

FEATURES

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- Available in uni-directional and bi-directional
- 3000W 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.

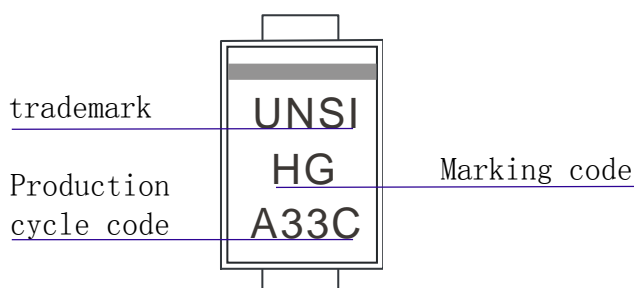
MECHANICAL DATA

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 μ s waveform	PPM	3000	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	400	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



SMDJ5.0 THRU SMDJ600

Stand-off Voltage:5.0 to 600V

Peak pulse power:3000W

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
SMDJ5.0A	SMDJ5.0CA	HDE	IDE	6.4	7	10	5	800	9.2	326.1
SMDJ6.0A	SMDJ6.0CA	HDG	IDG	6.67	7.37	10	6	800	10.3	291
SMDJ 6.5A	SMDJ6.5CA	HDK	IDK	7.22	7.98	10	6.5	500	11.2	267.9
SMDJ7.0 A	SMDJ7.0CA	HDM	IDM	7.78	8.6	10	7	200	12	250
SMDJ 7.5A	SMDJ7.5CA	HDP	IDP	8.33	9.21	10	7.5	100	12.9	232.6
SMDJ 8.0A	SMDJ8.0CA	HDR	IDR	8.89	9.83	10	8	50	13.6	220.6
SMDJ8.5 A	SMDJ8.5CA	HDT	IDT	9.44	10.4	10	8.5	20	14.4	208.3
SMDJ9.0 A	SMDJ9.0CA	HDV	IDV	10	11.1	10	9	5	15.4	194.8
SMDJ10A	SMDJ10CA	HDX	IDX	11.1	12.3	1	10	2	17	176.5
SMDJ11A	SMDJ11CA	HDZ	IDZ	12.2	13.5	1	11	2	18.2	164.8
SMDJ12A	SMDJ12CA	HEE	IEE	13.3	14.7	1	12	2	19.9	150.8
SMDJ13A	SMDJ13CA	HEG	IEG	14.4	15.9	1	13	2	21.5	139.5
SMDJ14A	SMDJ14CA	HEK	IEK	15.6	17.2	1	14	2	23.2	129.3
SMDJ15A	SMDJ15CA	HEM	IEM	16.7	18.5	1	15	2	24.4	123
SMDJ16A	SMDJ16CA	HEP	IEP	17.8	19.7	1	16	2	26	115.4
SMDJ17A	SMDJ17CA	HER	IER	18.9	20.9	1	17	2	27.6	108.7
SMDJ18A	SMDJ18CA	HET	IET	20	22.1	1	18	2	29.2	102.7
SMDJ20A	SMDJ20CA	HEV	IEV	22.2	24.5	1	20	2	32.4	92.6
SMDJ22A	SMDJ22CA	HEX	IEX	24.4	26.9	1	22	2	35.5	84.5
SMDJ24A	SMDJ24CA	HEZ	IEZ	26.7	29.5	1	24	2	38.9	77.1
SMDJ26A	SMDJ26CA	HFE	IFE	28.9	31.9	1	26	2	42.1	71.3
SMDJ28A	SMDJ28CA	HFG	IFG	31.1	34.4	1	28	2	45.4	66.1
SMDJ30A	SMDJ30CA	HFK	IFK	33.3	36.8	1	30	2	48.4	62
SMDJ33A	SMDJ33CA	HFM	IFM	36.7	40.6	1	33	2	53.3	56.3
SMDJ36A	SMDJ36CA	HFP	IFP	40	44.2	1	36	2	58.1	51.6
SMDJ40A	SMDJ40CA	HFR	IFR	44.4	49.1	1	40	2	64.5	46.5
SMDJ43A	SMDJ43CA	HFT	IFT	47.8	52.8	1	43	2	69.4	43.2
SMDJ45A	SMDJ45CA	HFV	IFV	50	55.3	1	45	2	72.7	41.3
SMDJ48A	SMDJ48CA	HFX	IFX	53.3	58.9	1	48	2	77.4	38.8
SMDJ51A	SMDJ51CA	HFZ	IFZ	56.7	62.7	1	51	2	82.4	36.4
SMDJ54A	SMDJ54CA	HGE	IGE	60	66.3	1	54	2	87.1	34.4
SMDJ58A	SMDJ58CA	HGG	IGG	64.4	71.2	1	58	2	93.6	32.1
SMDJ60A	SMDJ60CA	HGK	IGK	66.7	73.7	1	60	2	96.8	31
SMDJ64A	SMDJ64CA	HGM	IGM	71.1	78.6	1	64	2	103	29.1
SMDJ70A	SMDJ70CA	HGP	IGP	77.8	86	1	70	2	113	26.5



