	E480232

Features

- For Surface Mount Application in Order to Optimize Board Space
- Built-in Strain Relief
- Glass Passivated Junction
- For Bidirectional Devices Add “C” To The Suffix of The Part Number: i.e.SMLJ5.0CA for 5% Tolerance
- Excellent Clamping Capability
- Repetition Rate(duty cycle):0.5%
- Fast Response Time: Typical Less Than 1ps From 0V to BV Min
- Typical I_D Less than 1μA Above 10V
- ESD Protected up to 16KV (HBM)
- 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)

Mechanical Data

- Polarity: Color Band Denotes Positive End(Cathode) Except Bi-directional Types
- Weight: 0.007 ounce, 0.21 gram
- 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
- Thermal Resistance: 17.5°C/W Junction to Lead
- Thermal Resistance: 75°C/W Junction to Ambient

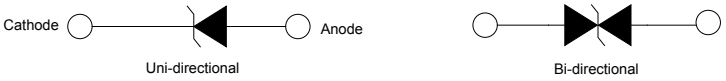
Electrical Characteristics @ 25°C Unless Otherwise Specified

Peak Pulse Power Surge Current on 10/1000μs Waveform	I_{PPM}	See the Table	Note 3,Fig3
Peak Pulse Power Dissipation on 10/1000μs Waveform	P_{PPM}	3000W(Min)	Note 3,4,Fig1

Note:

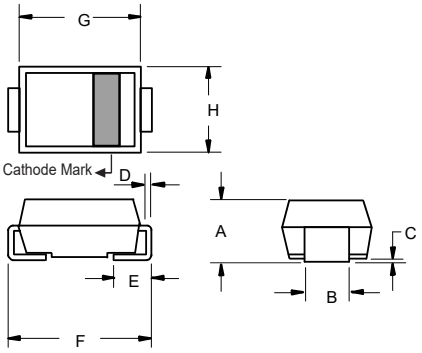
1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.
3. Non-repetitive current pulse, per Fig.3 and derated above T_A=25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

Pin Configuration:



