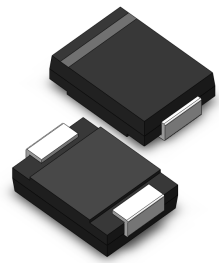
5.0SMDJ11A(CA) - 5.0SMDJ440A(CA)

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR DIODE

VOLTAGE RANGE: 11V - 440V
POWER: 5000Watts



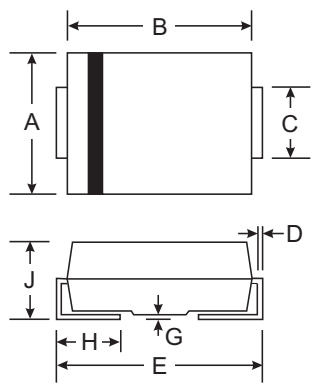
Features

- For surface mount application
- Built-in strain relief
- Excellent clamping capability
- Low profile package
- Fast response time: Typically less than
- 1.0ps from 0 volt to BV min.
  Typical I_R less than 1μA above 10V

Mechanical Data

- Case: SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.21 grams (approx.)

RoHS COMPLIANT



SMC/DO-214AB		
Dim	**Min**	**Max**
A	5.59	6.22
B	6.60	7.11
C	2.75	3.18
D	0.15	0.31
E	7.75	8.13
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics

T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

RATINGS	SYMBOL	VALUE	UNITS
Peak Power Dissipation at T_A=25°C, T_P=1ms(NOTE 1)	P_{PK}	Minimum 5000	Watts
Power Dissipation on infinite heatsink at T_L=75°C	P_D	6.5	Watts
Peak Forward Surge Current at 8.3ms Single Half Sine-Wave superimposed on rated load (JEDEC method) (NOTE 3)	I_{FSM}	300	Amps
Maximum Instantenous Forward Voltage at 100A for Unidirectional only	V_F	3.5/5.0	Volts
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

NOTES:
1. Non-repetitive current pulse per Fig. 3 and derated above T_A=25°C per Fig. 2.
2. 8.3ms single half sine-wave, duty cycle = 4 pulses per minute maximum.
3. V_F<3.5V for devices of V_{BR}<200V and V_F<5.0V for devices of V_{BR}>201V.

