

**SURFACE MOUNT
UNIDIRECTIONAL AND BIDIRECTIONAL
TRANSIENT VOLTAGE SUPPRESSORS**

STAND-OFF VOLTAGE - **5.0** to **220** Volts
POWER DISSIPATION - **3000** WATTS

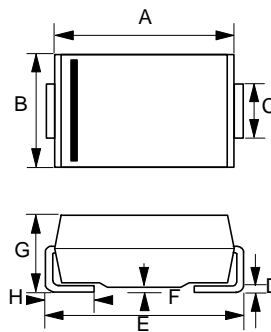
FEATURES

- For surface mounted applications
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has UL flammability classification 94V-O
- Typical IR less than 1uA above 10V
- Fast response time: typically less than 1.0ns for Uni-direction, less than 5.0ns for Bi-direction, from 0 Volts to BV min

MECHANICAL DATA

- Case : Molded plastic
- Polarity : by cathode band denotes uni-directional device none cathode band denotes bi-directional device
- Weight : 0.007 ounces, 0.21 gram

SMC



SMC		
DIM.	MIN.	MAX.
A	6.60	7.11
B	5.59	6.22
C	2.92	3.18
D	0.15	0.31
E	7.75	8.13
F	0.05	0.20
G	2.01	2.62
H	0.76	1.52

All Dimensions in millimeter

Datasheet Directory

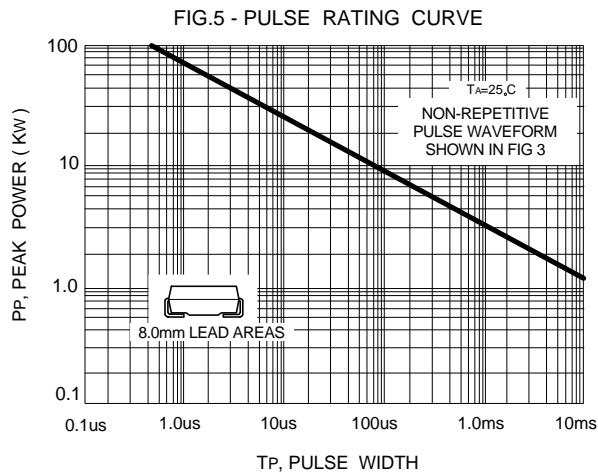
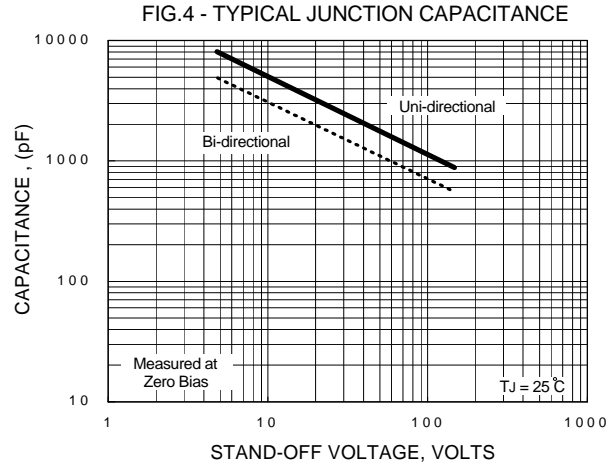
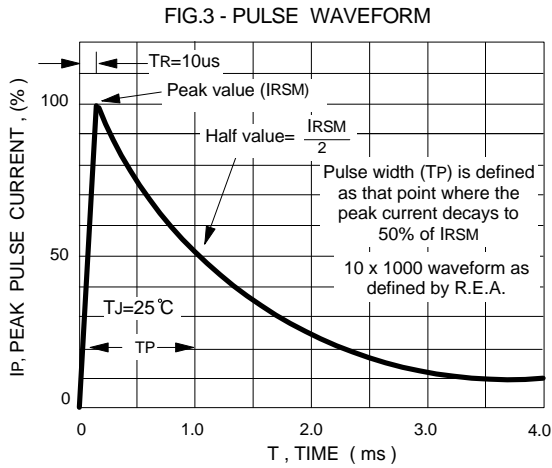
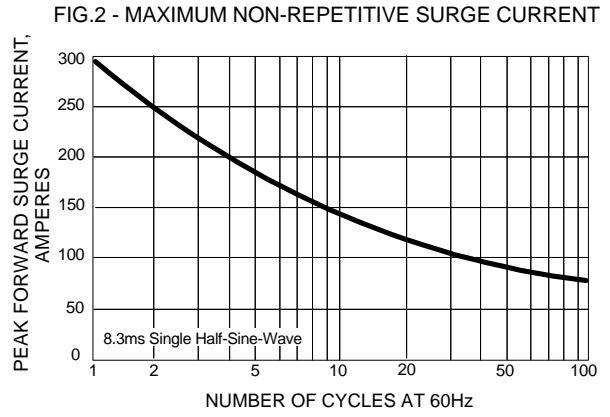
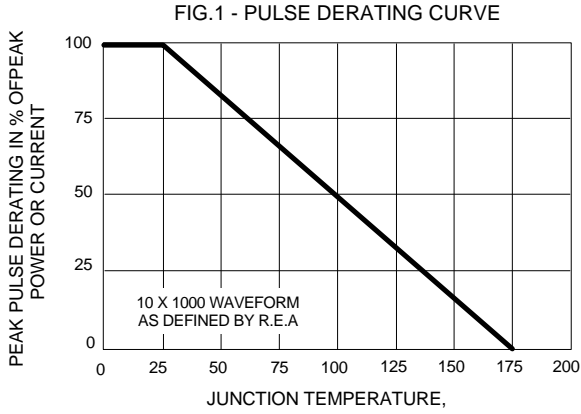
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOLS	VALUE	UNIT
PEAK POWER DISSIPATION AT T _J = 25 °C, T _P = 1ms (Note 1)	P _{PK}	Minimum 3000	WATTS
Peak Forward Surge Current 8.3ms single half sine-wave @T _J =25 °C (Note 2)	I _{FSM}	300	AMPS.
Operating Temperature Range	T _J	-55 to +175	°C
Storage Temperature Range	T _{STG}	-55 to +175	°C