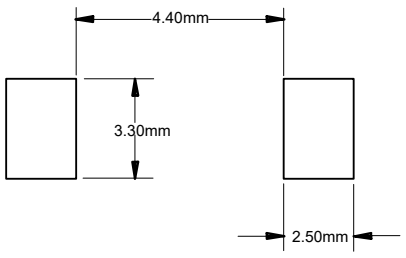
3000 Watt TVS
5.0 to 440 Volts

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)	
SMLJ5.0C	5.0	6.40	7.30	10	9.6	312.5	1000	DDD
SMLJ5.0CA	5.0	6.40	7.00	10	9.2	326.0	1000	DDE
SMLJ6.0C	6.0	6.67	8.15	10	11.4	263.2	1000	DDF
SMLJ6.0CA	6.0	6.67	7.37	10	10.3	291.3	1000	DDG
SMLJ6.5C	6.5	7.22	8.82	10	12.3	243.9	500	DDH
SMLJ6.5CA	6.5	7.22	7.98	10	11.2	267.9	500	DDK
SMLJ7.0C	7.0	7.78	9.51	10	13.3	225.6	200	DDL
SMLJ7.0CA	7.0	7.78	8.60	10	12.0	250.0	200	DDM
SMLJ7.5C	7.5	8.33	10.2	1	14.3	209.8	100	DDN
SMLJ7.5CA	7.5	8.33	9.21	1	12.9	232.6	100	DDP
SMLJ8.0C	8.0	8.89	10.9	1	15.0	200.0	50	DDQ
SMLJ8.0CA	8.0	8.89	9.83	1	13.6	220.6	50	DDR
SMLJ8.5C	8.5	9.44	11.5	1	15.9	188.6	25	DDS
SMLJ8.5CA	8.5	9.44	10.4	1	14.4	208.4	25	DDT
SMLJ9.0C	9.0	10.0	12.2	1	16.9	177.4	10	DDU
SMLJ9.0CA	9.0	10.0	11.1	1	15.4	194.8	10	DDV
SMLJ10C	10	11.1	13.6	1	18.8	159.6	5	DDW
SMLJ10CA	10	11.1	12.3	1	17.0	176.4	5	DDX
SMLJ11C	11	12.2	14.9	1	20.1	149.2	2	DDY
SMLJ11CA	11	12.2	13.5	1	18.2	164.8	2	DDZ
SMLJ12C	12	13.3	16.3	1	22.0	136.4	2	DED
SMLJ12CA	12	13.3	14.7	1	19.9	150.6	2	DEE
SMLJ13C	13	14.4	17.6	1	23.8	126.0	2	DEF
SMLJ13CA	13	14.4	15.9	1	21.5	139.4	2	DEG
SMLJ14C	14	15.6	19.1	1	25.8	116.2	2	DEH
SMLJ14CA	14	15.6	17.2	1	23.2	129.4	2	DEK
SMLJ15C	15	16.7	20.4	1	26.9	111.6	2	DEL
SMLJ15CA	15	16.7	18.5	1	24.4	123.0	2	DEM
SMLJ16C	16	17.8	21.8	1	28.8	104.2	2	DEN
SMLJ16CA	16	17.8	19.7	1	26.0	115.4	2	DEP
SMLJ17C	17	18.9	23.1	1	30.5	98.4	2	DEQ
SMLJ17CA	17	18.9	20.9	1	27.6	106.6	2	DER
SMLJ18C	18	20.0	24.4	1	32.2	93.2	2	DES
SMLJ18CA	18	20.0	22.1	1	29.2	102.8	2	DET
SMLJ20C	20	22.2	27.1	1	35.8	83.8	2	DEU
SMLJ20CA	20	22.2	24.5	1	32.4	92.6	2	DEV
SMLJ22C	22	24.4	29.8	1	39.4	76.2	2	DEW
SMLJ22CA	22	24.4	26.9	1	35.5	84.4	2	DEX
SMLJ24C	24	26.7	32.6	1	43.0	69.8	2	DEY
SMLJ24CA	24	26.7	29.5	1	38.9	77.2	2	DEZ
SMLJ26C	26	28.9	35.3	1	46.6	64.4	2	DFD
SMLJ26CA	26	28.9	31.9	1	42.1	71.2	2	DFE
SMLJ28C	28	31.1	38.0	1	50.0	60.0	2	DFF
SMLJ28CA	28	31.1	34.4	1	45.4	66.0	2	DFG
SMLJ30C	30	33.3	40.7	1	53.5	56.0	2	DFH

For parts without A, the VBR is +10%.

