

## FEATURES

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- Available in uni-directional and bi-directional
- 5000W 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 and telecommunication.

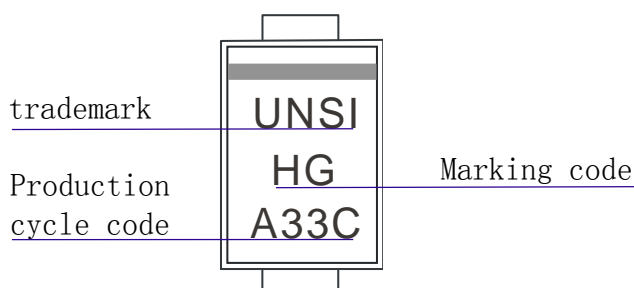
## MECHANICAL DATA

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°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Peak pulse power dissipation with a 10/1000 $\mu$ s waveform	PPPM	5000	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	°C

### Notes:

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

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

Part Number		Marking code		Breakdown voltage VBR@IT		Test Current IT	Reverse Stand off Voltage VRWMV	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
5. OSMDJ18A	5. OSMDJ18CA	5PEV	5BEV	20	22.1	1	18	10	29.2	172
5. OSMDJ20A	5. OSMDJ20CA	5PEW	5BEW	22.2	24.5	1	20	5	32.4	155
5. OSMDJ22A	5. OSMDJ22CA	5PEX	5BEX	24.4	26.9	1	22	5	35.5	141
5. OSMDJ24A	5. OSMDJ24CA	5PEZ	5BEZ	26.7	29.5	1	24	5	38.9	129
5. OSMDJ26A	5. OSMDJ26CA	5PFE	5BFE	28.9	31.9	1	26	5	42.1	119
5. OSMDJ28A	5. OSMDJ28CA	5PFG	5BFG	31.1	34.4	1	28	5	45.4	110
5. OSMDJ30A	5. OSMDJ30CA	5PFK	5BFK	33.3	36.8	1	30	5	48.4	103
5. OSMDJ33A	5. OSMDJ33CA	5PFM	5BFM	36.7	40.6	1	33	5	53.3	93.9
5. OSMDJ36A	5. OSMDJ36CA	5PFP	5BFP	40	44.2	1	36	5	58.1	86.1
5. OSMDJ40A	5. OSMDJ40CA	5PFR	5BFR	44.4	49.1	1	40	5	64.5	77.6
5. OSMDJ43A	5. OSMDJ43CA	5PFT	5BFT	47.8	52.8	1	43	5	69.4	72.1
5. OSMDJ45A	5. OSMDJ45CA	5PFV	5BFV	50	55.3	1	45	5	72.7	68.8
5. OSMDJ48A	5. OSMDJ48CA	5PFX	5BFX	53.3	58.9	1	48	5	77.4	64.7
5. OSMDJ51A	5. OSMDJ51CA	5PFZ	5BFZ	56.7	62.7	1	51	5	82.4	60.7
5. OSMDJ54A	5. OSMDJ54CA	5PGE	5BGE	60	66.3	1	54	5	87.1	57.5
5. OSMDJ58A	5. OSMDJ58CA	5PGG	5BGG	64.4	71.2	1	58	5	93.6	53.5
5. OSMDJ60A	5. OSMDJ60CA	5PGK	5BGK	66.7	73.7	1	60	5	96.8	51.7
5. OSMDJ64A	5. OSMDJ64CA	5PGM	5BGM	71.1	78.6	1	64	5	103	48.6
5. OSMDJ70A	5. OSMDJ70CA	5PGP	5BGP	77.8	86	1	70	5	113	44.3
5. OSMDJ75A	5. OSMDJ75CA	5PGR	5BGR	83.3	92.1	1	75	5	121	41.4
5. OSMDJ78A	5. OSMDJ78CA	5PGT	5BGT	86.7	95.8	1	78	5	126	39.7
5. OSMDJ85A	5. OSMDJ85CA	5PGV	5BGV	94.4	104	1	85	5	137	36.5
5. OSMDJ90A	5. OSMDJ90CA	5PGX	5BGX	100	111	1	90	5	146	34.3
5. OSMDJ100A	5. OSMDJ100C	5PGZ	5BGZ	111	123	1	100	5	162	30.9
5. OSMDJ110A	5. OSMDJ110C	5PHE	5BHE	122	135	1	110	5	177	28.3
5. OSMDJ120A	5. OSMDJ120C	5PHG	5BHG	133	147	1	120	5	193	26
5. OSMDJ130A	5. OSMDJ130C	5PHK	5BHK	144	159	1	130	5	209	24
5. OSMDJ150A	5. OSMDJ150C	5PHM	5BHM	167	185	1	150	5	243	20.6
5. OSMDJ160A	5. OSMDJ160C	5PHP	5BHB	178	197	1	160	5	259	19.3

