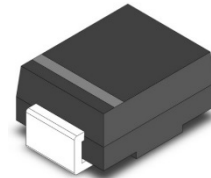


FEATURES

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- Available in uni-directional and bi-directional
- 600W peak pulse power capability with
- Excellent clamping capability
- Very fast response time

DO-214AA (SMB)



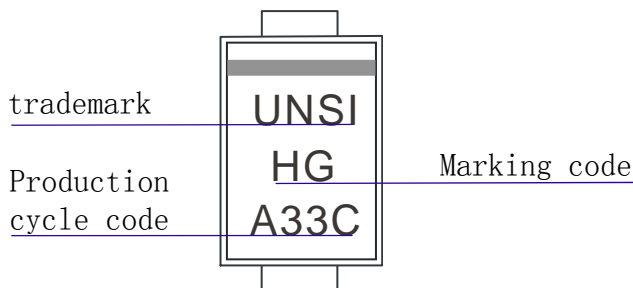
TYPICAL APPLICATIONS

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-214AA (SMB)
 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	PPPM	600	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	100	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) (2) Mounted on 0.2 x 0.2" (5.0 x 5.0 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 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
SMBJ5.0A	SMBJ5.0CA	KE	AE	6.4	7.07	10	5	800	9.2	65.2
SMBJ6.0A	SMBJ6.0CA	KG	AG	6.67	7.37	10	6	800	10.3	58.3
SMBJ6.5A	SMBJ6.5CA	KK	AK	7.22	7.98	10	6.5	500	11.2	53.6
SMBJ7.0A	SMBJ7.0CA	KM	AM	7.78	8.6	10	7	200	12	50
SMBJ7.5A	SMBJ7.5CA	KP	AP	8.33	9.21	1	7.5	100	12.9	46.5
SMBJ8.0A	SMBJ8.0CA	KR	AR	8.89	9.83	1	8	50	13.6	44.1
SMBJ8.5A	SMBJ8.5CA	KT	AT	9.44	10.4	1	8.5	20	14.4	41.7
SMBJ9.0A	SMBJ9.0CA	KV	AV	10	11.1	1	9	10	15.4	39
SMBJ10A	SMBJ10CA	KX	AX	11.1	12.3	1	10	5	17	35.3
SMBJ11A	SMBJ11CA	KZ	AZ	12.2	13.5	1	11	1	18.2	33
SMBJ12A	SMBJ12CA	LE	BE	13.3	14.7	1	12	1	19.9	30.2
SMBJ13A	SMBJ13CA	LG	BG	14.4	15.9	1	13	1	21.5	27.9
SMBJ14A	SMBJ14CA	LK	BK	15.6	17.2	1	14	1	23.2	25.9
SMBJ15A	SMBJ15CA	LM	BM	16.7	18.5	1	15	1	24.4	24.6
SMBJ16A	SMBJ16CA	LP	BP	17.8	19.7	1	16	1	26	23.1
SMBJ17A	SMBJ17CA	LR	BR	18.9	20.9	1	17	1	27.6	21.7
SMBJ18A	SMBJ18CA	LT	BT	20	22.1	1	18	1	29.2	20.5
SMBJ20A	SMBJ20CA	LV	BV	22.2	24.5	1	20	1	32.4	18.5
SMBJ22A	SMBJ22CA	LX	BX	24.4	27	1	22	1	35.5	16.9
SMBJ24A	SMBJ24CA	LZ	BZ	26.7	29.5	1	24	1	38.9	15.4
SMBJ26A	SMBJ26CA	ME	CE	28.9	31.9	1	26	1	42.1	14.3
SMBJ28A	SMBJ28CA	MG	CG	31.1	34.4	1	28	1	45.4	13.2
SMBJ30A	SMBJ30CA	MK	CK	33.3	36.8	1	30	1	48.4	12.4
SMBJ33A	SMBJ33CA	MM	CM	36.7	40.6	1	33	1	53.3	11.3
SMBJ36A	SMBJ36CA	MP	CP	40	44.2	1	36	1	58.1	10.3
SMBJ40A	SMBJ40CA	MR	CR	44.4	49.1	1	40	1	64.5	9.3
SMBJ43A	SMBJ43CA	MT	CT	47.8	52.8	1	43	1	69.4	8.6
SMBJ45A	SMBJ45CA	MV	CV	50	55.3	1	45	1	72.7	8.3
SMBJ48A	SMBJ48CA	MX	CX	53.3	58.9	1	48	1	77.4	7.8
SMBJ51A	SMBJ51CA	MZ	CZ	56.7	62.7	1	51	1	82.4	7.3
SMBJ54A	SMBJ54CA	NE	DE	60	66.3	1	54	1	87.1	6.9
SMBJ58A	SMBJ58CA	NG	DG	64.4	71.2	1	58	1	93.6	6.4
SMBJ60A	SMBJ60CA	NK	DK	66.7	73.7	1	60	1	96.8	6.2
SMBJ64A	SMBJ64CA	NM	DM	71.1	78.6	1	64	1	103	5.8

