

FEATURES

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- Available in uni-directional and bi-directional
- 1500W peak pulse power capability with
- Excellent clamping capability
- Very fast response time

DO-214AB (SMC)



TYPICAL APPLICATIONS

Use in sensitive electronics protection against voltage transients induced by inductive load switching and for consumer, computer, industrial, automotive andtelecommunication.

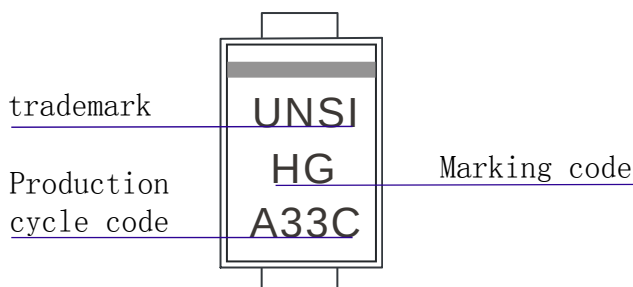
MECHANICAL DATA

Case: DO-214AB (SMC)

Epoxy meets UL 94V-0 flammability rating
reliability grade (AEC Q101 qualified)

Polarity: Color band denotes cathode end

Printing description



MAXIMUM RATINGS (TA=25℃unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Peak pulse power dissipation with a 10/1000 μ s waveform	PPPM	1500	W
Peak pulse current with a waveform	IPPM	See next table	A
Peak forward surge current 8.3 ms single half sine-wave uni-directional only	IFSM	200	A
Operating junction and storage temperature range	TJ, TSTG	-55 to +150	℃

Notes:

- (1) Non-repetitive current pulse, per Fig. 3 and derated above TA = 25℃ per
- (2) (2) Mounted on 0.31 x 0.31" (8.0 x 8.0 mm) copper pads to each terminal



1.5SMCJ5.8 THRU 1.5SMCJ440

Stand-off Voltage:5.8 to 440V

Peak pulse power:1500W

ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted)

Part Number		Marking code		Breakdown voltage VBR@IT		Test Current IT	Reverse Stand off Voltage RWMV	Max. Reverse Leakage@VRWM	Max. Clamping Voltage@IPP	Max. Peak Pulse Current
UNI	Bi	UNI	Bi	MIN(V)	MAX(V)	(mA)	V	uA	V	A
1.5SMC6.8A	1.5SMC6.8CA	6V8A	6V8C	6.45	7.13	10	5.8	1000	10.5	142.9
1.5SMC7.5A	1.5SMC7.5CA	7V5A	7V5C	7.13	7.88	10	6.4	500	11.3	132.7
1.5SMC8.2A	1.5SMC8.2CA	8V2A	8V2C	7.79	8.61	10	7.02	200	12.1	124
1.5SMC9.1A	1.5SMC9.1CA	9V1A	9V1C	8.65	9.56	10	7.78	50	13.4	111.9
1.5SMC10A	1.5SMC10CA	10A	10C	9.5	10.5	1	8.55	10	14.5	103.4
1.5SMC11A	1.5SMC11CA	11A	11C	10.5	11.6	1	9.4	5	15.6	96.2
1.5SMC12A	1.5SMC12CA	12A	12C	11.4	12.6	1	10.2	5	16.7	89.8
1.5SMC13A	1.5SMC13CA	13A	13C	12.4	13.7	1	11.1	5	18.2	82.4
1.5SMC15A	1.5SMC15CA	15A	15C	14.3	15.8	1	12.8	5	21.2	70.8
1.5SMC16A	1.5SMC16CA	16A	16C	15.2	16.8	1	13.6	1	22.5	66.7
1.5SMC18A	1.5SMC18CA	18A	18C	17.1	18.9	1	15.3	1	25.2	59.5
1.5SMC20A	1.5SMC20CA	20A	20C	19	21	1	17.1	1	27.7	54.2
1.5SMC22A	1.5SMC22CA	22A	22C	20.9	23.1	1	18.8	1	30.6	49
1.5SMC24A	1.5SMC24CA	24A	24C	22.8	25.2	1	20.5	1	33.2	45.2
1.5SMC27A	1.5SMC27CA	27A	27C	25.7	28.4	1	23.1	1	37.5	40
1.5SMC30A	1.5SMC30CA	30A	30C	28.5	31.5	1	25.6	1	41.4	36.2
1.5SMC33A	1.5SMC33CA	33A	33C	31.4	34.7	1	28.2	1	45.7	32.8
1.5SMC36A	1.5SMC36CA	36A	36C	34.2	37.8	1	30.8	1	49.9	30.1
1.5SMC39A	1.5SMC39CA	39A	39C	37.1	41	1	33.3	1	53.9	27.8
1.5SMC43A	1.5SMC43CA	43A	43C	40.9	45.2	1	36.8	1	59.3	25.3
1.5SMC47A	1.5SMC47CA	47A	47C	44.7	49.4	1	40.2	1	64.8	23.1
1.5SMC51A	1.5SMC51CA	51A	51C	48.5	53.6	1	43.6	1	70.1	21.4
1.5SMC56A	1.5SMC56CA	56A	56C	53.2	58.8	1	47.8	1	77	19.5
1.5SMC62A	1.5SMC62CA	62A	62C	58.9	65.1	1	53	1	85	17.6
1.5SMC68A	1.5SMC68CA	68A	68C	64.6	71.4	1	58.1	1	92	16.3
1.5SMC75A	1.5SMC75CA	75A	75C	71.3	78.8	1	64.1	1	103	14.6
1.5SMC82A	1.5SMC82CA	82A	82C	77.9	86.1	1	70.1	1	113	13.3
1.5SMC91A	1.5SMC91CA	91A	91C	86.5	95.6	1	77.8	1	125	12
1.5SMC100A	1.5SMC100CA	100A	100C	95	105	1	85.5	1	137	10.9
1.5SMC110A	1.5SMC110CA	110A	110C	105	116.1	1	94	1	152	9.9
1.5SMC120A	1.5SMC120CA	120A	120C	114	126	1	102	1	165	9.1
1.5SMC130A	1.5SMC130CA	130A	130C	124	137.1	1	111	1	179	8.4

