FEATURES

SMC(DO-214AB)

- For surface mounted application
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Excellent clamping capability
- Fast response time: Typically less than 1.0ps from 0 volt to BV min.
- Typical I_R less than 1μA above 10V '
- High temperature soldering guaranteed:260°C/ 10 seconds at terminals
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- 1500 watts peak pulse power capability with a 10 x 1000 uswaveform by 0.01% duty cycle

MECHANICAL DATA

- Case: Molded plastic
- Terminals: Solder plated
- Polarity: Indicated by cathode band
- Standard packaging: 12mm tape (EIA STD RS-481)
- Weight: 0.007ounce,0.21 grams.

DEVICES FOR BIPOLAR APPLICATION

For bidirectional use C or CA suffix for types SMCJ5.0 thru types SMCJ440 (e.g.SMCJ5.0CA, SMCJ440CA),electrical characteristics apply in both directions.

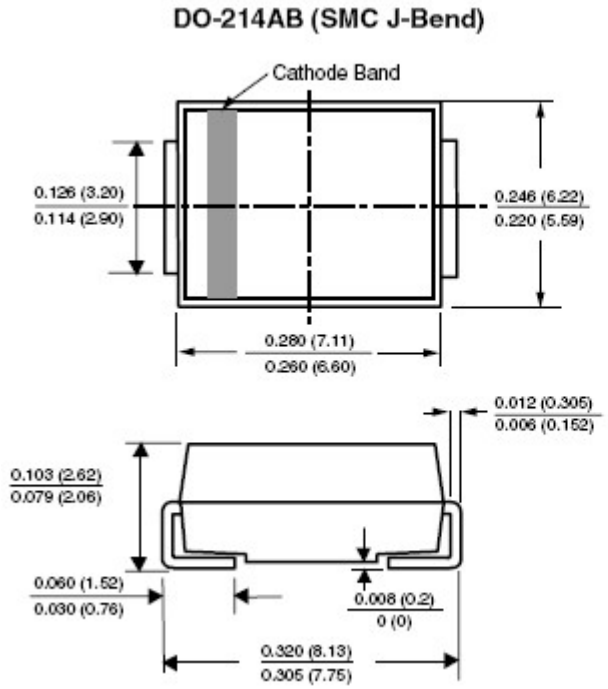
MAXIMUM RATINGS AND CHARACTERISTICS

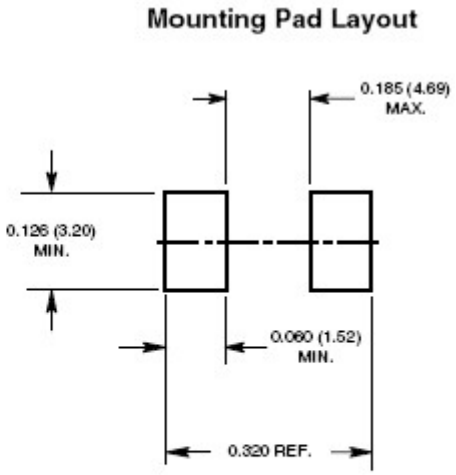
Ratings at 25 ambient temperature unless otherwise specified.

Type Number	Symbol	Value	Units
Peak Power Dissipation at TA=25°C, Tp=1ms(Note 1)	P_{PPM}	Minimum 1500	Watts
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) (Note 2, 3) - Unidirectional Only	I_{FSM}	200	Amps
Maximum Instantaneous Forward Voltage at 100A for Unidirectional Only	V_F	3.5/5.0	Volts
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to + 150	°C

Notes: 1. Non-repetitive Current Pulse Per Fig. 3 and Derated above T_A=25°C Per Fig. 2.
2. Mounted on 5.0mm² (.013 mm Thick) Copper Pads to Each Terminal.
3. 8.3ms Single Half Sine-wave or Equivalent Square Wave, Duty Cycle=4 pulses Per Minute Maximum.

PACKAGE DIMENSIONS





ELECTRICAL CHARACTERISTICS

Part Number		Reverse Stand-Off Voltage	Breakdown Voltage @IT		Test Current	Maximum Clamping Voltage @IPP	Peak Pulse Current	Reverse Leakage @VRWM
(UNI)	(BI)	VRWM(V)	VBR MIN.(V)	VBR MAX.(V)	IT(mA)	VC(V)	IPP(A)	IR(μA)
SCJ5.0A	SMCJ5.0CA	5.0	6.40	7.25	10	9.2	163.0	800
SMCJ6.0A	SMCJ6.0CA	6.0	6.67	7.67	10	10.3	145.7	800
SMCJ6.5A	SMCJ6.5CA	6.5	7.22	8.30	10	11.2	134.0	500
SMCJ7.0A	SMCJ7.0CA	7.0	7.78	8.95	10	12	125.0	200
SMCJ7.5A	SMCJ7.5CA	7.5	8.33	9.58	1	12.9	116.3	100
SMCJ8.0A	SMCJ8.0CA	8.0	8.89	10.23	1	13.6	110.3	50
SMCJ8.5A	SMCJ8.5CA	8.5	9.44	10.82	1	14.4	104.2	20
SMCJ9.0A	SMCJ9.0CA	9.0	10.00	11.50	1	15.4	97.4	10
SMCJ10A	SMCJ10CA	10.0	11.10	12.80	1	17	88.3	5