Part Number (Uni)	Part Number (Bi)	Device Marking Code		Reverse Standoff Voltage	Breakdown Voltage V_{BR} @ I_T			Maximum Reverse Leakage @ VR	Maximum Peak Pulse Current	Maximum Clamping Voltage @ Ipp
		Uni	Bi	VR (V)	Min (V)	Max (V)	I_T (mA)	IR (μA)	Ipp (A)	Vc (V)
5.0SMDJ11	5.0SMDJ11C	5PDW	5BDW	11.0	12.20	14.90	10	800	248.76	20.1
5.0SMDJ11A	5.0SMDJ11CA	5PDX	5BDX	11.0	12.20	13.50	10	800	274.73	18.2
5.0SMDJ12	5.0SMDJ12C	5PDY	5BDY	12.0	13.30	16.30	10	800	227.27	22.0
5.0SMDJ12A	5.0SMDJ12CA	5PDZ	5BDZ	12.0	13.30	14.70	10	800	251.26	19.9
5.0SMDJ13	5.0SMDJ13C	5PED	5BED	13.0	14.40	17.60	10	500	210.08	23.8
5.0SMDJ13A	5.0SMDJ13CA	5PEE	5BEE	13.0	14.40	15.90	10	500	232.56	21.5
5.0SMDJ14	5.0SMDJ14C	5PEF	5BEF	14.0	15.60	19.10	10	200	193.80	25.8
5.0SMDJ14A	5.0SMDJ14CA	5PEG	5BEG	14.0	15.60	17.20	10	200	215.52	23.2
5.0SMDJ15	5.0SMDJ15C	5PEH	5BEH	15.0	16.70	20.40	1	100	185.87	26.9
5.0SMDJ15A	5.0SMDJ15CA	5PEK	5BEK	15.0	16.70	18.50	1	100	204.92	24.4
5.0SMDJ16	5.0SMDJ16C	5PEL	5BEL	16.0	17.80	21.80	1	50	173.61	28.8
5.0SMDJ16A	5.0SMDJ16CA	5PEM	5BEM	16.0	17.80	19.70	1	50	192.31	26.0
5.0SMDJ17	5.0SMDJ17C	5PEN	5BEN	17.0	18.90	23.10	1	20	163.93	30.5
5.0SMDJ17A	5.0SMDJ17CA	5PEP	5BEP	17.0	18.90	20.90	1	20	181.16	27.6
5.0SMDJ18	5.0SMDJ18C	5PEQ	5BEQ	18.0	20.00	24.40	1	10	155.28	32.2
5.0SMDJ18A	5.0SMDJ18CA	5PER	5BER	18.0	20.00	22.10	1	10	171.23	29.2
5.0SMDJ19	5.0SMDJ19C	5PES	5BES	19.0	21.10	25.76	1	10	147.06	34.0
5.0SMDJ19A	5.0SMDJ19CA	5PET	5BET	19.0	21.10	23.30	1	10	162.34	30.8
5.0SMDJ20	5.0SMDJ20C	5PEU	5BEU	20.0	22.20	27.10	1	5	139.66	35.8
5.0SMDJ20A	5.0SMDJ20CA	5PEV	5BEV	20.0	22.20	24.50	1	5	154.32	32.4
5.0SMDJ22	5.0SMDJ22C	5PEW	5BEW	22.0	24.40	29.80	1	5	126.90	39.4
5.0SMDJ22A	5.0SMDJ22CA	5PEX	5BEX	22.0	24.40	26.90	1	5	140.85	35.5
5.0SMDJ24	5.0SMDJ24C	5PEY	5BEY	24.0	26.70	32.60	1	5	116.28	43.0
5.0SMDJ24A	5.0SMDJ24CA	5PEZ	5BEZ	24.0	26.70	29.50	1	5	128.53	38.9
