DESCRIPTION

The SMDJ series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

The SMDJ is available in SMC package

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications in order to optimize board space
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Excellent clamping capability
- Repetition Rate (duty cycle):0.01%
- Fast response time: typically less than 1.0ps
- Typical IR less than 1mA above 10V
- High temperature soldering guaranteed: 260°C/10 seconds,
- Available in SMC package

ORDERING INFORMATION

Package Type	Part Number	
	Bi-directional	
SMC	SMDJ5.0CA	SMDJ43CA
	SMDJ6.0CA	SMDJ45CA
	SMDJ6.5CA	SMDJ48CA
	SMDJ7.0CA	SMDJ51CA
	SMDJ7.5CA	SMDJ54CA
	SMDJ8.0CA	SMDJ58CA
	SMDJ8.5CA	SMDJ60CA
	SMDJ9.0CA	SMDJ64CA
	SMDJ10CA	SMDJ70CA
	SMDJ11CA	SMDJ75CA
	SMDJ12CA	SMDJ78CA
	SMDJ13CA	SMDJ85CA
	SMDJ14CA	SMDJ90CA
	SMDJ15CA	SMDJ100CA
	SMDJ16CA	SMDJ110CA
	SMDJ17CA	SMDJ120CA
	SMDJ18CA	SMDJ130CA
	SMDJ20CA	SMDJ150CA
	SMDJ22CA	SMDJ160CA
	SMDJ24CA	SMDJ170CA
	SMDJ26CA	SMDJ180CA
	SMDJ28CA	SMDJ190CA
	SMDJ30CA	SMDJ200CA
	SMDJ33CA	SMDJ220CA
	SMDJ36CA	SMDJ250CA
	SMDJ40CA	
Note	SPQ: 500pcs/ Reel	
AiT provides all RoHS Compliant Products		

MECHANICAL DATA

Case: JEDEC DO-214AB (SMC)
Terminals: Plated leads, solderable per MIL-STD-202, Method 208
Polarity: Without Color band denoted cathode
Mounting Position: Any
Weight: 0.26g

PIN DESCRIPTION

ABSOLUTE MAXIMUM RATINGS

T_A = 25°C
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%.

P_{PPK}, Peak Power Dissipation at T_A=25°C, T_P=1ms[NOTE1]	Minimum 3000W
$P_{M(AV)}$, Steady State Power Dissipation at T_L=75°C[NOTE2]	6.5W
T_J, Operating Temperature Range	-55°C~+150°C
T_{STG}, Storage Temperature Range	-55°C~+150°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

NOTE1: Non-repetitive current pulse, per Fig. 3 and derated above T_A=25°C per Fig. 2.

NOTE2: Mounted on 0.31 x 0.31" (8.0 x 8.0mm) copper pads to each terminal.

NOTE3: 8.3ms single half sine-wave, duty cycle= 4 pulses per minutes maximum

ELECTRICAL CHARACTERISTICS

Part Number	Reverse Stand-off Voltage	Breakdown Voltage Min.@I_T	Breakdown Voltage Max. @I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RRM}
	V_{RWM} (V)	V_{BR} (V)	V_{BR} (V)	I_T (mA)	V_C (V)	I_{PP} (A)	I_R (uA)
SMDJ5.0CA	5.00	6.40	7.00	10.00	9.20	326.1	800
SMDJ6.0CA	6.00	6.67	7.37	10.00	10.30	291.3	800
SMDJ6.5CA	6.50	7.22	7.98	10.00	11.20	267.9	500
SMDJ7.0CA	7.00	7.78	8.60	10.00	12.00	250.0	200
SMDJ7.5CA	7.50	8.33	9.21	1.00	12.90	232.6	100
SMDJ8.0CA	8.00	8.89	9.83	1.00	13.60	220.6	50
SMDJ8.5CA	8.50	9.44	10.40	1.00	14.40	208.3	20
SMDJ9.0CA	9.00	10.00	11.10	1.00	15.40	194.8	10
SMDJ10CA	10.00	11.10	12.30	1.00	17.00	176.5	1
SMDJ11CA	11.00	12.20	13.50	1.00	18.20	164.8	1
SMDJ12CA	12.00	13.30	14.70	1.00	19.90	150.8	1
SMDJ13CA	13.00	14.40	15.90	1.00	21.50	139.5	1
SMDJ14CA	14.00	15.60	17.20	1.00	23.20	129.3	1
SMDJ15CA	15.00	16.70	18.50	1.00	24.40	123.0	1
SMDJ16CA	16.00	17.80	19.70	1.00	26.00	115.4	1
SMDJ17CA	17.00	18.90	20.90	1.00	27.60	108.7	1
SMDJ18CA	18.00	20.00	22.10	1.00	29.20	102.7	1
SMDJ20CA	20.00	22.20	24.50	1.00	32.40	92.6	1
SMDJ22CA	22.00	24.40	26.90	1.00	35.50	84.5	1
SMDJ24CA	24.00	26.70	29.50	1.00	38.90	77.1	1
SMDJ26CA	26.00	28.90	31.90	1.00	42.10	71.3	1
SMDJ28CA	28.00	31.10	34.40	1.00	45.40	66.1	1
SMDJ30CA	30.00	33.30	36.80	1.00	48.40	62.0	1
SMDJ33CA	33.00	36.70	40.60	1.00	53.30	56.3	1