Part Number		Reverse Stand-Off Voltage	Breakdown Voltage @IT		Test Current	Maximum Clamping Voltage @IPP	Peak Pulse Current	Reverse Leakage @VRWM
(UNI)	(BI)	VRWM(V)	VBR MIN.(V)	VBR MAX.(V)	IT(mA)	VC(V)	IPP(A)	IR(μA)
SMCJ11A	SMCJ11CA	11.0	12.20	14.00	1	18.2	82.5	1
SMCJ12A	SMCJ12CA	12.0	13.30	15.30	1	19.9	75.4	1
SMCJ13A	SMCJ13CA	13.0	14.40	16.50	1	21.5	69.8	1
SMCJ14A	SMCJ14CA	14.0	15.60	17.90	1	23.2	64.7	1
SMCJ15A	SMCJ15CA	15.0	16.70	19.20	1	24.4	61.5	1
SMCJ16A	SMCJ16CA	16.0	17.80	20.50	1	26	57.7	1
SMCJ17A	SMCJ17CA	17.0	18.90	21.70	1	27.6	54.4	1
SMCJ18A	SMCJ18CA	18.0	20.00	23.30	1	29.2	51.4	1
SMCJ20A	SMCJ20CA	20.0	22.20	25.50	1	32.4	46.3	1
SMCJ22A	SMCJ22CA	22.0	24.40	28.00	1	35.5	42.3	1
SMCJ24A	SMCJ24CA	24.0	26.70	30.70	1	38.9	38.6	1
SMCJ26A	SMCJ26CA	26.0	28.90	33.20	1	42.1	35.7	1
SMCJ28A	SMCJ28CA	28.0	31.10	35.80	1	45.2	33.1	1
SMCJ30A	SMCJ30CA	30.0	33.30	38.30	1	48.4	31.0	1
SMCJ33A	SMCJ33CA	33.0	36.70	42.20	1	53.3	28.2	1
SMCJ36A	SMCJ36CA	36.0	40.00	46.00	1	58.1	25.9	1
SMCJ40A	SMCJ40CA	40.0	44.40	51.10	1	64.5	23.3	1
SMCJ43A	SMCJ43CA	43.0	47.80	54.90	1	69.4	21.7	1
SMCJ45A	SMCJ45CA	45.0	50.00	57.50	1	72.7	20.6	1
SMCJ48A	SMCJ48CA	48.0	53.30	61.30	1	77.4	19.4	1
SMCJ51A	SMCJ51CA	51.0	56.70	65.20	1	82.4	18.2	1
SMCJ54A	SMCJ54CA	54.0	60.00	69.00	1	87.1	17.3	1
SMCJ58A	SMCJ58CA	58.0	64.40	74.10	1	93.6	16.1	1
SMCJ60A	SMCJ60CA	60.0	66.70	76.70	1	96.8	15.5	1
SMCJ64A	SMCJ64CA	64.0	71.10	81.80	1	103	14.6	1
SMCJ70A	SMCJ70CA	70.0	77.80	89.50	1	113	13.3	1

Part Number		Reverse Stand-Off Voltage	Breakdown Voltage @IT		Test Current	Maximum Clamping Voltage @IPP	Peak Pulse Current	Reverse Leakage @VRWM
(UNI)	(BI)	VRWM(V)	VBR MIN.(V)	VBR MAX.(V)	IT(mA)	VC(V)	IPP(A)	IR(μA)
SMCJ75A	SMCJ75CA	75.0	83.30	95.80	1	121	12.4	1
SMCJ78A	SMCJ78CA	78.0	86.70	99.70	1	126	11.9	1
SMCJ85A	SMCJ85CA	85.0	94.40	108.20	1	137	11.0	1
SMCJ90A	SMCJ90CA	90.0	100.00	115.50	1	146	10.3	1
SMCJ100A	SMCJ100CA	100.0	111.00	128.00	1	162	9.3	1
SMCJ110A	SMCJ110CA	110.0	122.00	140.50	1	177	8.5	1
SMCJ120A	SMCJ120CA	120.0	133.00	153.00	1	193	7.8	1
SMCJ130A	SMCJ130CA	130.0	144.00	165.50	1	209	7.2	1
SMCJ150A	SMCJ150CA	150.0	167.00	192.50	1	243	6.2	1
SMCJ160A	SMCJ160CA	160.0	178.00	205.00	1	259	5.8	1
SMCJ170A	SMCJ170CA	170.0	189.00	217.50	1	275	5.5	1
SMCJ180A	SMCJ180CA	180.0	201.00	230.40	1	292	5.1	1
SMCJ190A	SMCJ190CA	190.0	209.00	243.20	1	308	4.8	1
SMCJ200A	SMCJ200CA	200.0	224.00	256.00	1	324	4.6	1
SMCJ210A	SMCJ210CA	210.0	231.00	268.80	1	340	4.4	1
SMCJ220A	SMCJ220CA	220.0	246.00	281.60	1	356	4.2	1
SMCJ250A	SMCJ250CA	250.0	279.00	309.00	1	405	3.7	1
SMCJ300A	SMCJ300CA	300.0	335.00	371.00	1	486	3.1	1
SMCJ350A	SMCJ350CA	350.0	391.00	432.00	1	567	2.5	1
SMCJ400A	SMCJ400CA	400.0	447.00	494.00	1	648	2.3	1
SMCJ440A	SMCJ440CA	440.0	492.00	543.00	1	713	2.1	1