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)	
SMLJ30CA	30	33.3	36.8	1	48.4	62.0	2	DFK
SMLJ33C	33	36.7	44.9	1	59.0	50.4	2	DFL
SMLJ33CA	33	36.7	40.6	1	53.3	56.2	2	DFM
SMLJ36C	36	40.0	48.9	1	64.3	46.6	2	DFN
SMLJ36CA	36	40.0	44.2	1	58.1	51.6	2	DFP
SMLJ40C	40	44.4	54.3	1	71.4	42.0	2	DFQ
SMLJ40CA	40	44.4	49.1	1	64.5	46.4	2	DFR
SMLJ43C	43	47.8	58.4	1	76.7	39.2	2	DFS
SMLJ43CA	43	47.8	52.8	1	69.4	43.2	2	DFT
SMLJ45C	45	50.0	61.1	1	80.3	37.4	2	DFU
SMLJ45CA	45	50.0	55.3	1	72.7	41.2	2	DFV
SMLJ48C	48	53.3	65.1	1	85.5	35.0	2	DFW
SMLJ48CA	48	53.3	58.9	1	77.4	38.8	2	DFX
SMLJ51C	51	56.7	69.3	1	91.1	37.0	2	DFY
SMLJ51CA	51	56.7	62.7	1	82.4	36.4	2	DFZ
SMLJ54C	54	60.0	73.3	1	96.3	31.2	2	DGD
SMLJ54CA	54	60.0	66.3	1	87.1	34.4	2	DGE
SMLJ58C	58	64.4	78.7	1	103	39.2	2	DGF
SMLJ58CA	58	64.4	71.2	1	93.6	32.0	2	DGG
SMLJ60C	60	66.7	81.5	1	107	28.0	2	DGH
SMLJ60CA	60	66.7	73.7	1	96.8	31.0	2	DGK
SMLJ64C	64	71.1	86.9	1	114	26.4	2	DGL
SMLJ64CA	64	71.1	78.6	1	103	29.2	2	DGM
SMLJ70C	70	77.8	95.1	1	125	24.0	2	DGN
SMLJ70CA	70	77.8	86.0	1	113	26.6	2	DGP
SMLJ75C	75	83.3	102	1	134	22.4	2	DGQ
SMLJ75CA	75	83.3	92.1	1	121	24.8	2	DGR
SMLJ78C	78	86.7	106	1	139	21.6	2	DGS
SMLJ78CA	78	86.7	95.8	1	126	22.8	2	DGT
SMLJ85C	85	94.4	115	1	151	19.8	2	DGU
SMLJ85CA	85	94.4	104	1	137	20.8	2	DGV
SMLJ90C	90	100	122	1	160	18.8	2	DGW
SMLJ90CA	90	100	111	1	146	20.6	2	DGX
SMLJ100C	100	111	136	1	179	16.8	2	DGY
SMLJ100CA	100	111	123	1	162	18.6	2	DGZ
SMLJ110C	110	122	149	1	196	15.4	2	DHD
SMLJ110CA	110	122	135	1	177	16.8	2	DHE
SMLJ120C	120	133	163	1	214	14.0	2	DHF
SMLJ120CA	120	133	147	1	193	15.6	2	DHG
SMLJ130C	130	144	176	1	231	13.0	2	DHH
SMLJ130CA	130	144	159	1	209	14.4	2	DHK
SMLJ150C	150	167	204	1	268	11.2	2	DHL
SMLJ150CA	150	167	185	1	243	12.4	2	DHM
SMLJ160C	160	178	218	1	287	10.4	2	DHN
SMLJ160CA	160	178	197	1	259	11.6	2	DHP
SMLJ170C	170	189	231	1	304	9.8	2	DHQ

For parts without A, the VBR is +10%.