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
SMBJ70A	SMBJ70CA	NP	DP	77.8	86	1	70	1	113	5.3
SMBJ75A	SMBJ75CA	NR	DR	83.3	92.1	1	75	1	121	5
SMBJ78A	SMBJ78CA	NT	DT	86.7	95.8	1	78	1	126	4.8
SMBJ85A	SMBJ85CA	NV	DV	94.4	104	1	85	1	137	4.4
SMBJ90A	SMBJ90CA	NX	DX	100	111	1	90	1	146	4.1
SMBJ100A	SMBJ100CA	NZ	DZ	111	123	1	100	1	162	3.7
SMBJ110A	SMBJ110CA	PE	EE	122	135	1	110	1	177	3.4
SMBJ120A	SMBJ120CA	PG	EG	133	147	1	120	1	193	3.1
SMBJ130A	SMBJ130CA	PK	EK	144	159	1	130	1	209	2.9
SMBJ150A	SMBJ150CA	PM	EM	167	185	1	150	1	243	2.5
SMBJ160A	SMBJ160CA	PP	EP	178	197	1	160	1	259	2.3
SMBJ170A	SMBJ170CA	PR	ER	189	209	1	170	1	275	2.2
SMBJ180A	SMBJ180CA	PT	ET	200	230	1	180	1	290	2.1
SMBJ190A	SMBJ190CA	PV	EV	211	243	1	190	1	306	2
SMBJ200A	SMBJ200CA	PV	EV	222	256	1	200	1	324	1.9
SMBJ220A	SMBJ220CA	PX	EX	244	281	1	220	1	355	1.7
SMBJ250A	SMBJ250CA	QG	FQ	278	309	1	250	1	403	1.5
SMBJ300A	SMBJ300CA	QK	FK	333	371	1	300	1	484	1.2
SMBJ350A	SMBJ350CA	QM	FM	389	432	1	350	1	565	1.1
SMBJ400A	SMBJ400CA	QP	FP	444	494	1	400	1	645	0.9
SMBJ440A	SMBJ440CA	QR	FR	489	543	1	440	1	710	0.8