## RATINGS AND CHARACTERISTICS CURVES

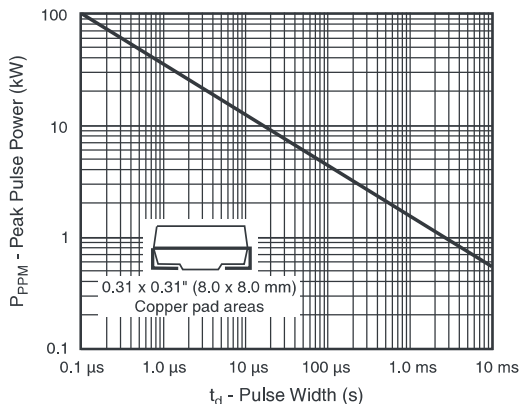


Figure 1. Peak Pulse Power Rating Curve

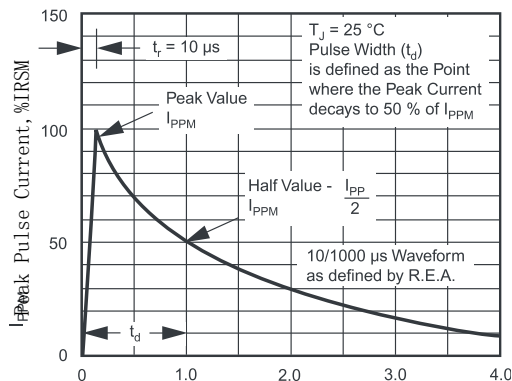


Figure 3. Pulse Waveform

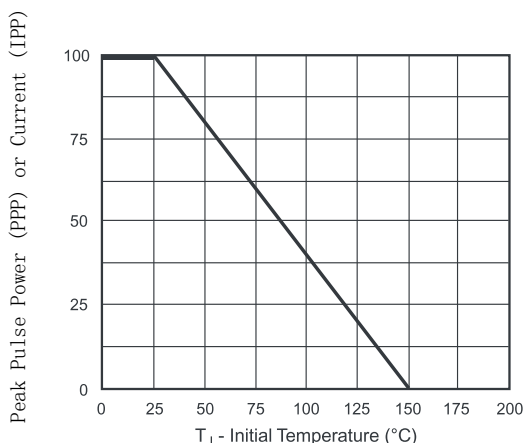


Figure 2. Pulse Power or Current vs. Initial Junction Temperature

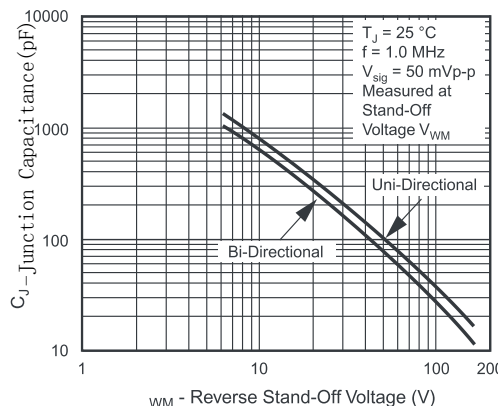


Figure 4. Typical Junction Capacitance

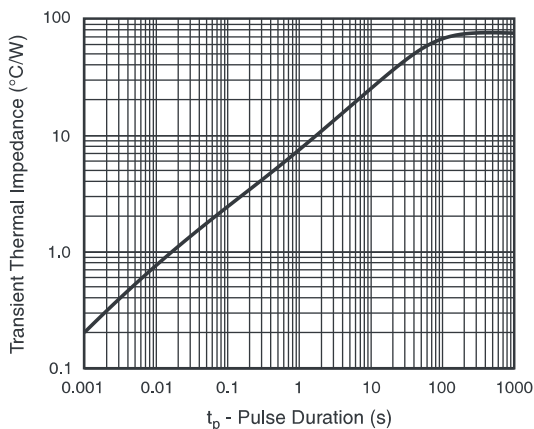


Figure 5 - Typical Transient Thermal Impedance

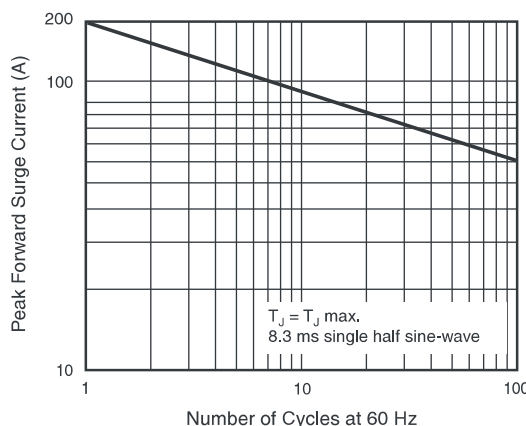
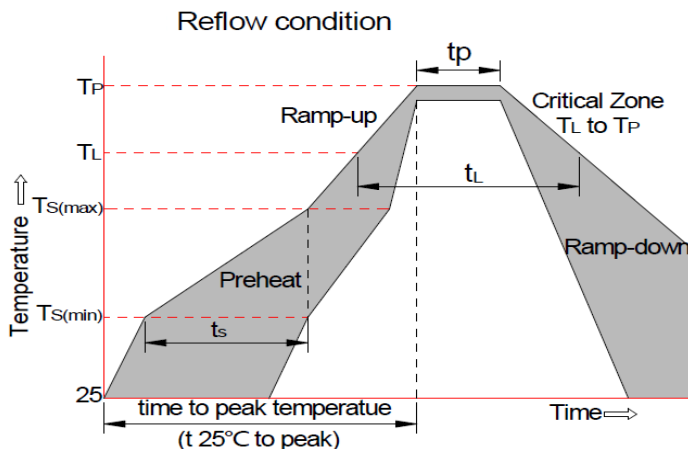