RATINGS AND CHARACTERISTICS CURVES

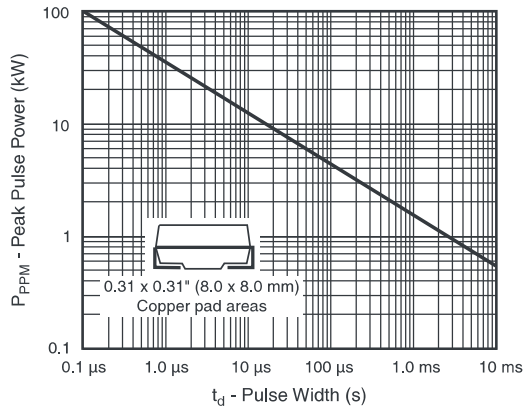


Figure 1. Peak Pulse Power Rating Curve

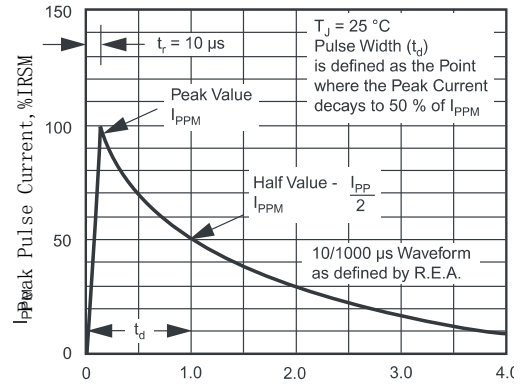


Figure 3. Pulse Waveform

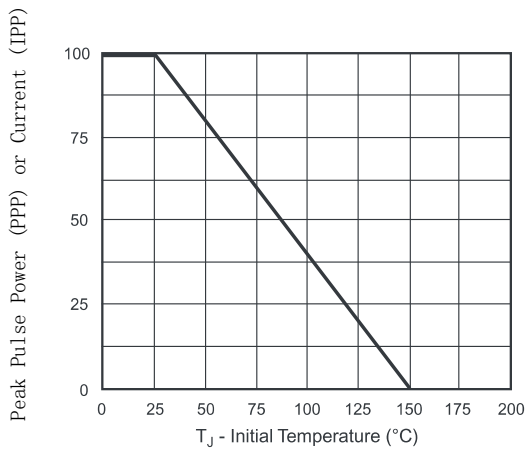


Figure 2. Pulse Power or Current vs. Initial Junction Temperature

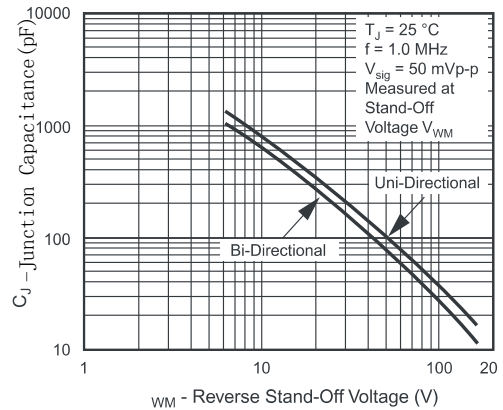


Figure 4. Typical Junction Capacitance

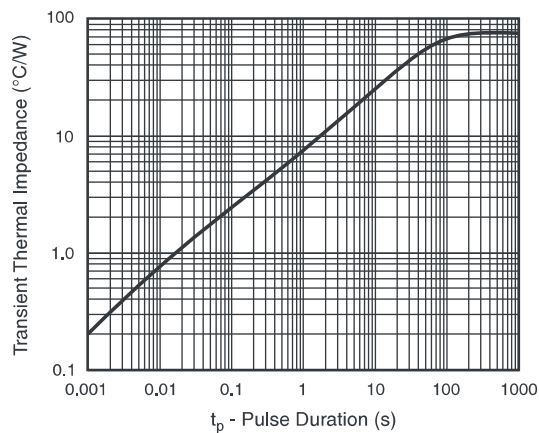


Fig. 5 - Typical Transient Thermal Impedance

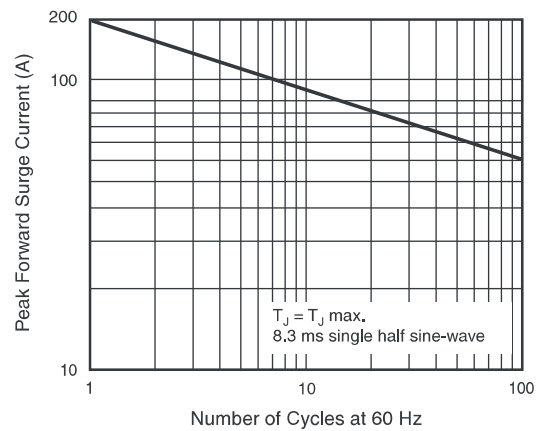
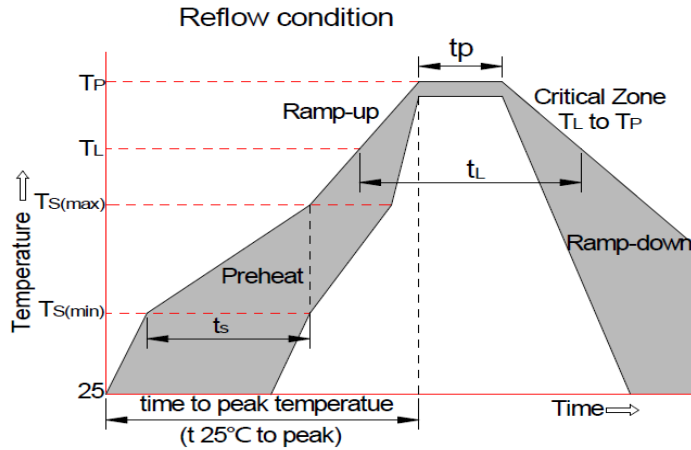


Fig. 6 - Maximum Non-Repetitive Peak Forward Surge Current
Uni-Directional Use On

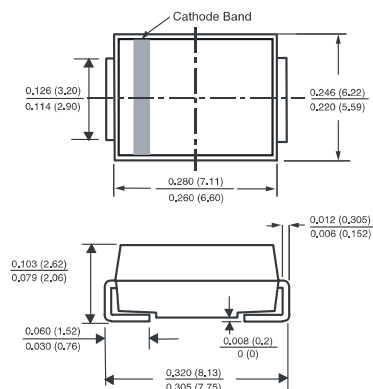