RATINGS AND CHARACTERISTICS CURVES

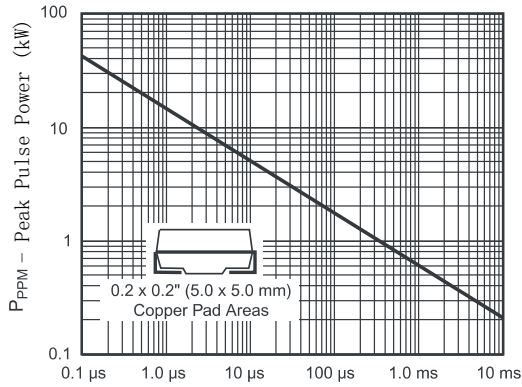


Figure 1. Peak Pulse Power Rating Curve

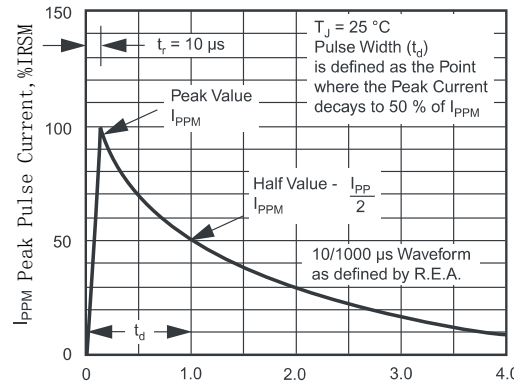


Figure 3. Pulse Waveform

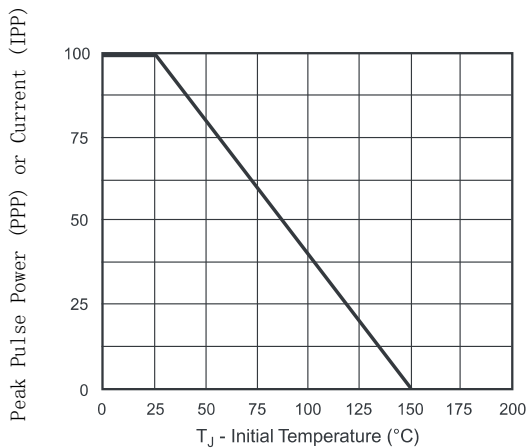


Figure 2. Pulse Power or Current vs. Initial Junction Temperature

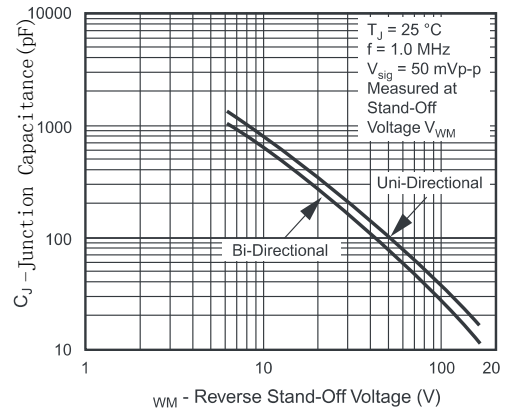


Figure 4. Typical Junction Capacitance

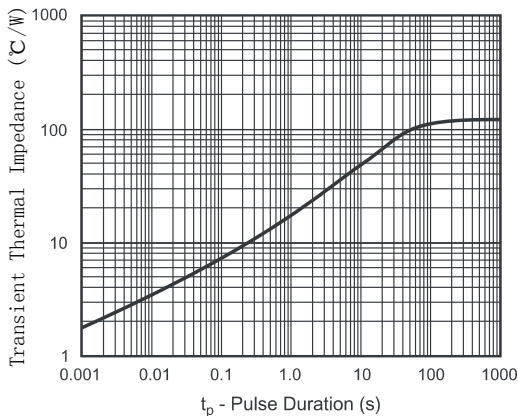


Figure 5. Typical Transient Thermal Impedance

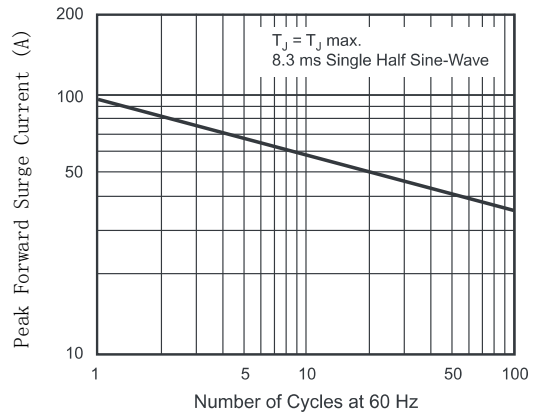
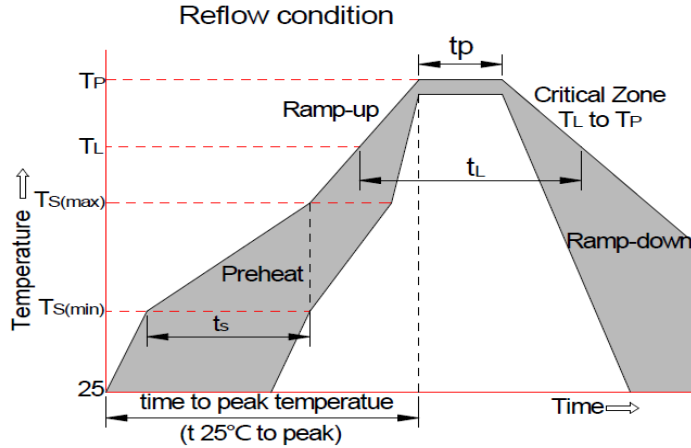


Figure 6. Maximum Non-Repetitive Forward Surge Current Uni-Directional Only

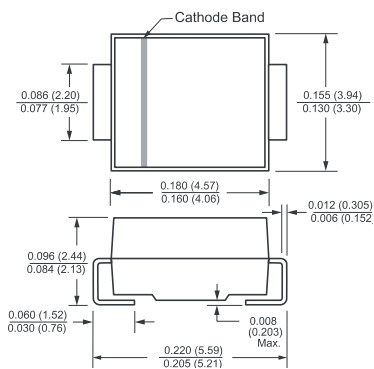
Soldering Parameters



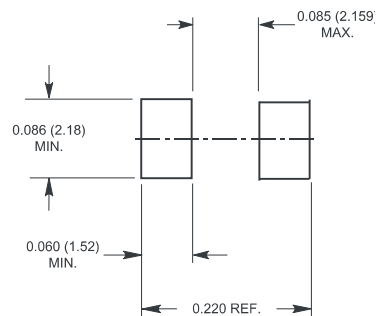
Reflow Condition		PbFree assembly (see asbelow)
Pre Heat	-Temperature Min (Ts(Min))	+150°C
	-Temperature Max(Ts(max))	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (TL) to peak)		3°C/sec. Max
	Ts(max) to TL -Ramp-up Rate	3°C/sec. Max
Reflow	-Temperature(TL)(Liquid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