

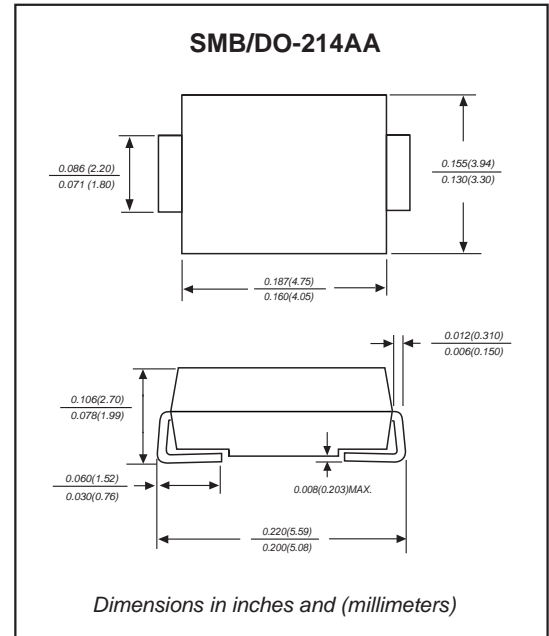
Features

- 1500W peak pulse power capability with a 10/1000 μ s waveform
- Low profile surface mounted application in order to optimize board space.
- Excellent clamping capability.
- Low incremental surge resistance.
- Fast response time
- Glass passivated chip junction.
- Lead-free parts meet RoHS requirements.
- Compliant to Halogen-free

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, DO-214AA /SMB
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any

Package outline



Maximum ratings (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	Value	UNIT
Peak Power Dissipation	with a 10/1000 μ s waveform, Note 1	P_{PPM}	1500	W
Peak Pulse current	with a 10/1000 μ s waveform, Note 1	I_{PPM}	See Table 1	A
Steady State Power Dissipation	at $T_L=75^\circ\text{C}$	$P_{M(AV)}$	5.0	W
Peak Forward Surge Current	8.3ms Single Half Sine-Wave	I_{FSM}	100	A
Maximum Instantaneous Forward Voltage	at 25A For Uni-Directional Types Only	V_F	3.5	V
Operating junction temperature range		T_J	-55 ~ +150	$^\circ\text{C}$
Storage temperature range		T_{STG}	-55 ~ +150	$^\circ\text{C}$

Note 1. Non-repetitive current pulse, per Fig. 3 and derated above $T_A=25^\circ\text{C}$ per Fig. 2