Soldering Parameters



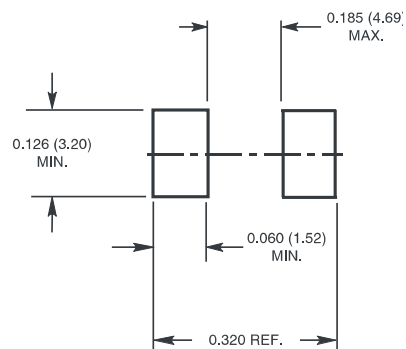
Reflow Condition		PbFree assembly (see asbelow)
Pre Heat	-Temperature Min (T _s (Min))	+150°C
	-Temperature Max(T _s (max))	+200°C
	-Time (Min to Max) (t _s)	60-180 secs.
Average ramp up rate (Liquid us Temp (T _L) to peak)		3°C/sec. Max
	T _s (max) to T _L -Ramp-up Rate	3°C/sec. Max
Reflow	-Temperature(T _L)(Liquid us)	+217°C
	-Temperature(t _L)	60-150 secs.
Peak Temp (T _p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t _p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T _p)		8 min. Max
Do not exceed		+260°C

PACKAGE OUTLINE DIMENSIONS

in inches (millimeters)



Mounting Pad Layout



Unmarked tolerance: +0.2mm