

DO-214AB(SMC)

Dimensions in inches and (millimeters)



Ordering Information	
Part Number	Compound
SMDJ SERIES	General
SMDJ SERIES-H	Halogen Free
SMDJ SERIES-Q	Automotive

PRIMARY CHARACTERISTICS	
V _{BR}	5.0~440V
P _{PPM}	3000W
P _D	6W
T _J max	150°C

Features

- Constructed with Glass Passivated Die
- 3000W peak pulse power Dissipation
- Excellent clamping capability
- Uni and Bidirectional unit
- Very fast response time
- Component in accordance to RoHS 2002/95/EC
- AEC-Q101 Qualified

Mechanical Data

- Cases: DO-214AB(SMC)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead free Plating (Tin Finish)
Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.231 grams (approximate)

MAXIMUM RATINGS (TA=25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Peak power dissipation with a 10/1000µs waveform	P _{PP}	Minimum 3000	W
Power dissipation on infinite heatsink at TL=75°C	P _D	6	W
Peak forward surge current, 8.3ms single half sine-wave unidirectional only(1)	I _{FSM}	300	A
Maximum instantaneous forward voltage at 100 A for unidirectional only(2)	V _F	3.5 / 5.0	V
Operating and Storage Temperature Range	T _J , T _{STG}	-55 ~ +150	°C

Note:

(1) Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

(2) V_F < 3.5V for devices of V_{BR} < 200V and V_F < 5.0V for devices of V_{BR} > 201V

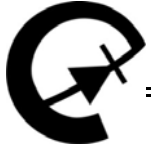


SMDJ SERIES



Transient Voltage Suppressors(3000W)