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)	
SMLJ170CA	170	189	209	1	275	11.0	2	DHR
SMLJ180CA	180	200	220	5	291.6	10.29	2	DHT
SMLJ190CA	190	211	232	5	307.8	9.75	2	DHV
SMLJ200CA	200	224	247	5	324	9.26	2	DHW
SMLJ220CA	220	246	272	5	356	8.43	2	DHX
SMLJ250CA	250	279	309	5	405	7.41	2	DHZ
SMLJ300CA	300	335	371	5	486	6.17	2	DJE
SMLJ350CA	350	391	432	5	567	5.29	2	DJG
SMLJ400CA	400	447	494	5	648	4.63	2	DJK
SMLJ440CA	440	492	543	5	713	4.21	2	DJM
SMLJ5.0	5.0	6.40	7.30	10	9.6	312.5	1000	RDD
SMLJ5.0A	5.0	6.40	7.00	10	9.2	326.0	1000	RDE
SMLJ6.0	6.0	6.67	8.15	10	11.4	263.2	1000	RDF
SMLJ6.0A	6.0	6.67	7.37	10	10.3	291.3	1000	RDG
SMLJ6.5	6.5	7.22	8.82	10	12.3	243.9	500	RDH
SMLJ6.5A	6.5	7.22	7.98	10	11.2	267.9	500	RDK
SMLJ7.0	7.0	7.78	9.51	10	13.3	225.6	200	PDL
SMLJ7.0A	7.0	7.78	8.60	10	12.0	250.0	200	PDM
SMLJ7.5	7.5	8.33	10.2	1	14.3	209.8	100	PDN
SMLJ7.5A	7.5	8.33	9.21	1	12.9	232.6	100	PDP
SMLJ8.0	8.0	8.89	10.9	1	15.0	200.0	50	PDQ
SMLJ8.0A	8.0	8.89	9.83	1	13.6	220.6	50	PDR
SMLJ8.5	8.5	9.44	11.5	1	15.9	188.6	25	PDS
SMLJ8.5A	8.5	9.44	10.4	1	14.4	208.4	25	PDT
SMLJ9.0	9.0	10.0	12.2	1	16.9	177.4	10	PDU
SMLJ9.0A	9.0	10.0	11.1	1	15.4	194.8	10	PDV
SMLJ10	10	11.1	13.6	1	18.8	159.6	5	PDW
SMLJ10A	10	11.1	12.3	1	17.0	176.4	5	PDX
SMLJ11	11	12.2	14.9	1	20.1	149.2	2	PDY
SMLJ11A	11	12.2	13.5	1	18.2	164.8	2	PDZ
SMLJ12	12	13.3	16.3	1	22.0	136.4	2	PED
SMLJ12A	12	13.3	14.7	1	19.9	150.6	2	PEE
SMLJ13	13	14.4	17.6	1	23.8	126.0	2	PEF
SMLJ13A	13	14.4	15.9	1	21.5	139.4	2	PEG
SMLJ14	14	15.6	19.1	1	25.8	116.2	2	PEH
SMLJ14A	14	15.6	17.2	1	23.2	129.4	2	PEK
SMLJ15	15	16.7	20.4	1	26.9	111.6	2	PEL
SMLJ15A	15	16.7	18.5	1	24.4	123.0	2	PEM
SMLJ16	16	17.8	21.8	1	28.8	104.2	2	PEN
SMLJ16A	16	17.8	19.7	1	26.0	115.4	2	PEP
SMLJ17	17	18.9	23.1	1	30.5	98.4	2	PEQ
SMLJ17A	17	18.9	20.9	1	27.6	106.6	2	PER
SMLJ18	18	20.0	24.4	1	32.2	93.2	2	PES
SMLJ18A	18	20.0	22.1	1	29.2	102.8	2	PET
SMLJ20	20	22.2	27.1	1	35.8	83.8	2	PEU
SMLJ20A	20	22.2	24.5	1	32.4	92.6	2	PEV

For parts without A, the VBR is +10%.

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)	
SMLJ22	22	24.4	29.8	1	39.4	76.2	2	PEW
SMLJ22A	22	24.4	26.9	1	35.5	84.4	2	PEX
SMLJ24	24	26.7	32.6	1	43.0	69.8	2	PEY
SMLJ24A	24	26.7	29.5	1	38.9	77.2	2	PEZ
SMLJ26	26	28.9	35.3	1	46.6	64.4	2	PFD
SMLJ26A	26	28.9	31.9	1	42.1	71.2	2	PFE
SMLJ28	28	31.1	38.0	1	50.0	60.0	2	PFF
SMLJ28A	28	31.1	34.4	1	45.4	66.0	2	PFG
SMLJ30	30	33.3	40.7	1	53.5	56.0	2	PFH
SMLJ30A	30	33.3	36.8	1	48.4	62.0	2	PFK
SMLJ33	33	36.7	44.9	1	59.0	50.4	2	PFL
SMLJ33A	33	36.7	40.6	1	53.3	56.2	2	PFM
SMLJ36	36	40.0	48.9	1	64.3	46.6	2	PFN
SMLJ36A	36	40.0	44.2	1	58.1	51.6	2	PFP
SMLJ40	40	44.4	54.3	1	71.4	42.0	2	PFQ
SMLJ40A	40	44.4	49.1	1	64.5	46.4	2	PFR
SMLJ43	43	47.8	58.4	1	76.7	39.2	2	PFS
SMLJ43A	43	47.8	52.8	1	69.4	43.2	2	PFT
SMLJ45	45	50.0	61.1	1	80.3	37.4	2	PFU
SMLJ45A	45	50.0	55.3	1	72.7	41.2	2	PFV
SMLJ48	48	53.3	65.1	1	85.5	35.0	2	PFW
SMLJ48A	48	53.3	58.9	1	77.4	38.8	2	PFX
SMLJ51	51	56.7	69.3	1	91.1	37.0	2	PFY
SMLJ51A	51	56.7	62.7	1	82.4	36.4	2	PFZ
SMLJ54	54	60.0	73.3	1	96.3	31.2	2	RGD
SMLJ54A	54	60.0	66.3	1	87.1	34.4	2	RGE
SMLJ58	58	64.4	78.7	1	103	39.2	2	PGF
SMLJ58A	58	64.4	71.2	1	93.6	32.0	2	PGG
SMLJ60	60	66.7	81.5	1	107	28.0	2	PGH
SMLJ60A	60	66.7	73.7	1	96.8	31.0	2	PGK
SMLJ64	64	71.1	86.9	1	114	26.4	2	PGL
SMLJ64A	64	71.1	78.6	1	103	29.2	2	PGM
SMLJ70	70	77.8	95.1	1	125	24.0	2	PGN
SMLJ70A	70	77.8	86.0	1	113	26.6	2	PGP
SMLJ75	75	83.3	102	1	134	22.4	2	PGQ
SMLJ75A	75	83.3	92.1	1	121	24.8	2	PGR
SMLJ78	78	86.7	106	1	139	21.6	2	PGS
SMLJ78A	78	86.7	95.8	1	126	22.8	2	PGT
SMLJ85	85	94.4	115	1	151	19.8	2	PGU
SMLJ85A	85	94.4	104	1	137	20.8	2	PGV
SMLJ90	90	100	122	1	160	18.8	2	PGW
SMLJ90A	90	100	111	1	146	20.6	2	PGX
SMLJ100	100	111	136	1	179	16.8	2	PGY
SMLJ100A	100	111	123	1	162	18.6	2	PGZ
SMLJ110	110	122	149	1	196	15.4	2	PHD
SMLJ110A	110	122	135	1	177	16.8	2	PHE