SMDJ5.0 THRU SMDJ600

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Peak pulse power:3000W

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UNI	Bi	UNI	Bi	MIN(V)	MAX(V)	(mA)	V	uA	V	A
SMDJ75A	SMDJ75CA	HGR	IGR	83.3	92.1	1	75	2	121	24.8
SMDJ78A	SMDJ78CA	HGT	IGT	86.7	95.8	1	78	2	126	23.8
SMDJ85A	SMDJ85CA	HGV	IGV	94.4	104	1	85	2	137	21.9
SMDJ90A	SMDJ90CA	HGX	IGX	100	111	1	90	2	146	20.5
SMDJ100A	SMDJ100CA	HGZ	IGZ	111	123	1	100	2	162	18.5
SMDJ110A	SMDJ110CA	HHE	IHE	122	135	1	110	2	177	16.9
SMDJ120A	SMDJ120CA	HHG	IHG	133	147	1	120	2	193	15.5
SMDJ130A	SMDJ130CA	HHK	IHK	144	159	1	130	2	209	14.4
SMDJ150A	SMDJ150CA	HHM	IHM	167	185	1	150	2	243	12.3
SMDJ160A	SMDJ160CA	HHP	IHP	178	197	1	160	2	259	11.6
SMDJ170A	SMDJ170CA	HHR	IHR	189	209	1	170	2	275	10.9
SMDJ180A	SMDJ180CA	HHT	IHT	198	219	1	180	2	292	10.3
SMDJ190A	SMDJ190CA	HHV	IHV	209	232	1	190	2	308	9.7
SMDJ200A	SMDJ200CA	HHX	IHX	220	244	1	200	2	324	9.3
SMDJ210A	SMDJ210CA	HHZ	IHZ	231	256	1	210	2	340	8.8
SMDJ220A	SMDJ220CA	HIE	IIE	242	268	1	220	2	356	8.4
SMDJ300A	SMDJ300CA	HIF	IIF	333	371	1	300	2	484	6.2
SMDJ400A	SMDJ400CA	HIG	IIG	444	494	1	400	2	645	4.7
SMDJ440A	SMDJ440CA	HIH	IIH	489	543	1	440	2	710	4.2
SMDJ600A	SMDJ600CA	HII	III	660	735	1	600	2	968	3.1