Electrical characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Table 1

Part No.	Reverse Stand-off Voltage	Breakdown Voltage @ I_T		Test Current	Maximum Clamping Voltage @ I_{PP}		Maximum Reverse Leakage Current	Marking Code	
	V_{RWM}	$V_{BR Min}$	$V_{BR Max}$	I_T	$V_c@I_{PP}$		$I_R@V_{RWM}$		
	Volts	Volts	Volts	mA	Volts	$I_{PP}(A)$	μA	UNI	BI
SMB15J5.0(C)A	5.0	6.40	7.07	10	9.2	163.0	1000	GDE	BDE
SMB15J6.0(C)A	6.0	6.67	7.37	10	10.3	145.7	1000	GDG	BDG
SMB15J6.5(C)A	6.5	7.22	7.98	10	11.2	134.0	500	GDK	BDK
SMB15J7.0(C)A	7.0	7.78	8.60	10	12.0	125.0	200	GDM	BDM
SMB15J7.5(C)A	7.5	8.33	9.21	1.0	12.9	116.3	100	GDP	BDP
SMB15J8.0(C)A	8.0	8.89	9.83	1.0	13.6	110.3	50	GDR	BDR
SMB15J8.5(C)A	8.5	9.44	10.40	1.0	14.4	104.2	20	GDT	BDT
SMB15J9.0(C)A	9.0	10.00	11.10	1.0	15.4	97.4	10	GDV	BDV
SMB15J10(C)A	10	11.10	12.30	1.0	17.0	88.3	5	GDX	BDX
SMB15J11(C)A	11	12.20	13.50	1.0	18.2	82.5	5	GDZ	BDZ
SMB15J12(C)A	12	13.30	14.70	1.0	19.9	75.4	5	GEE	BEE
SMB15J13(C)A	13	14.40	15.90	1.0	21.5	69.8	5	GEG	BEG
SMB15J14(C)A	14	15.60	17.20	1.0	23.2	64.7	5	GEK	BEK
SMB15J15(C)A	15	16.70	18.50	1.0	24.4	61.5	5	GEM	BEM
SMB15J16(C)A	16	17.80	19.70	1.0	26.0	57.7	5	GEP	BEP
SMB15J17(C)A	17	18.90	20.90	1.0	27.6	54.4	5	GER	BER
SMB15J18(C)A	18	20.00	22.10	1.0	29.2	51.4	5	GET	BET
SMB15J20(C)A	20	22.20	24.50	1.0	32.4	46.3	5	GEV	BEV
SMB15J22(C)A	22	24.40	26.90	1.0	35.5	42.3	5	GEX	BEX
SMB15J24(C)A	24	26.70	29.50	1.0	38.9	38.6	5	GEZ	BEZ
SMB15J26(C)A	26	28.90	31.90	1.0	42.1	35.7	5	GFE	BFE
SMB15J28(C)A	28	31.10	34.40	1.0	45.4	33.1	5	GFG	BFG
SMB15J30(C)A	30	33.30	36.80	1.0	48.4	31.0	5	GFK	BFK
SMB15J33(C)A	33	36.70	40.60	1.0	53.3	28.2	5	GFM	BFM
SMB15J36(C)A	36	40.00	44.20	1.0	58.1	25.9	5	GFP	BFP
SMB15J40(C)A	40	44.40	49.10	1.0	64.5	23.3	5	GFR	BFR
SMB15J43(C)A	43	47.80	52.80	1.0	69.4	21.7	5	GFT	BFT
SMB15J45(C)A	45	50.00	55.30	1.0	72.7	20.6	5	GFV	BFV
SMB15J48(C)A	48	53.30	58.90	1.0	77.4	19.4	5	GFX	BFX
SMB15J51(C)A	51	56.70	62.70	1.0	82.4	18.2	5	GFZ	BFZ
SMB15J54(C)A	54	60.00	66.30	1.0	87.1	17.2	5	GGE	BGE
SMB15J58(C)A	58	64.40	71.20	1.0	93.6	16.1	5	GGG	BGG
SMB15J60(C)A	60	66.70	73.70	1.0	96.8	15.5	5	GGK	BGK
SMB15J64(C)A	64	71.10	78.60	1.0	103.0	14.6	5	GGM	BGM
SMB15J70(C)A	70	77.80	86.00	1.0	113.0	13.3	5	GGP	BGP
SMB15J75(C)A	75	83.30	92.10	1.0	121.0	12.4	5	GGR	BGR
SMB15J78(C)A	78	86.70	95.80	1.0	126.0	11.9	5	GGT	BGT
SMB15J85(C)A	85	94.40	104.0	1.0	137.0	11.0	5	GGV	BGV

Rating and characteristic curves (SMB15J SERIES)