Part Number		Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min@I _T	Breakdown Voltage Max@I _T	Test Current	Max Clamping Voltage V _C @I _{PP}	Peak Pulse Current	Reverse Leakage I _R @V _{RRM}
DIRECTIONAL		DIRECTIONAL		V _{RRM}	V _{BR}	V _{BR}	I _T	V _C	I _{PP}	I _R
UNI	BI	UNI	BI	V	V	V	mA	V	A	uA
SMDJ5.0A	SMDJ5.0CA	3DJ5.0A	3DJ5.0CA	5.0	6.40	7.00	10.0	9.2	326.09	1000
SMDJ6.0A	SMDJ6.0CA	3DJ6.0A	3DJ6.0CA	6.0	6.67	7.37	10.0	10.3	291.26	1000
SMDJ6.5A	SMDJ6.5CA	3DJ6.5A	3DJ6.5CA	6.5	7.22	7.98	10.0	11.2	267.86	500
SMDJ7.0A	SMDJ7.0CA	3DJ7.0A	3DJ7.0CA	7.0	7.78	8.60	10.0	12.0	250.00	200
SMDJ7.5A	SMDJ7.5CA	3DJ7.5A	3DJ7.5CA	7.5	8.33	9.21	1.0	12.9	232.56	100
SMDJ8.0A	SMDJ8.0CA	3DJ8.0A	3DJ8.0CA	8.0	8.89	9.83	1.0	13.6	220.59	50
SMDJ8.5A	SMDJ8.5CA	3DJ8.5A	3DJ8.5CA	8.5	9.44	10.40	1.0	14.4	208.33	25
SMDJ9.0A	SMDJ9.0CA	3DJ9.0A	3DJ9.0CA	9.0	10.00	11.10	1.0	15.4	194.87	10
SMDJ10A	SMDJ10CA	3DJ10A	3DJ10CA	10.0	11.10	12.30	1.0	17.0	176.47	5
SMDJ11A	SMDJ11CA	3DJ11A	3DJ11CA	11.0	12.20	13.50	1.0	18.2	164.84	5
SMDJ12A	SMDJ12CA	3DJ12A	3DJ12CA	12.0	13.30	14.70	1.0	19.9	150.75	5
SMDJ13A	SMDJ13CA	3DJ13A	3DJ13CA	13.0	14.40	15.90	1.0	21.5	139.53	5
SMDJ14A	SMDJ14CA	3DJ14A	3DJ14CA	14.0	15.60	17.20	1.0	23.2	129.31	5
SMDJ15A	SMDJ15CA	3DJ15A	3DJ15CA	15.0	16.70	18.50	1.0	24.4	122.95	5
SMDJ16A	SMDJ16CA	3DJ16A	3DJ16CA	16.0	17.80	19.70	1.0	26.0	115.38	5
SMDJ17A	SMDJ17CA	3DJ17A	3DJ17CA	17.0	18.90	20.90	1.0	27.6	108.70	5
SMDJ18A	SMDJ18CA	3DJ18A	3DJ18CA	18.0	20.00	22.10	1.0	29.2	102.74	5
SMDJ19A	SMDJ19CA	3DJ19A	3DJ19CA	19.0	21.13	23.30	1.0	30.8	97.50	5
SMDJ20A	SMDJ20CA	3DJ20A	3DJ20CA	20.0	22.20	24.50	1.0	32.4	97.47	5
SMDJ22A	SMDJ22CA	3DJ22A	3DJ22CA	22.0	24.40	26.90	1.0	35.5	84.51	5
SMDJ24A	SMDJ24CA	3DJ24A	3DJ24CA	24.0	26.70	29.50	1.0	38.9	77.12	5
SMDJ26A	SMDJ26CA	3DJ26A	3DJ26CA	26.0	28.90	31.90	1.0	42.1	71.26	5
SMDJ28A	SMDJ28CA	3DJ28A	3DJ28CA	28.0	31.10	34.40	1.0	45.4	66.08	5
SMDJ30A	SMDJ30CA	3DJ30A	3DJ30CA	30.0	33.30	36.80	1.0	48.4	61.98	5
SMDJ33A	SMDJ33CA	3DJ33A	3DJ33CA	33.0	36.70	40.60	1.0	53.3	56.29	5
SMDJ36A	SMDJ36CA	3DJ36A	3DJ36CA	36.0	40.00	44.20	1.0	58.1	51.64	5
SMDJ40A	SMDJ40CA	3DJ40A	3DJ40CA	40.0	44.40	49.10	1.0	64.5	46.51	5
SMDJ43A	SMDJ43CA	3DJ43A	3DJ43CA	43.0	47.80	52.80	1.0	69.4	43.23	5
SMDJ45A	SMDJ45CA	3DJ45A	3DJ45CA	45.0	50.00	55.30	1.0	72.7	41.27	5
SMDJ48A	SMDJ48CA	3DJ48A	3DJ48CA	48.0	53.30	58.90	1.0	77.4	38.76	5
SMDJ51A	SMDJ51CA	3DJ51A	3DJ51CA	51.0	56.70	62.70	1.0	82.4	36.41	5
SMDJ54A	SMDJ54CA	3DJ54A	3DJ54CA	54.0	60.00	66.30	1.0	87.1	34.44	5
SMDJ58A	SMDJ58CA	3DJ58A	3DJ58CA	58.0	64.40	71.20	1.0	93.6	32.05	5
SMDJ60A	SMDJ60CA	3DJ60A	3DJ60CA	60.0	66.70	73.70	1.0	96.8	30.99	5
SMDJ64A	SMDJ64CA	3DJ64A	3DJ64CA	64.0	71.10	78.60	1.0	103.0	29.13	5
SMDJ70A	SMDJ70CA	3DJ70A	3DJ70CA	70.0	77.80	86.00	1.0	113.0	26.55	5
SMDJ75A	SMDJ75CA	3DJ75A	3DJ75CA	75.0	83.30	92.10	1.0	121.0	24.79	5
SMDJ78A	SMDJ78CA	3DJ78A	3DJ78CA	78.0	86.70	95.80	1.0	126.0	23.81	5
SMDJ80A	SMDJ80CA	3DJ80A	3DJ80CA	80.0	88.80	97.60	1.0	129.6	23.15	5
SMDJ85A	SMDJ85CA	3DJ85A	3DJ85CA	85.0	94.40	104.00	1.0	137.0	21.90	5
SMDJ90A	SMDJ90CA	3DJ90A	3DJ90CA	90.0	100.00	111.00	1.0	146.0	20.55	5