NOTES : 1. Non-repetitive current pulse, per Fig. 3 and derated above T_J= 25 °C per Fig.1.
2. Only for unidirectional units.

REV. 1, Apr-2006, KSIC03



Type Number	Type Number	Device Marking code		Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Clamping Voltage @Ipp	Max. Peak Pulse Current
		(UNI)	(BI)		VR (V)	Min (V)	Max (V)			
3.0SMCJ5.0	3.0SMCJ5.0C	HDD	IDD	5	6.40	7.82	10	1000	9.6	312.5
3.0SMCJ5.0A	3.0SMCJ5.0CA	HDE	IDE	5	6.40	7.07	10	1000	9.2	326.1
3.0SMCJ6.0	3.0SMCJ6.0C	HDF	IDF	6	6.67	8.15	10	1000	11.4	263.2
3.0SMCJ6.0A	3.0SMCJ6.0CA	HDG	IDG	6	6.67	7.37	10	1000	10.3	291.3
3.0SMCJ6.5	3.0SMCJ6.5C	HDH	IDH	6.5	7.22	8.82	10	500	12.3	243.9
3.0SMCJ6.5A	3.0SMCJ6.5CA	HDK	IDK	6.5	7.22	7.98	10	500	11.2	267.9
3.0SMCJ7.0	3.0SMCJ7.0C	HDL	IDL	7	7.78	9.51	10	200	13.3	225.6
3.0SMCJ7.0A	3.0SMCJ7.0CA	HDM	IDM	7	7.78	8.60	10	200	12.0	250.0
3.0SMCJ7.5	3.0SMCJ7.5C	HDN	IDN	7.5	8.33	10.18	1	100	14.3	209.8
3.0SMCJ7.5A	3.0SMCJ7.5CA	HDP	IDP	7.5	8.33	9.21	1	100	12.9	232.6
3.0SMCJ8.0	3.0SMCJ8.0C	HDQ	IDQ	8	8.89	10.86	1	50	15.0	200.0
3.0SMCJ8.0A	3.0SMCJ8.0CA	HDR	IDR	8	8.89	9.83	1	50	13.6	220.6
3.0SMCJ8.5	3.0SMCJ8.5C	HDS	IDS	8.5	9.44	11.54	1	25	15.9	188.7
3.0SMCJ8.5A	3.0SMCJ8.5CA	HDT	IDT	8.5	9.44	10.43	1	25	14.4	208.3
3.0SMCJ9.0	3.0SMCJ9.0C	HDU	IDU	9	10.00	12.22	1	10	16.9	177.5
3.0SMCJ9.0A	3.0SMCJ9.0CA	HDV	IDV	9	10.00	11.05	1	10	15.4	194.8
3.0SMCJ10	3.0SMCJ10C	HDW	IDW	10	11.10	13.56	1	5	18.8	159.6
3.0SMCJ10A	3.0SMCJ10CA	HDX	IDX	10	11.10	12.27	1	5	17.0	176.5
3.0SMCJ11	3.0SMCJ11C	HDY	IDY	11	12.20	14.9	1	5	20.1	149.3
3.0SMCJ11A	3.0SMCJ11CA	HDZ	IDZ	11	12.20	13.5	1	5	18.2	164.8
3.0SMCJ12	3.0SMCJ12C	HED	IED	12	13.30	16.3	1	5	22.0	136.4
3.0SMCJ12A	3.0SMCJ12CA	HEE	IEE	12	13.30	14.7	1	5	19.9	150.8
3.0SMCJ13	3.0SMCJ13C	HEF	IEF	13	14.40	17.6	1	5	23.8	126.1
3.0SMCJ13A	3.0SMCJ13CA	HEG	IEG	13	14.40	15.9	1	5	21.5	139.5
3.0SMCJ14	3.0SMCJ14C	HEH	IEH	14	15.60	19.1	1	5	25.8	116.3
3.0SMCJ14A	3.0SMCJ14CA	HEK	IEK	14	15.60	17.2	1	5	23.2	129.3
3.0SMCJ15	3.0SMCJ15C	HEL	IEL	15	16.70	20.4	1	5	26.9	111.5
3.0SMCJ15A	3.0SMCJ15CA	HEM	IEM	15	16.70	18.5	1	5	24.2	124.0
3.0SMCJ16	3.0SMCJ16C	HEN	IEN	16	17.80	21.8	1	5	28.8	104.2
3.0SMCJ16A	3.0SMCJ16CA	HEP	IEP	16	17.80	19.7	1	5	26.0	115.4
3.0SMCJ17	3.0SMCJ17C	HEQ	IEQ	17	18.90	23.1	1	5	30.5	98.4
3.0SMCJ17A	3.0SMCJ17CA	HER	IER	17	18.90	20.9	1	5	27.6	108.7
3.0SMCJ18	3.0SMCJ18C	HES	IES	18	20.00	24.4	1	5	32.2	93.2
3.0SMCJ18A	3.0SMCJ18CA	HET	IET	18	20.00	22.1	1	5	29.2	102.7
3.0SMCJ20	3.0SMCJ20C	HEU	IEU	20	22.20	27.1	1	5	35.8	83.8
3.0SMCJ20A	3.0SMCJ20CA	HEV	IEV	20	22.20	24.5	1	5	32.4	92.6
3.0SMCJ22	3.0SMCJ22C	HEW	IEW	22	24.40	29.8	1	5	39.4	76.1
3.0SMCJ22A	3.0SMCJ22CA	HEX	IEX	22	24.40	27.0	1	5	35.5	84.5
3.0SMCJ24	3.0SMCJ24C	HEY	IEY	24	26.70	32.6	1	5	43.0	69.8
3.0SMCJ24A	3.0SMCJ24CA	HEZ	IEZ	24	26.70	29.5	1	5	38.9	77.1
3.0SMCJ26	3.0SMCJ26C	HFD	IFD	26	28.9	35.3	1	5	46.6	64.4
3.0SMCJ26A	3.0SMCJ26CA	HFE	IFE	26	28.9	31.9	1	5	42.1	71.3