For parts without A, the VBR is +10%.

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)	
SMLJ120	120	133	163	1	214	14.0	2	PHF
SMLJ120A	120	133	147	1	193	15.6	2	PHG
SMLJ130	130	144	176	1	231	13.0	2	PHH
SMLJ130A	130	144	159	1	209	14.4	2	PHK
SMLJ150	150	167	204	1	268	11.2	2	PHL
SMLJ150A	150	167	185	1	243	12.4	2	PHM
SMLJ160	160	178	218	1	287	10.4	2	PHN
SMLJ160A	160	178	197	1	259	11.6	2	PHP
SMLJ170	170	189	231	1	304	9.8	2	PHQ
SMLJ170A	170	189	209	1	275	11.0	2	PHR
SMLJ180A	180	200	220	5	291.6	10.29	2	PHT
SMLJ190A	190	211	232	5	307.8	9.75	2	PHV
SMLJ200A	200	224	247	5	324	9.26	2	PHW
SMLJ220A	220	246	272	5	356	8.43	2	PHX
SMLJ250A	250	279	309	5	405	7.41	2	PHZ
SMLJ300A	300	335	371	5	486	6.17	2	PJE
SMLJ350A	350	391	432	5	567	5.29	2	PJG
SMLJ400A	400	447	494	5	648	4.63	2	PJK
SMLJ440A	440	492	543	5	713	4.21	2	PJM

For parts without A, the VBR is +10%.