Part Number	Reverse Stand-off Voltage	Breakdown Voltage Min.@I_T	Breakdown Voltage Max. @I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RRM}
	V_{RWM} (V)	V_{BR} (V)	V_{BR} (V)	I_T (mA)	V_C (V)	I_{PP} (A)	I_R (uA)
SMDJ36CA	36.00	40.00	44.20	1.00	58.10	51.6	1
SMDJ40CA	40.00	44.40	49.10	1.00	64.50	45.5	1
SMDJ43CA	43.00	47.80	52.80	1.00	69.40	43.2	1
SMDJ45CA	45.00	50.00	55.30	1.00	72.70	41.3	1
SMDJ48CA	48.00	53.30	58.90	1.00	77.40	38.8	1
SMDJ51CA	51.00	56.70	62.70	1.00	82.40	36.4	1
SMDJ54CA	54.00	60.00	66.30	1.00	87.10	34.4	1
SMDJ58CA	58.00	64.40	71.20	1.00	93.60	32.1	1
SMDJ60CA	60.00	66.70	73.70	1.00	96.80	31.0	1
SMDJ64CA	64.00	71.10	78.60	1.00	103.00	29.1	1
SMDJ70CA	70.00	77.80	86.00	1.00	113.00	26.5	1
SMDJ75CA	75.00	83.30	92.10	1.00	121.00	24.8	1
SMDJ78CA	78.00	86.70	95.80	1.00	126.00	23.8	1
SMDJ85CA	85.00	94.40	104.00	1.00	137.00	21.9	1
SMDJ90CA	90.00	100.00	111.00	1.00	146.00	20.5	1
SMDJ100CA	100.00	111.00	123.00	1.00	162.00	18.5	1
SMDJ110CA	110.00	122.00	135.00	1.00	177.00	16.9	1
SMDJ120CA	120.00	133.00	147.00	1.00	193.00	15.5	1
SMDJ130CA	130.00	144.00	159.00	1.00	209.00	14.4	1
SMDJ150CA	150.00	167.00	185.00	1.00	243.00	12.3	1
SMDJ160CA	160.00	178.00	197.00	1.00	259.00	11.6	1
SMDJ170CA	170.00	189.00	209.00	1.00	275.00	10.9	1
SMDJ180CA	180.00	198.00	221.00	1.00	291.00	10.3	1
SMDJ190CA	190.00	209.00	233.00	1.00	307.00	9.8	1
SMDJ200CA	200.00	220.00	246.00	1.00	324.00	9.3	1
SMDJ220CA	220.00	246.00	272.00	1.00	356.00	8.4	1
SMDJ250CA	250.00	279.00	309.00	1.00	405.00	7.4	1