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		(UNI)	(BI)		VR (V)	Min (V)	Max (V)			
3.0SMCJ28	3.0SMCJ28C	HFF	IFF	28.0	31.1	38.0	1	5	50.0	60.0
3.0SMCJ28A	3.0SMCJ28CA	HFG	IFG	29.0	31.1	34.4	1	5	45.4	66.1
3.0SMCJ30	3.0SMCJ30C	HFH	IFH	30.0	33.3	40.7	1	5	53.5	56.1
3.0SMCJ30A	3.0SMCJ30CA	HFJ	IFJ	30.0	33.3	36.8	1	5	48.4	62.0
3.0SMCJ33	3.0SMCJ33C	HFL	IFL	33.0	36.7	44.8	1	5	59.0	50.8
3.0SMCJ33A	3.0SMCJ33CA	HFM	IFM	33.0	36.7	40.6	1	5	53.3	56.3
3.0SMCJ36	3.0SMCJ36C	HFN	IFN	36.0	40.0	48.9	1	5	64.3	46.7
3.0SMCJ36A	3.0SMCJ36CA	HFP	IFP	36.0	40.0	44.2	1	5	58.1	51.6
3.0SMCJ40	3.0SMCJ40C	HFQ	IFQ	40.0	44.4	54.3	1	5	71.4	42.0
3.0SMCJ40A	3.0SMCJ40CA	HFR	IFR	40.0	44.4	49.1	1	5	64.5	46.5
3.0SMCJ43	3.0SMCJ43C	HFS	IFS	43.0	47.8	58.4	1	5	76.7	39.1
3.0SMCJ43A	3.0SMCJ43CA	HFT	IFT	43.0	47.8	52.8	1	5	69.4	43.2
3.0SMCJ45	3.0SMCJ45C	HFU	IFU	45.0	50.0	61.1	1	5	80.3	37.4
3.0SMCJ45A	3.0SMCJ45CA	HFV	IFV	45.0	50.0	55.3	1	5	72.7	41.3
3.0SMCJ48	3.0SMCJ48C	HFV	IFV	48.0	53.3	65.1	1	5	85.5	35.1
3.0SMCJ48A	3.0SMCJ48CA	HFX	IFX	48.0	53.3	58.9	1	5	77.4	38.8
3.0SMCJ51	3.0SMCJ51C	HFY	IFY	51.0	56.7	69.3	1	5	91.1	32.9
3.0SMCJ51A	3.0SMCJ51CA	HFZ	IFZ	51.0	56.7	62.7	1	5	82.4	36.4
3.0SMCJ54	3.0SMCJ54C	HGD	IGD	54.0	60.0	73.3	1	5	96.3	31.2
3.0SMCJ54A	3.0SMCJ54CA	HGE	IGE	54.0	60.0	66.3	1	5	87.1	34.4
3.0SMCJ58	3.0SMCJ58C	HGF	IGF	58.0	64.4	78.7	1	5	103.0	29.1
3.0SMCJ58A	3.0SMCJ58CA	HGG	IGG	58.0	64.4	71.2	1	5	93.6	32.1
3.0SMCJ60	3.0SMCJ60C	HGH	IGH	60.0	66.7	81.5	1	5	107.0	28.0
3.0SMCJ60A	3.0SMCJ60CA	HGK	IGK	60.0	66.7	73.7	1	5	96.8	31.0
3.0SMCJ64	3.0SMCJ64C	HGL	IGL	64.0	71.1	86.9	1	5	114.0	26.3
3.0SMCJ64A	3.0SMCJ64CA	HGM	IGM	64.0	71.1	78.6	1	5	103.0	29.1
3.0SMCJ70	3.0SMCJ70C	HGN	IGN	70.0	77.8	95.1	1	5	125.0	24.0
3.0SMCJ70A	3.0SMCJ70CA	HGP	IGP	70.0	77.8	86.0	1	5	113.0	26.5
3.0SMCJ75	3.0SMCJ75C	HGQ	IGQ	75.0	83.3	101.8	1	5	134.0	22.4
3.0SMCJ75A	3.0SMCJ75CA	HGR	IGR	75.0	83.3	92.1	1	5	121.0	24.8
3.0SMCJ78	3.0SMCJ78C	HGS	IGS	78.0	86.7	105.9	1	5	139.0	21.6
3.0SMCJ78A	3.0SMCJ78CA	HGT	IGT	78.0	86.7	95.8	1	5	126.0	23.8
3.0SMCJ85	3.0SMCJ85C	HGU	IGU	85.0	94.4	115.4	1	5	151.0	19.9
3.0SMCJ85A	3.0SMCJ85CA	HGV	IGV	85.0	94.4	104.3	1	5	137.0	21.9
3.0SMCJ90	3.0SMCJ90C	HGW	IGW	90.0	100.0	122.2	1	5	160.0	18.8
3.0SMCJ90A	3.0SMCJ90CA	HGX	IGX	90.0	100.0	110.5	1	5	146.0	20.5
3.0SMCJ100	3.0SMCJ100C	HGY	IGY	100.0	111.0	135.6	1	5	179.0	16.8
3.0SMCJ100A	3.0SMCJ100CA	HGZ	IGZ	100.0	111.0	122.7	1	5	162.0	18.5
3.0SMCJ110	3.0SMCJ110C	HHD	IHD	110.0	122.0	149.1	1	5	196.0	15.3
3.0SMCJ110A	3.0SMCJ110CA	HHE	IHE	110.0	122.0	134.8	1	5	177.0	16.9
3.0SMCJ120	3.0SMCJ120C	HHF	IHF	120.0	133.0	162.5	1	5	214.0	14.0
3.0SMCJ120A	3.0SMCJ120CA	HHG	IHG	120.0	133.0	147.0	1	5	193.0	15.5