Fig. 6 - Maximum Non-Repetitive Peak Forward Surge Current Uni-Directional Use On

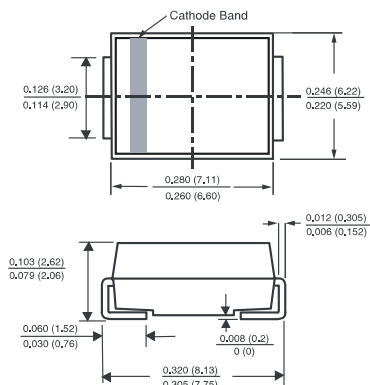
## Soldering Parameters



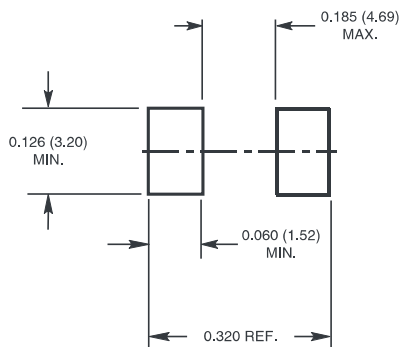
Reflow Condition		PbFree assembly (see asbellow)
Pre Heat	-Temperature Min (Ts(Min))	+150°C
	-Temperature Max(Ts(max))	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (TL) to peak)		3°C/sec. Max
	Ts(max) to TL -Ramp-up Rate	3°C/sec. Max
Reflow	-Temperature(TL)(Liquid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

## PACKAGE OUTLINE DIMENSIONS

in inches (millimeters)



## Mounting Pad Layout



Unmarked tolerance: +0.2mm