TYPICAL CHARACTERISTICS

Figure 1. Peak Pulse Power Rating Curve

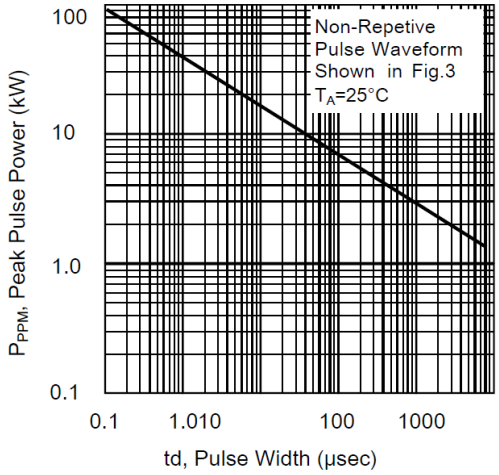


Figure 2. Pulse Derating Curve

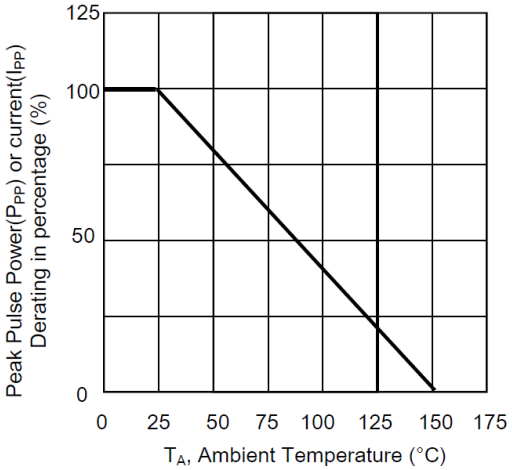


Figure 3. Pulse Waveform

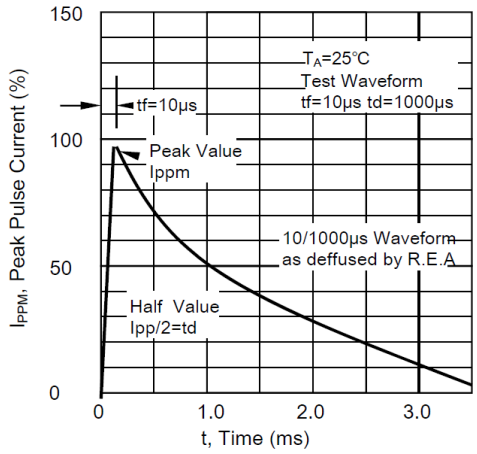
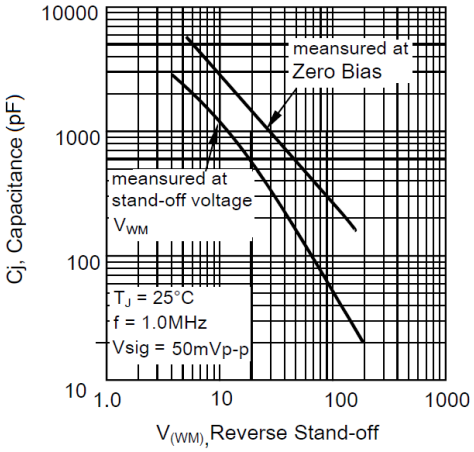
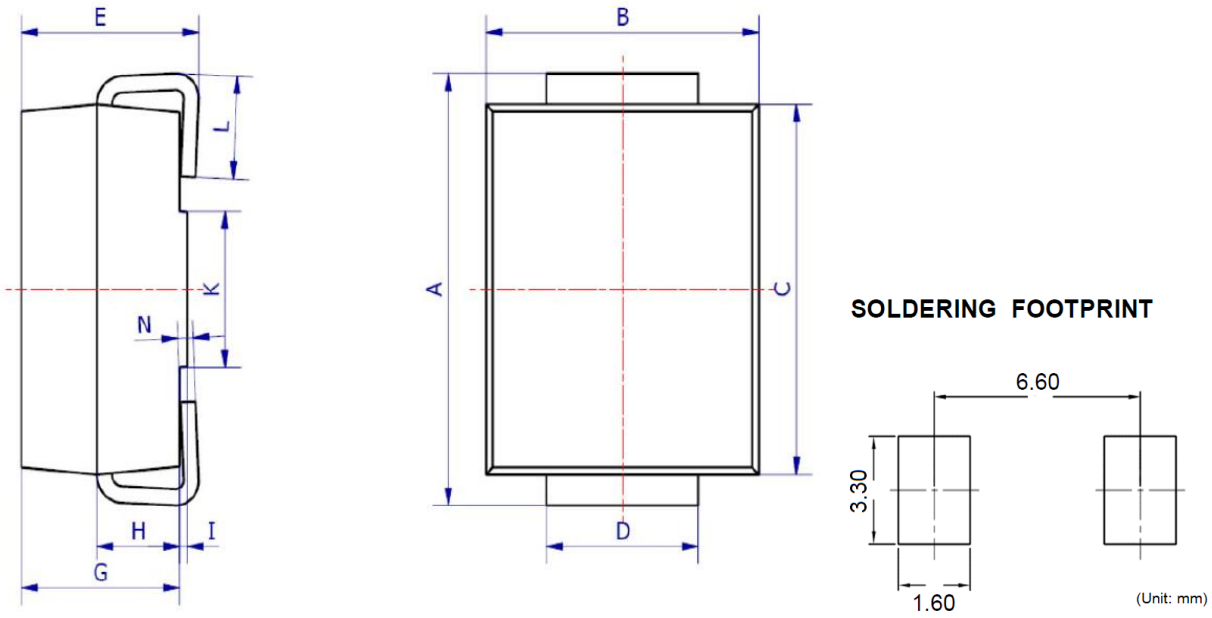


Figure 4. Typical Junction Capacitance



PACKAGE INFORMATION

Dimension in SMC Package (Unit: mm)



DIM	MILLIMETERS	
	MIN	MAX
A	7.70	8.30
B	5.85	6.25
C	6.65	7.05
D	2.80	3.20
E	2.45	2.85
G	2.10	2.50
H	1.00	1.40
I	0.05	0.15
K	4.30	4.70
L	1.00	1.50
N	0.10	0.30

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