PACKAGING

Part Number	Component Package	Quantity
SMCJxxxXX	DO-214AB	500

RATINGS AND CHARACTERISTIC CURVES (TA=25 unless otherwise noted)

FIG.1- PEAK PULSE POWER RATING CURVE

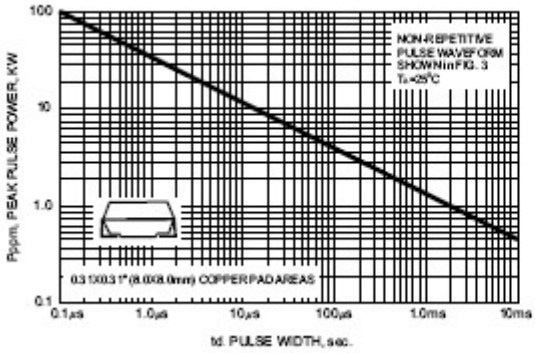


FIG.2- PULSE DERATING CURVE

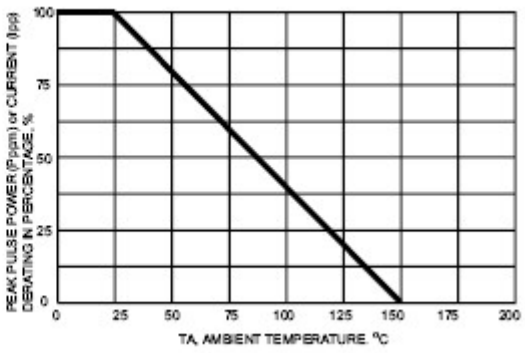


FIG.3- PULSE WAVEFORM

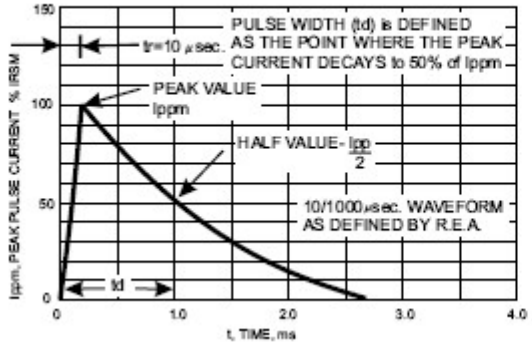


FIG.4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

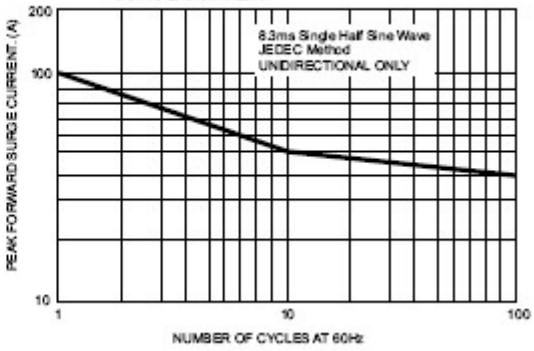


FIG.5- TYPICAL JUNCTION CAPACITANCE BIDIRECTIONAL

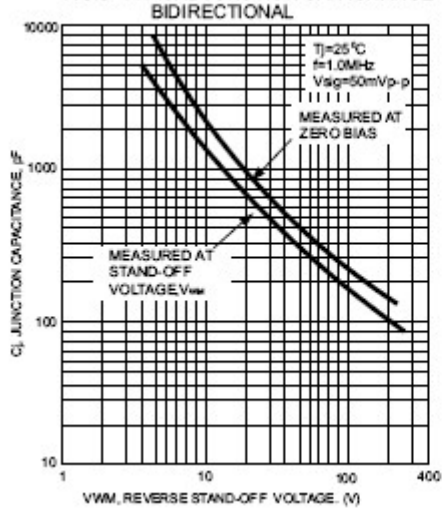
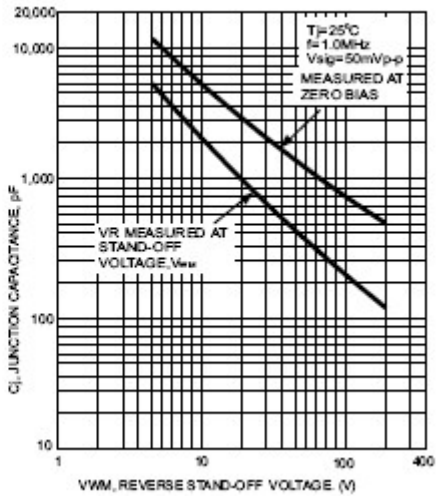


FIG.6- TYPICAL JUNCTION CAPACITANCE



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