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		(UNI)	(BI)		VR (V)	Min (V)	Max (V)			
3.0SMCJ130	3.0SMCJ130C	HHH	IHH	130.0	144.0	176.0	1	5	231.0	13.0
3.0SMCJ130A	3.0SMCJ130CA	HHK	IHK	130.0	144.0	159.2	1	5	209.0	14.4
3.0SMCJ150	3.0SMCJ150C	HHL	IHL	150.0	167.0	204.1	1	5	268.0	11.2
3.0SMCJ150A	3.0SMCJ150CA	HHM	IHM	150.0	167.0	184.6	1	5	243.0	12.3
3.0SMCJ160	3.0SMCJ160C	HHN	IHN	160.0	178.0	217.5	1	5	287.0	10.5
3.0SMCJ160A	3.0SMCJ160CA	HHP	IHP	160.0	178.0	196.7	1	5	259.0	11.6
3.0SMCJ170	3.0SMCJ170C	HHQ	IHQ	170.0	189.0	231.0	1	5	304.0	9.9
3.0SMCJ170A	3.0SMCJ170CA	HHR	IHR	170.0	189.0	208.9	1	5	275.0	10.9
3.0SMCJ180	3.0SMCJ180C	HHS	HIS	180.0	198.0	242.0	1	5	322.0	9.3
3.0SMCJ180A	3.0SMCJ180CA	HHT	IHT	180.0	198.0	218.8	1	5	292.0	10.3
3.0SMCJ190	3.0SMCJ190C	HHU	IHU	190.0	209.0	255.4	1	5	340.0	8.8
3.0SMCJ190A	3.0SMCJ190CA	HHV	IHV	190.0	209.0	231.0	1	5	308.0	9.7
3.0SMCJ200	3.0SMCJ200C	HHW	IHW	200.0	220.0	268.8	1	5	358.0	8.4
3.0SMCJ200A	3.0SMCJ200CA	HHX	IHX	200.0	220.0	243.2	1	5	324.0	9.3
3.0SMCJ210	3.0SMCJ210C	HHY	IHY	210.0	231.0	282.3	1	5	376.0	8.0
3.0SMCJ210A	3.0SMCJ210CA	HHZ	IHZ	210.0	231.0	255.3	1	5	340.0	8.8
3.0SMCJ220	3.0SMCJ220C	HD	IID	220.0	242.0	295.7	1	5	394.0	7.6
3.0SMCJ220A	3.0SMCJ220CA	HE	IIE	220.0	242.0	267.5	1	5	356.0	8.4

NOTES: 'Suffix 'C' denotes bidirectional device. Suffix 'A' denotes 5% tolerance device, no suffix denotes 10% tolerance device .

1. For bidirectional devices having VR of 10 volts and under, the IR limit is doubled .