Curve Characteristics

Fig. 1 - Peak Pulse Power Rating Curve

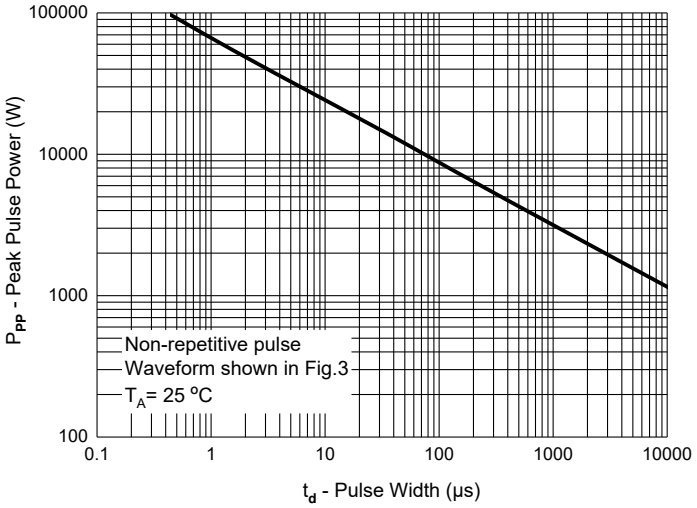


Fig. 2 - Typical Junction Capacitance

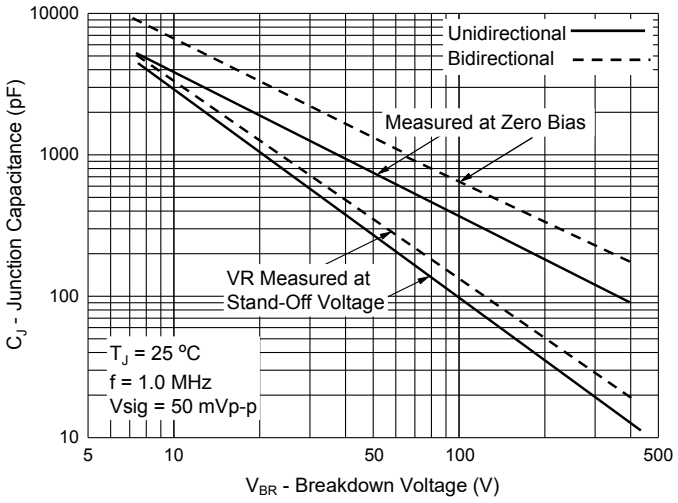


Fig. 3 - Pulse Waveform

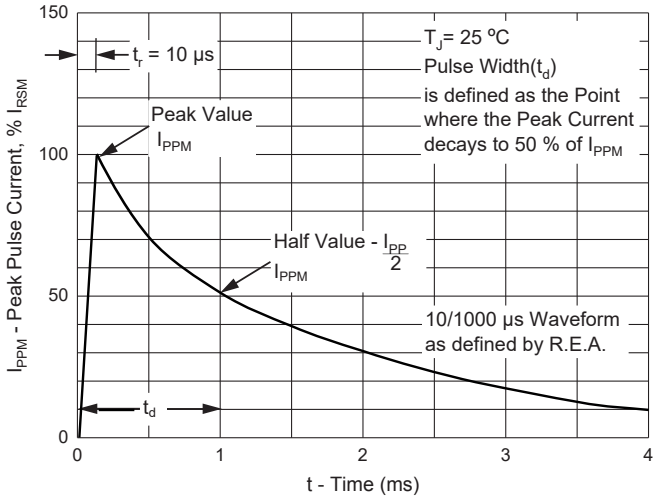
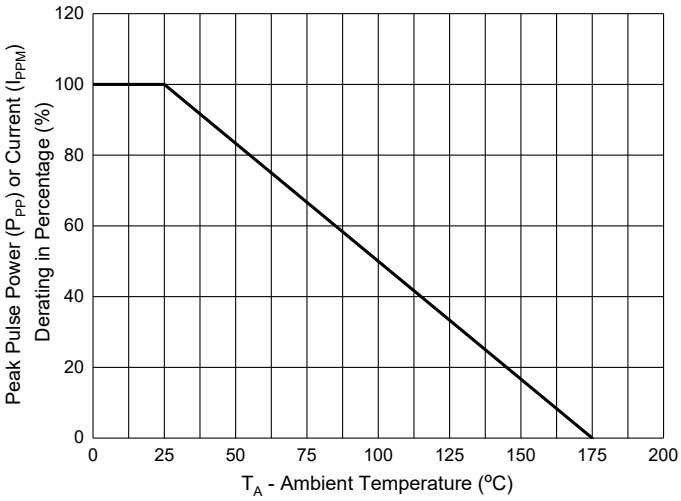


Fig. 4 - Pulse Derating Curve



Ordering Information

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

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