5.0SMDJ26	5.0SMDJ26C	5PFD	5BFD	26.0	28.90	35.30	1	5	107.30	46.6
5.0SMDJ26A	5.0SMDJ26CA	5PFE	5BFE	26.0	28.90	31.90	1	5	118.76	42.1
5.0SMDJ28	5.0SMDJ28C	5PFF	5BFF	28.0	31.10	38.00	1	5	100.00	50.0
5.0SMDJ28A	5.0SMDJ28CA	5PFG	5BFG	28.0	31.10	34.40	1	5	110.13	45.4
5.0SMDJ30	5.0SMDJ30C	5PFH	5BFH	30.0	33.30	40.70	1	5	93.46	53.5
5.0SMDJ30A	5.0SMDJ30CA	5PFK	5BFK	30.0	33.30	36.80	1	5	103.31	48.4
5.0SMDJ33	5.0SMDJ33C	5PFL	5BFL	33.0	36.70	44.90	1	5	84.75	59.0
5.0SMDJ33A	5.0SMDJ33CA	5PFM	5BFM	33.0	36.70	40.60	1	5	93.81	53.3
5.0SMDJ36	5.0SMDJ36C	5PFN	5BFN	36.0	40.00	48.90	1	5	77.76	64.3
5.0SMDJ36A	5.0SMDJ36CA	5PFP	5BFP	36.0	40.00	44.20	1	5	86.06	58.1
5.0SMDJ40	5.0SMDJ40C	5PFQ	5BFQ	40.0	44.40	54.30	1	5	70.03	71.4
5.0SMDJ40A	5.0SMDJ40CA	5PFR	5BFR	40.0	44.40	49.10	1	5	77.52	64.5
5.0SMDJ43	5.0SMDJ43C	5PFS	5BFS	43.0	47.80	58.40	1	5	65.19	76.7
5.0SMDJ43A	5.0SMDJ43CA	5PFT	5BFT	43.0	47.80	52.80	1	5	72.05	69.4
5.0SMDJ45	5.0SMDJ45C	5PFU	5BFU	45.0	50.00	61.10	1	5	62.27	80.3
5.0SMDJ45A	5.0SMDJ45CA	5PFV	5BFV	45.0	50.00	55.30	1	5	68.78	72.7
5.0SMDJ48	5.0SMDJ48C	5PFW	5BFW	48.0	53.30	65.10	1	5	58.48	85.5
5.0SMDJ48A	5.0SMDJ48CA	5PFX	5BFX	48.0	53.30	58.90	1	5	64.60	77.4
5.0SMDJ51	5.0SMDJ51C	5PFY	5BFY	51.0	56.70	69.30	1	5	54.88	91.1
5.0SMDJ51A	5.0SMDJ51CA	5PFZ	5BFZ	51.0	56.70	62.70	1	5	60.68	82.4
5.0SMDJ54	5.0SMDJ54C	5PGD	5BGD	54.0	60.00	73.30	1	5	51.92	96.3
5.0SMDJ54A	5.0SMDJ54CA	5PGE	5BGE	54.0	60.00	66.30	1	5	57.41	87.1
5.0SMDJ58	5.0SMDJ58C	5PGF	5BGF	58.0	64.40	78.70	1	5	48.54	103.0
5.0SMDJ58A	5.0SMDJ58CA	5PGG	5BGG	58.0	64.40	71.20	1	5	53.42	93.6
5.0SMDJ60	5.0SMDJ60C	5PGH	5BGH	60.0	66.70	81.50	1	5	46.73	107.0
5.0SMDJ60A	5.0SMDJ60CA	5PGK	5BGK	60.0	66.70	73.70	1	5	51.65	96.8
5.0SMDJ64	5.0SMDJ64C	5PGL	5BGL	64.0	71.10	86.40	1	5	43.86	114.0
5.0SMDJ64A	5.0SMDJ64CA	5PGM	5BGM	64.0	71.10	78.60	1	5	48.54	103.0