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DIRECTIONAL		DIRECTIONAL		V _{RRM}	V _{BR}	V _{BR}	I _T	V _C	I _{PP}	I _R
UNI	BI	UNI	BI	V	V	V	mA	V	A	uA
SMDJ100A	SMDJ100CA	3DJ100A	3DJ100CA	100.0	111.00	123.00	1.0	162.0	18.52	5
SMDJ110A	SMDJ110CA	3DJ110A	3DJ110CA	110.0	122.00	135.00	1.0	177.0	16.95	5
SMDJ120A	SMDJ120CA	3DJ120A	3DJ120CA	120.0	133.00	147.00	1.0	193.0	15.54	5
SMDJ130A	SMDJ130CA	3DJ130A	3DJ130CA	130.0	144.00	159.00	1.0	209.0	14.35	5
SMDJ140A	SMDJ140CA	3DJ140A	3DJ140CA	140.0	155.00	171.00	1.0	226.8	13.23	5
SMDJ150A	SMDJ150CA	3DJ150A	3DJ150CA	150.0	167.00	185.00	1.0	243.0	12.35	5
SMDJ160A	SMDJ160CA	3DJ160A	3DJ160CA	160.0	178.00	197.00	1.0	259.0	11.58	5
SMDJ170A	SMDJ170CA	3DJ170A	3DJ170CA	170.0	189.00	209.00	1.0	275.0	10.91	5
SMDJ180A	SMDJ180CA	3DJ180A	3DJ180CA	180.0	200.00	220.00	1.0	291.6	10.29	5
SMDJ190A	SMDJ190CA	3DJ190A	3DJ190CA	190.0	211.00	232.00	1.0	307.8	9.75	5
SMDJ200A	SMDJ200CA	3DJ200A	3DJ200CA	200.0	224.00	247.00	1.0	324.0	9.26	5
SMDJ220A	SMDJ220CA	3DJ220A	3DJ220CA	220.0	246.00	272.00	1.0	356.0	8.43	5
SMDJ250A	SMDJ250CA	3DJ250A	3DJ250CA	250.0	279.00	309.00	1.0	405.0	7.41	5
SMDJ300A	SMDJ300CA	3DJ300A	3DJ300CA	300.0	335.00	371.00	1.0	486.0	6.17	5
SMDJ350A	SMDJ350CA	3DJ350A	3DJ350CA	350.0	391.00	432.00	1.0	567.0	5.29	5
SMDJ400A	SMDJ400CA	3DJ400A	3DJ400CA	400.0	447.00	494.00	1.0	648.0	4.63	5
SMDJ440A	SMDJ440CA	3DJ440A	3DJ440CA	440.0	492.00	543.00	1.0	713.0	4.21	5

Note:

1. Suffix 'A ' denotes 5% tolerance device.
2. Add suffix ' CA ' after part number to specify Bi-directional devices.
3. For Bi-Directional devices having VR of 10 volts and under, the IR limit is double .



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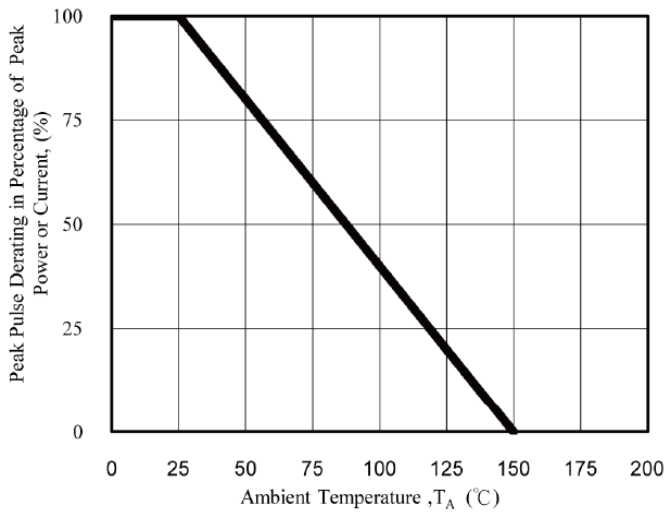