FIG1: Peak Pulse Power Rating Curve

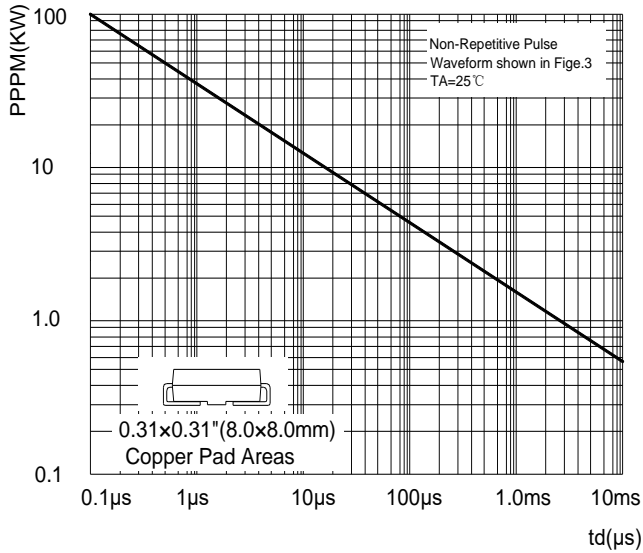


FIG2: Pulse Power or Current vs. Initial Junction Temperature

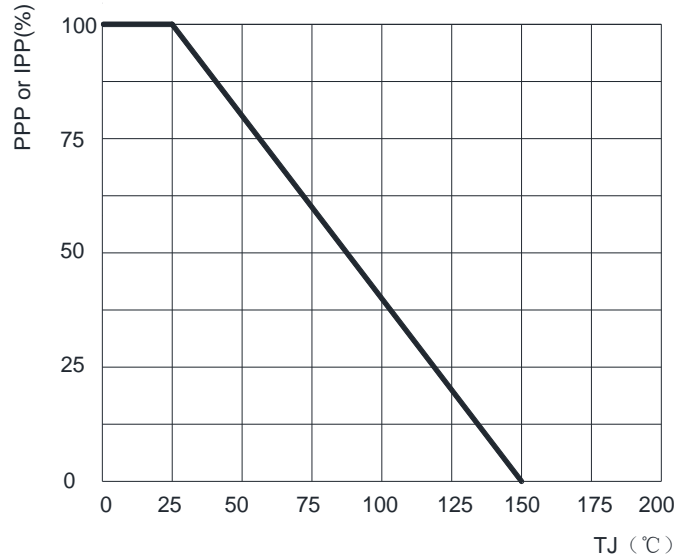


FIG3: Pulse Waveform

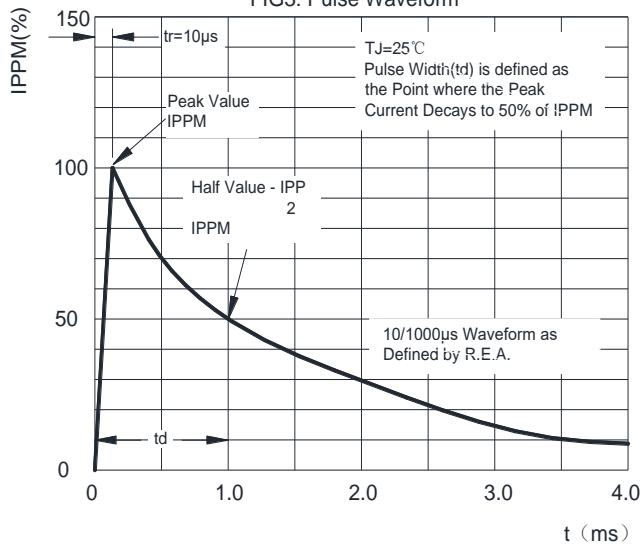
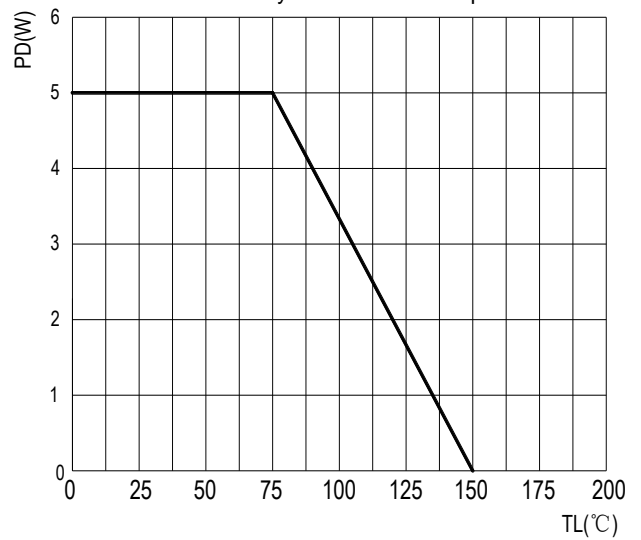
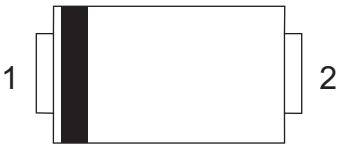





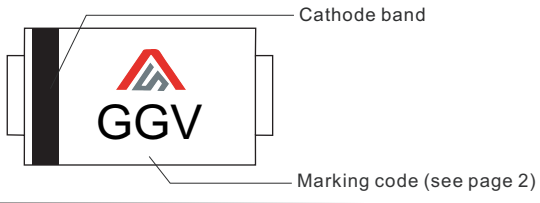
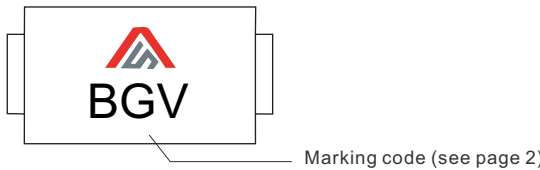
FIG5: Steady State Power Dissipation



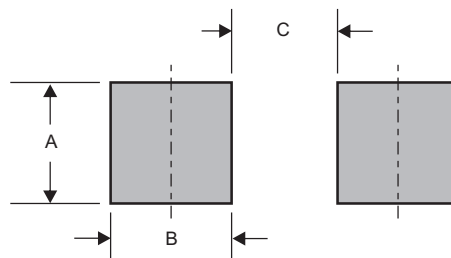
Pinning information

Pin	Simplified outline	Symbol
Uni-Directional Pin1 cathode Pin2 anode		
Bi-Directional		

Marking

Type number	Example
Uni-Directional	 <p>Cathode band</p> <p>Marking code (see page 2)</p>
Bi-Directional	 <p>Marking code (see page 2)</p>

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMB	0.078 (2.00)	0.059 (1.50)	0.110 (2.80)