Part Number (Uni)	Part Number (Bi)	Device Marking Code		Reverse Standoff Voltage	Breakdown Voltage V_{BR} @ I_T			Maximum Reverse Leakage @ VR	Maximum Peak Pulse Current	Maximum Clamping Voltage @ Ipp
		Uni	Bi	VR (V)	Min (V)	Max (V)	I_T (mA)	IR (μA)	Ipp (A)	Vc (V)
5.0SMDJ70	5.0SMDJ70C	5PGN	5BGN	70.0	77.80	95.10	1	5	40.00	125.0
5.0SMDJ70A	5.0SMDJ70CA	5PGP	5BGP	70.0	77.80	86.00	1	5	44.25	113.0
5.0SMDJ75	5.0SMDJ75C	5PGQ	5BGQ	75.0	83.30	102.00	1	5	37.31	134.0
5.0SMDJ75A	5.0SMDJ75CA	5PGR	5BGR	75.0	83.30	92.10	1	5	41.32	121.0
5.0SMDJ78	5.0SMDJ78C	5PGS	5BGS	78.0	86.70	106.00	1	5	35.97	139.0
5.0SMDJ78A	5.0SMDJ78CA	5PGT	5BGT	78.0	86.70	95.80	1	5	39.68	126.0
5.0SMDJ85	5.0SMDJ85C	5PGU	5BGU	85.0	94.40	115.00	1	5	33.11	151.0
5.0SMDJ85A	5.0SMDJ85CA	5PGV	5BGV	85.0	94.40	104.00	1	5	36.50	137.0
5.0SMDJ90	5.0SMDJ90C	5PGW	5BGW	90.0	100.00	122.00	1	5	31.25	160.0
5.0SMDJ90A	5.0SMDJ90CA	5PGX	5BGX	90.0	100.00	111.00	1	5	34.25	146.0
5.0SMDJ100	5.0SMDJ100C	5PGY	5BGY	100.0	111.00	136.00	1	5	27.93	179.0
5.0SMDJ100A	5.0SMDJ100CA	5PGZ	5BGZ	100.0	111.00	123.00	1	5	30.86	162.0
5.0SMDJ110	5.0SMDJ110C	5PHD	5BHD	110.0	122.00	149.00	1	5	25.51	196.0
5.0SMDJ110A	5.0SMDJ110CA	5PHE	5BHE	110.0	122.00	135.00	1	5	28.25	177.0
5.0SMDJ120	5.0SMDJ120C	5PHF	5BHF	120.0	133.00	163.00	1	5	23.36	214.0
5.0SMDJ120A	5.0SMDJ120CA	5PHG	5BHG	120.0	133.00	147.00	1	5	25.91	193.0
5.0SMDJ130	5.0SMDJ130C	5PHH	5BHH	130.0	144.00	176.00	1	5	21.65	231.0
5.0SMDJ130A	5.0SMDJ130CA	5PHK	5BHK	130.0	144.00	159.00	1	5	23.92	209.0
5.0SMDJ150	5.0SMDJ150C	5PHL	5BHL	150.0	167.00	204.00	1	5	18.66	268.0
5.0SMDJ150A	5.0SMDJ150CA	5PHM	5BHM	150.0	167.00	185.00	1	5	20.58	243.0
5.0SMDJ160	5.0SMDJ160C	5PHN	5BHN	160.0	178.00	218.00	1	5	17.42	287.0
5.0SMDJ160A	5.0SMDJ160CA	5PHP	5BHP	160.0	178.00	197.00	1	5	19.31	259.0
5.0SMDJ170	5.0SMDJ170C	5PHQ	5BHQ	170.0	189.00	231.00	1	5	16.45	304.0
5.0SMDJ170A	5.0SMDJ170CA	5PHR	5BHR	170.0	189.00	209.00	1	5	18.18	275.0
5.0SMDJ180	5.0SMDJ180C	5PHS	5BHS	180.0	200.00	244.00	1	5	15.52	322.2
5.0SMDJ180A	5.0SMDJ180CA	5PHT	5BHT	180.0	200.00	220.00	1	5	17.15	291.6
5.0SMDJ190	5.0SMDJ190C	5PHU	5BHU	190.0	211.00	258.00	1	5	14.70	340.1
5.0SMDJ190A	5.0SMDJ190CA	5PHV	5BHV	190.0	211.00	232.00	1	5	16.24	307.8
5.0SMDJ200A	5.0SMDJ200CA	5PHW	5BHW	200.0	224.00	247.00	1	5	15.43	324.0
5.0SMDJ220A	5.0SMDJ220CA	5PHX	5BHX	220.0	246.00	272.00	1	5	14.04	356.0
5.0SMDJ250A	5.0SMDJ250CA	5PHZ	5BHZ	250.0	279.00	309.00	1	5	12.35	405.0
5.0SMDJ300A	5.0SMDJ300CA	5PJE	5BJE	300.0	335.00	371.00	1	5	10.29	486.0
5.0SMDJ350A	5.0SMDJ350CA	5PJG	5BJG	350.0	391.00	432.00	1	5	8.82	567.0
5.0SMDJ400A	5.0SMDJ400CA	5PJK	5BJK	400.0	447.00	494.00	1	5	7.72	648.0
5.0SMDJ440A	5.0SMDJ440CA	5PJM	5BJM	440.0	492.00	543.00	1	5	7.01	713.0