Fig. 1 - Pulse Derating Curve

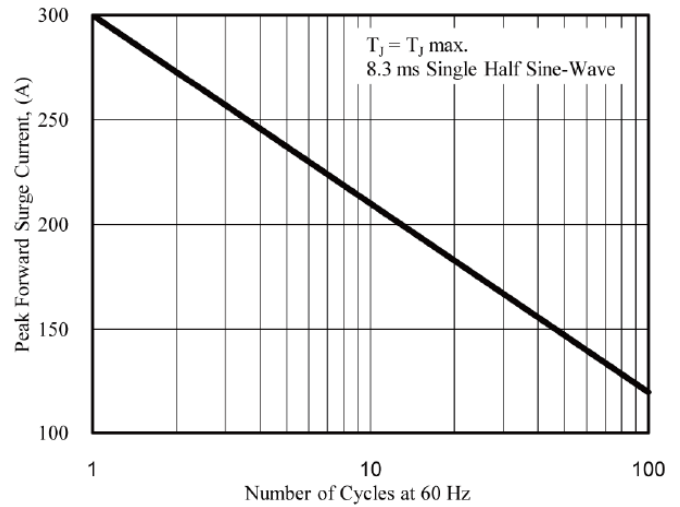


Fig. 2 - Maximum Non-Repetitive Surge Current

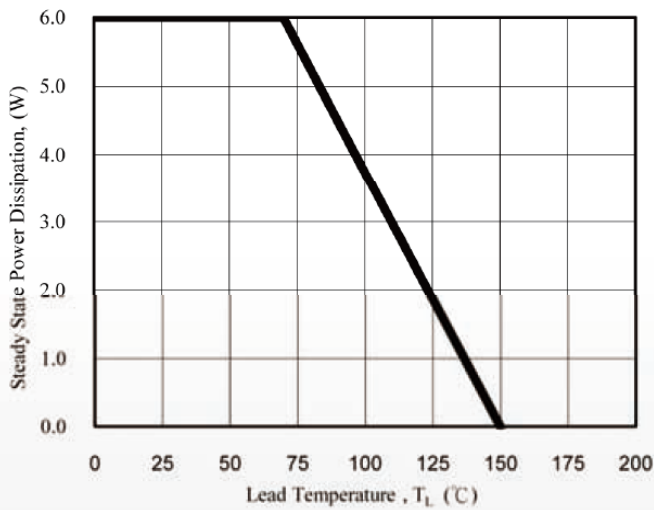


Fig. 3 - Steady State Power Derating Curve

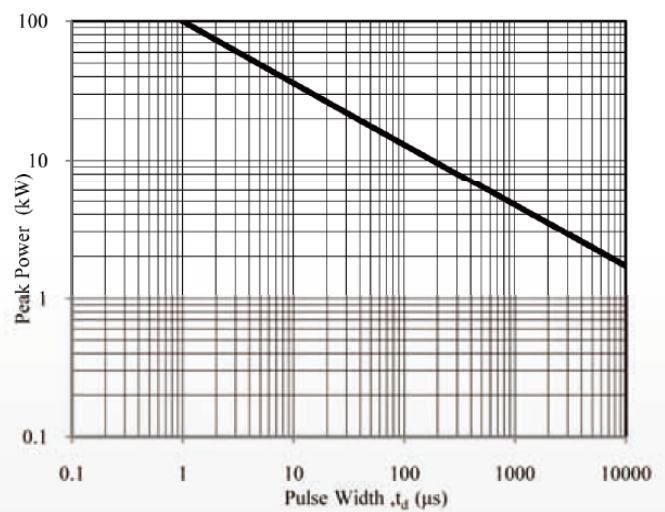


Fig. 4 - Peak Pulse Power Rating Curve

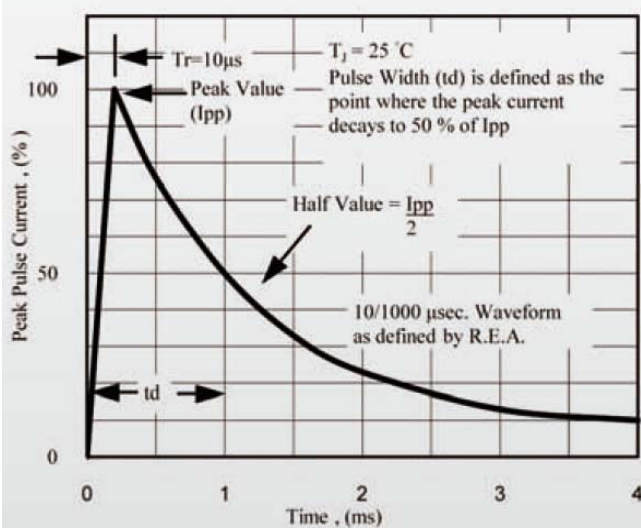


Fig. 5 - Pulse Waveform

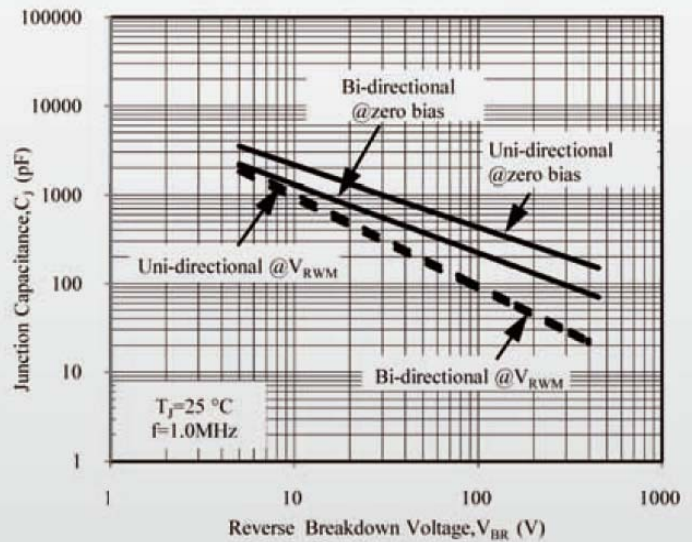


Fig. 6 - Typical Junction Capacitance