RATINGS AND CHARACTERISTICS CURVES

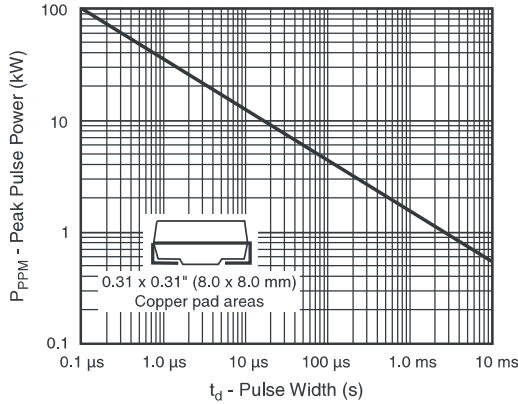


Figure 1. Peak Pulse Power Rating Curve

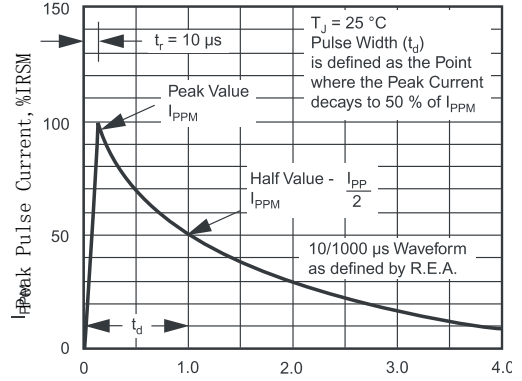


Figure 3. Pulse Waveform

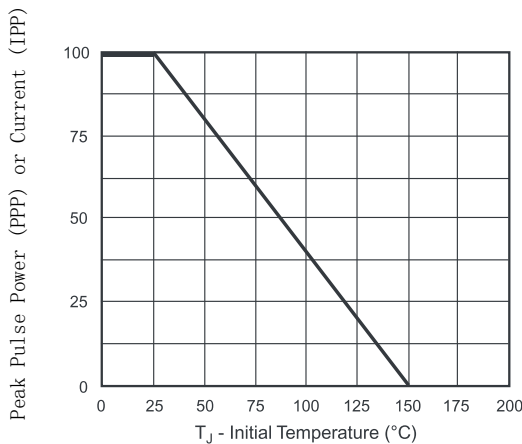


Figure 2. Pulse Power or Current vs. Initial Junction Temperature

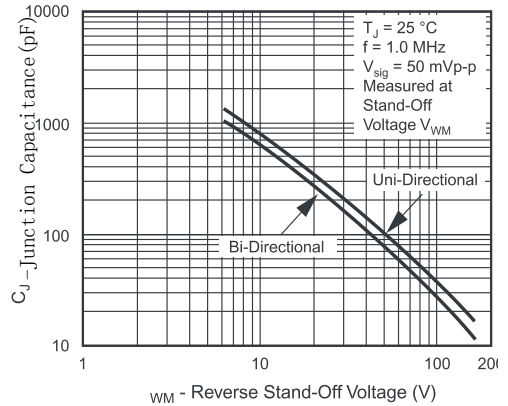


Figure 4. Typical Junction Capacitance

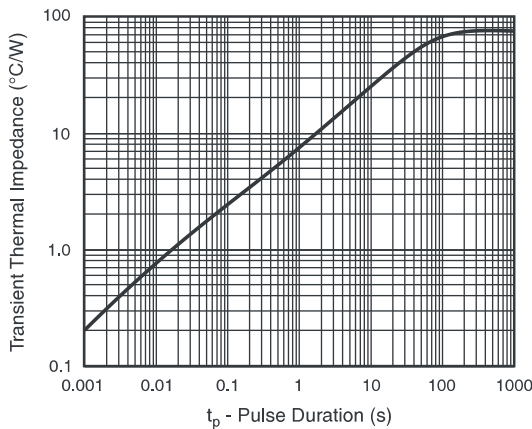


Figure 5 - Typical Transient Thermal Impedance

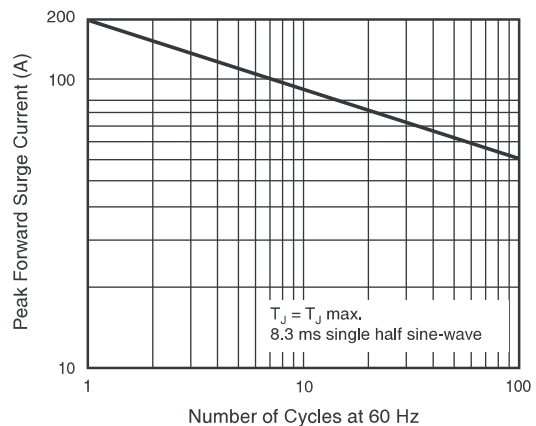
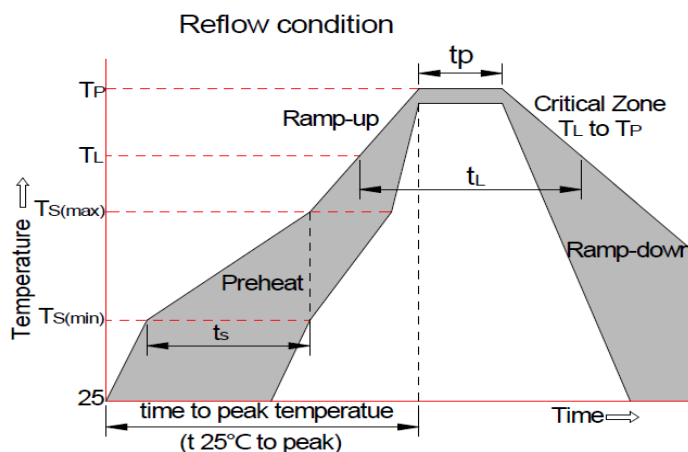


Fig. 6 - Maximum Non-Repetitive Peak Forward Surge Current Uni-Directional Use On

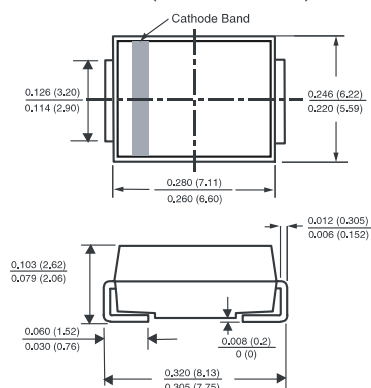
Soldering Parameters



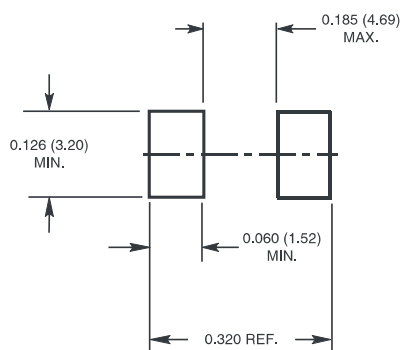
Reflow Condition		PbFree assembly (see asbellow)
Pre Heat	-Temperature Min (Ts(Min))	+150°C
	-Temperature Max(Ts(max))	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (TL) to peak)		3°C/sec. Max
	Ts(max) to TL -Ramp-up Rate	3°C/sec. Max
Reflow	-Temperature(TL)(Liquid 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