RATING AND CHARACTERISTIC CURVES (5.0SMDJ SERIES)

FIG.1-PEAK PULSE POWER DERATING CURVE

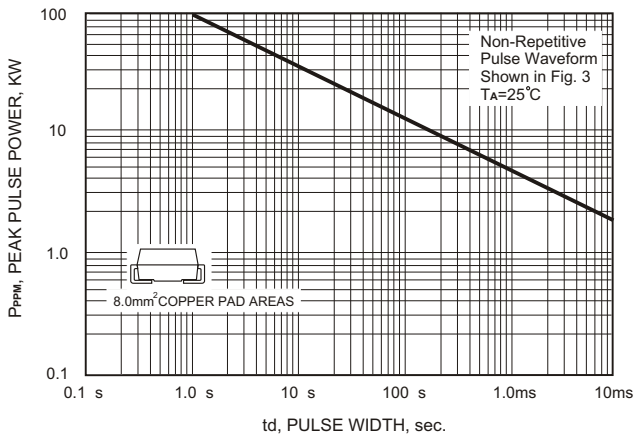


FIG.2-PULSE DERATING CURVE

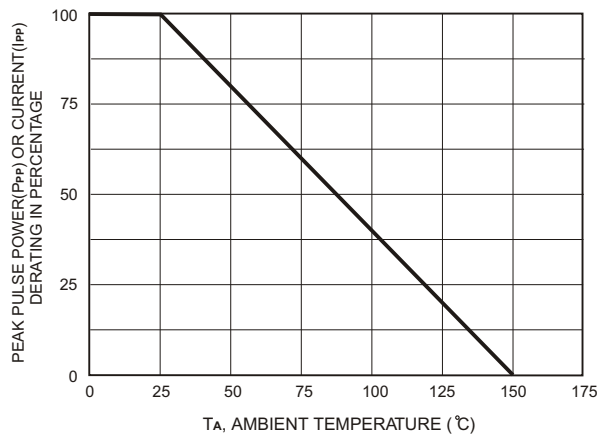


FIG.3-PULSE WAVE FORM

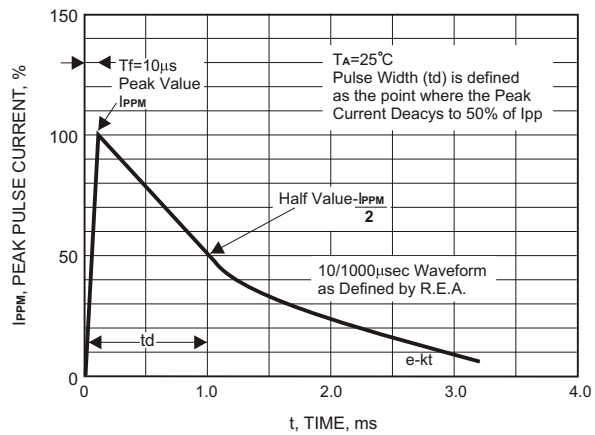


FIG.4-TYPICAL JUNCTION CAPACITANCE

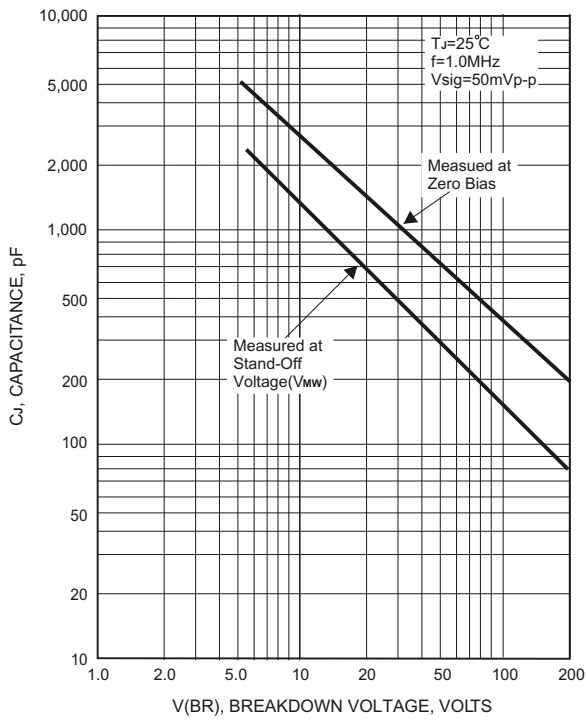


FIG.5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT