Fast response time:Typically less than 1.0ps from 0 Volts to BV Min
- Lead Free Finish/RoHS Compliant (Note2) ("P" Suffix Designates Compliant. See Ordering Information)
- ESD protection of data lines in accordance with IEC 61000-4-2, 30kV(Air),30kV (Contact)

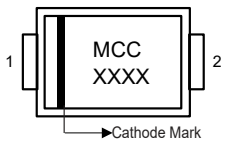
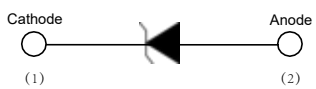
Maximum Ratings

Parameter	Symbol	Value	Unit
Peak Pulse Power Surge Current with a 10/1000μs Waveform (Note 3)	I_{PPM}	See Next Table	A
Peak Pulse Power Dissipation(Note 3)	P_{PPM}	5000	W
Power Dissipationon infinite heat sink at TL= 75°	P_D	6.5	W
Maximum instantaneous forward voltage at 100 A for unidirectional only	V_F	5	V

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.4.
4. 8.3ms, single half sine wave duty cycle = 4 pulses per Minutes maximum.

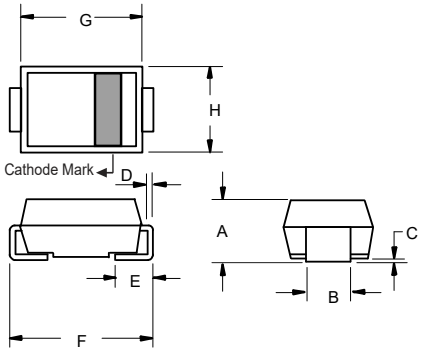
Internal Structure

Description	Simplified outline	Graphic symbol
Uni-directional		
Bi-directional		

XXXX = Marking code

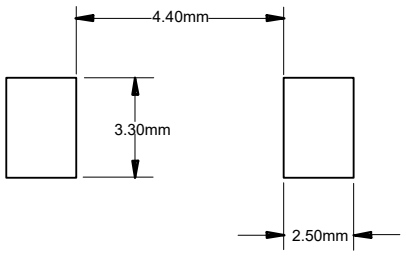
5000Watt TVS
11 to 400 Volts

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



Thermal Characteristics

Parameter	Symbol	Value	Unit
Operating Junction Temperature Range	T_J	-55 to +175	˚C
Storage Temperature Range	T_{STG}	-55 to +175	˚C
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	15	˚C/W
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	75	˚C/W
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	13	˚C/W

Note:
5.Mounted on 0.31 x 0.31" (8.0 x 8.0 mm) copper pads to each terminal.

Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number	Working Peak Reverse Voltage	Breakdown Voltage VBR @I_T			Maximun Clamping Voltage @I_{PP}10/1000us		Maximun Clamping Voltage @I_{PP}8/20us		Maximum Reverse Leakage @V_{RWM}	Device Marking Code
(Uni)	V_{RWM} (V)	Min (V)	Max (V)	I_T (mA)	V_C(V)	I_{PP}(A)	V_C(V)	I_{PP}(A)	I_R(μA)	Uni
5.0SMLJ11A	11	12.2	13.5	10	18.2	275.0	23.0	1737	800	5PEN
5.0SMLJ12A	12	13.3	14.7	10	19.9	252.0	26.0	1581	800	5PEP
5.0SMLJ13A	13	14.4	15.9	10	21.5	233.0	27.2	1471	500	5PEQ
5.0SMLJ14A	14	15.6	17.2	10	23.2	216.0	31.0	1333	200	5PER
5.0SMLJ15A	15	16.7	18.5	1	24.4	205.0	32.5	1231	100	5PES
5.0SMLJ16A	16	17.8	19.7	1	26.0	193.0	34.4	1163	50	5PET
5.0SMLJ17A	17	18.9	20.9	1	27.6	181.0	37.0	1081	20	5PEU
5.0SMLJ18A	18	20.0	22.1	1	29.2	172.0	39.3	1018	10	5PEV
5.0SMLJ20A	20	22.2	24.5	1	32.4	155.0	42.8	935	5	5PEW
5.0SMLJ22A	22	24.4	26.9	1	35.5	141.0	48.2	830	5	5PEX
5.0SMLJ24A	24	26.7	29.5	1	38.9	129.0	51.6	775	5	5PEZ
5.0SMLJ26A	26	28.9	31.9	1	42.1	119.0	55.8	717	5	5PFE
5.0SMLJ28A	28	31.1	34.4	1	45.4	110.0	60.2	664	5	5PFG
5.0SMLJ30A	30	33.3	36.8	1	48.4	103.0	64.0	625	5	5PFK
5.0SMLJ33A	33	36.7	40.6	1	53.3	93.9	69.8	573	5	5PFM
5.0SMLJ36A	36	40.0	44.2	1	58.1	86.1	76.0	526	5	5PFP
5.0SMLJ40A	40	44.4	49.1	1	64.5	77.6	84.0	476	5	5PFR
5.0SMLJ43A	43	47.8	52.8	1	69.4	72.1	90.3	443	5	5PFT
5.0SMLJ45A	45	50.0	55.3	1	72.7	68.8	94.6	423	5	5PFV
5.0SMLJ48A	48	53.3	58.9	1	77.4	64.7	100	400	5	5PFX
5.0SMLJ51A	51	56.7	62.7	1	82.4	60.7	107	374	5	5PFZ
5.0SMLJ54A	54	60.0	66.3	1	87.1	57.5	113	354	5	5RGE
5.0SMLJ58A	58	64.4	71.2	1	93.6	53.5	121	331	5	5PGG
5.0SMLJ60A	60	66.7	73.7	1	96.8	51.7	125	320	5	5PGK
5.0SMLJ64A	64	71.1	78.6	1	103.0	48.6	134	299	5	5PGM
5.0SMLJ70A	70	77.8	86.0	1	113.0	44.3	146	274	5	5PGP
5.0SMLJ75A	75	83.3	92.1	1	121.0	41.4	157	255	5	5PGR
5.0SMLJ78A	78	86.7	95.8	1	126.0	39.7	163	245	5	5PGT
5.0SMLJ85A	85	94.4	104.0	1	137.0	36.5	177	226	5	5PGV
5.0SMLJ90A	90	100.0	111.0	1	146.0	34.3	-	-	5	5PGX
5.0SMLJ100A	100	111.0	123.0	1	162.0	30.9	-	-	5	5PGZ
5.0SMLJ110A	110	122.0	135.0	1	177.0	28.3	-	-	5	5PHE
5.0SMLJ120A	120	133.0	147.0	1	193.0	26.0	-	-	5	5PHG
5.0SMLJ130A	130	144.0	159.0	1	209.0	24.0	-	-	5	5PHK
5.0SMLJ150A	150	167.0	185.0	1	243.0	20.6	-	-	5	5PHM
5.0SMLJ160A	160	178.0	197.0	1	259.0	19.3	-	-	5	5PHP
5.0SMLJ170A	170	189.0	209.0	1	275.0	18.2	-	-	5	5PHR
5.0SMLJ180A	180	200.0	220.0	1	292.0	17.1	-	-	5	5PHT
5.0SMLJ190A	190	211.0	258.0	1	308.0	16.2	-	-	5	5PHV
5.0SMLJ200A	200	224.0	247.0	1	324.0	15.4	-	-	5	5PHW
5.0SMLJ220A	220	246.0	272.0	1	356.0	14.0	-	-	5	5PHX
5.0SMLJ250A	250	279.0	309.0	1	405.0	12.3	-	-	5	5PHZ
5.0SMLJ300A	300	335.0	371.0	1	486.0	10.3	-	-	5	5PJE
5.0SMLJ350A	350	391.0	432.0	1	567.0	8.8	-	-	5	5PJG
5.0SMLJ400A	400	447.0	494.0	1	648.0	7.7	-	-	5	5PJK

Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number	Working Peak Reverse Voltage	Breakdown Voltage VBR @I_T			Maximun Clamping Voltage @I_{PP}10/1000us		Maximun Clamping Voltage @I_{PP}8/20us		Maximum Reverse Leakage @V_{RWM}	Device Marking Code
(Bi)	V_{RWM} (V)	Min (V)	Max (V)	I_T (mA)	V_C(V)	I_{PP}(A)	V_C(V)	I_{PP}(A)	I_R(μA)	Bi
5.0SMLJ11CA	11	12.2	13.5	10	18.2	275.0	23.0	1737	800	5BEN
5.0SMLJ12CA	12	13.3	14.7	10	19.9	252.0	26.0	1581	800	5BEP
5.0SMLJ13CA	13	14.4	15.9	10	21.5	233.0	27.2	1471	500	5BEQ
5.0SMLJ14CA	14	15.6	17.2	10	23.2	216.0	31.0	1333	200	5BER
5.0SMLJ15CA	15	16.7	18.5	1	24.4	205.0	32.5	1231	100	5BES
5.0SMLJ16CA	16	17.8	19.7	1	26.0	193.0	34.4	1163	50	5BET
5.0SMLJ17CA	17	18.9	20.9	1	27.6	181.0	37.0	1081	20	5BEU
5.0SMLJ18CA	18	20.0	22.1	1	29.2	172.0	39.3	1018	10	5BEV
5.0SMLJ20CA	20	22.2	24.5	1	32.4	155.0	42.8	935	5	5BEW
5.0SMLJ22CA	22	24.4	26.9	1	35.5	141.0	48.2	830	5	5BEX
5.0SMLJ24CA	24	26.7	29.5	1	38.9	129.0	51.6	775	5	5BEZ
5.0SMLJ26CA	26	28.9	31.9	1	42.1	119.0	55.8	717	5	5BFE
5.0SMLJ28CA	28	31.1	34.4	1	45.4	110.0	60.2	664	5	5BFG
5.0SMLJ30CA	30	33.3	36.8	1	48.4	103.0	64.0	625	5	5BFK
5.0SMLJ33CA	33	36.7	40.6	1	53.3	93.9	69.8	573	5	5BFM
5.0SMLJ36CA	36	40.0	44.2	1	58.1	86.1	76.0	526	5	5BFP
5.0SMLJ40CA	40	44.4	49.1	1	64.5	77.6	84.0	476	5	5BFR
5.0SMLJ43CA	43	47.8	52.8	1	69.4	72.1	90.3	443	5	5BFT
5.0SMLJ45CA	45	50.0	55.3	1	72.7	68.8	94.6	423	5	5BFV
5.0SMLJ48CA	48	53.3	58.9	1	77.4	64.7	100	400	5	5BFX
5.0SMLJ51CA	51	56.7	62.7	1	82.4	60.7	107	374	5	5BFZ
5.0SMLJ54CA	54	60.0	66.3	1	87.1	57.5	113	354	5	5BGE
5.0SMLJ58CA	58	64.4	71.2	1	93.6	53.5	121	331	5	5BGG
5.0SMLJ60CA	60	66.7	73.7	1	96.8	51.7	125	320	5	5BGK
5.0SMLJ64CA	64	71.1	78.6	1	103.0	48.6	134	299	5	5BGM
5.0SMLJ70CA	70	77.8	86.0	1	113.0	44.3	146	274	5	5BGP
5.0SMLJ75CA	75	83.3	92.1	1	121.0	41.4	157	255	5	5BGR
5.0SMLJ78CA	78	86.7	95.8	1	126.0	39.7	163	245	5	5BGT
5.0SMLJ85CA	85	94.4	104.0	1	137.0	36.5	177	226	5	5BGV
5.0SMLJ90CA	90	100.0	111.0	1	146.0	34.3	-	-	5	5BGX
5.0SMLJ100CA	100	111.0	123.0	1	162.0	30.9	-	-	5	5BGZ
5.0SMLJ110CA	110	122.0	135.0	1	177.0	28.3	-	-	5	5BHE
5.0SMLJ120CA	120	133.0	147.0	1	193.0	26.0	-	-	5	5BHG
5.0SMLJ130CA	130	144.0	159.0	1	209.0	24.0	-	-	5	5BHK
5.0SMLJ150CA	150	167.0	185.0	1	243.0	20.6	-	-	5	5BHM
5.0SMLJ160CA	160	178.0	197.0	1	259.0	19.3	-	-	5	5BHP
5.0SMLJ170CA	170	189.0	209.0	1	275.0	18.2	-	-	5	5BHR
5.0SMLJ180CA	180	200.0	220.0	1	292.0	17.1	-	-	5	5BHT
5.0SMLJ190CA	190	211.0	258.0	1	308.0	16.2	-	-	5	5BHV
5.0SMLJ200CA	200	224.0	247.0	1	324.0	15.4	-	-	5	5BHW
5.0SMLJ220CA	220	246.0	272.0	1	356.0	14.0	-	-	5	5BHX
5.0SMLJ250CA	250	279.0	309.0	1	405.0	12.3	-	-	5	5BHZ
5.0SMLJ300CA	300	335.0	371.0	1	486.0	10.3	-	-	5	5BJE
5.0SMLJ350CA	350	391.0	432.0	1	567.0	8.8	-	-	5	5BJG
5.0SMLJ400CA	400	447.0	494.0	1	648.0	7.7	-	-	5	5BJK

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

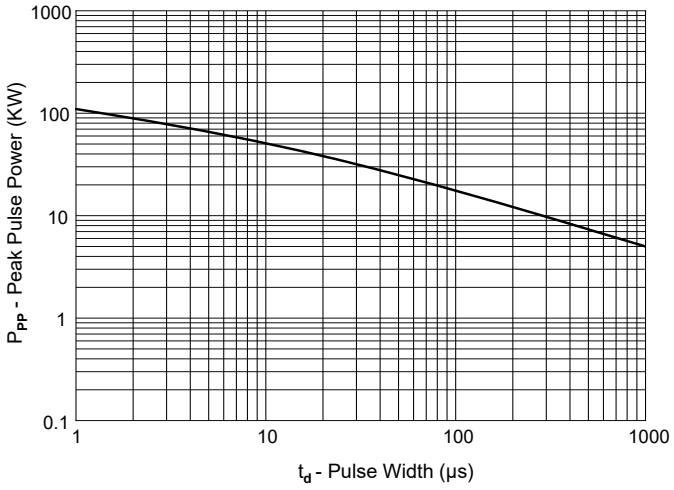


Fig. 2 - Typical Junction Capacitance

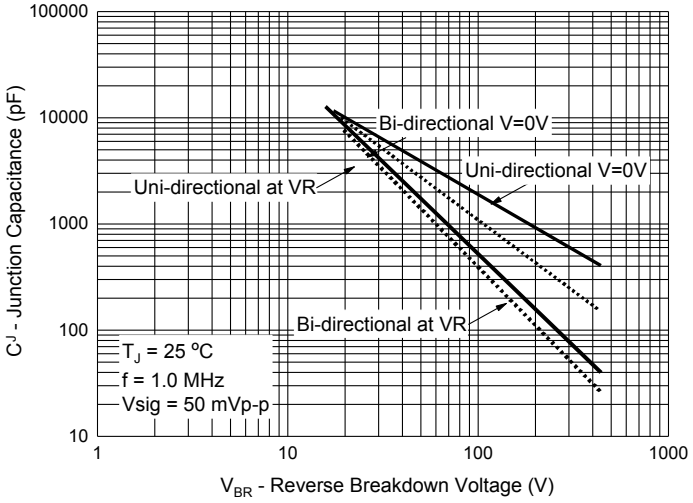


Fig. 3 - Pulse Waveform

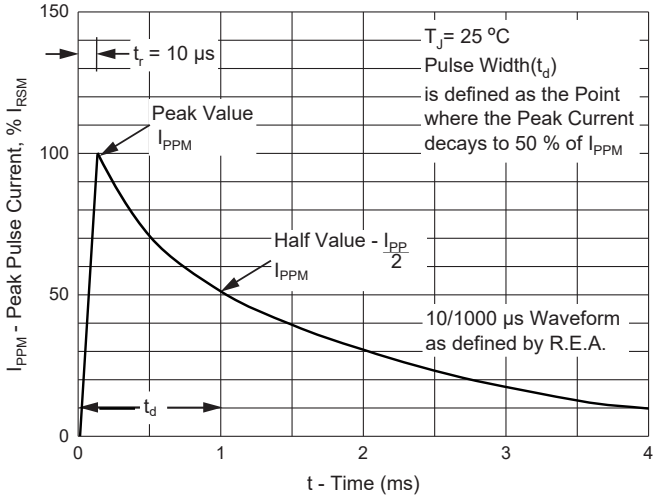
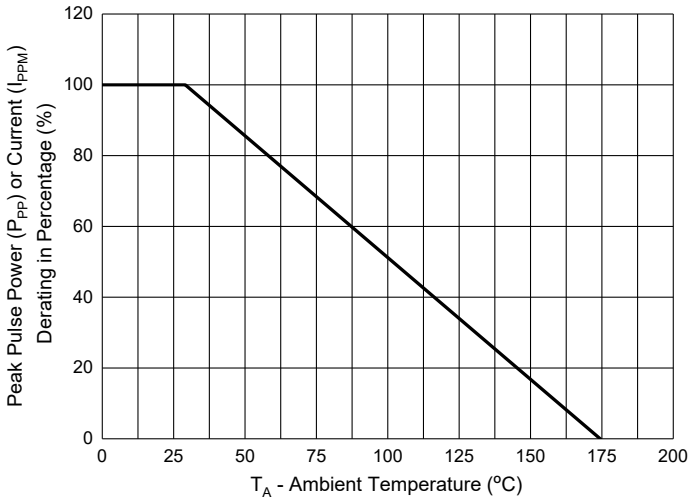


Fig. 4 - Pulse Derating Curve



Ordering Information

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

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