

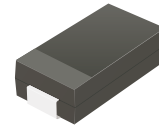
SMB15Jxx(C)A-HF Series

Working Peak Reverse Voltage: 8 to 85 V

Peak Pulse Power: 1500W

RoHS Device

Halogen Free

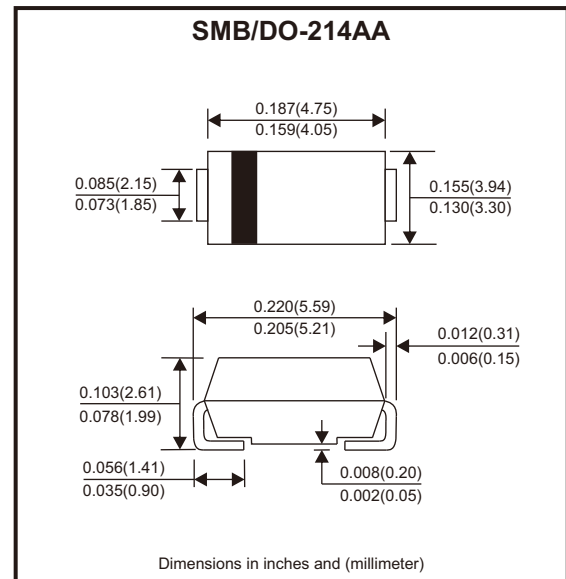


Features

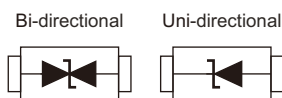
- For surface mounted applications.
- Low-profile package.
- Ideal for automated placement.
- Available in Uni-directional and Bi-directional.
- 1500W peak pulse power capability with a 10/1000 μ s waveform.
- Low incremental surge resistance, excellent clamping capability.
- Very fast response time.
- High temperature soldering guaranteed: 260°C/10s at terminals.

Mechanical Data

- Case: SMB/DO-214AA, molded plastic.
- Terminals: Matte tin plated leads, solderable per J-STD-002B and JESD22-B102D.
- Polarity: For Uni-directional types the band denotes athode end, no marking on Bi-directional types.



Circuit Diagram



Maximum Ratings and Electrical Characteristics (TA=25°C unless otherwise specified)

Characteristics	Symbol	Value	Units
Peak power dissipation, with a 10/1000 μ s waveform (Note 1, 2) (Fig.1)	P _{PP}	1500	W
Peak pulse current, with a 10/1000 μ s waveform (Note 1)	I _{PP}	See Next Table	A
Power dissipation, on infinite heat sink at T _L =75°C	P _D	5	W
Peak forward surge current, 8.3ms single half sine-wave unidirectional only (Note 2)	I _{FSM}	100	A
Maximum instantaneous forward voltage at 25A for unidirectional only	V _F	3.5	V
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C

Notes: 1. Non-repetitive current pulse, per Fig.3 and derated above Ta = 25°C per Fig.2.
2. Mounted on 0.3" x 0.3" (8.0 x 8.0mm) copper pads to each terminal.

Electrical Characteristics (TA=25°C unless otherwise specified)

Part No.	Breakdown Voltage V _{BR} @ I _T			Maximum Reverse Leakage @ V _{RWM} I _R (μA)	Working Peak Reverse Voltage V _{RWM} (V)	Maximum Reverse Surge Current (Note 1) I _{PP} (A)	Maximum Clamping Voltage @ I _{PP} V _C (V)	Device Marking Code	
	Min. (V)	Max. (V)	I _T (mA) t _p ≤ 50ms					UNI	BI
SMB15J8.0(C)A-HF	8.89	9.83	1	50	8.0	110.29	13.6	8.0A	8.0CA
SMB15J8.5(C)A-HF	9.44	10.40	1	20	8.5	104.17	14.4	8.5A	8.5CA
SMB15J9.0(C)A-HF	10.00	11.10	1	10	9.0	97.4	15.4	9.0A	9.0CA
SMB15J10(C)A-HF	11.10	12.30	1	5.0	10.0	88.24	17.0	10A	10CA
SMB15J11(C)A-HF	12.20	13.50	1	5.0	11.0	82.42	18.2	11A	11CA
SMB15J12(C)A-HF	13.30	14.70	1	5.0	12.0	75.38	19.9	12A	12CA
SMB15J13(C)A-HF	14.40	15.90	1	5.0	13.0	69.77	21.5	13A	13CA
SMB15J14(C)A-HF	15.60	17.20	1	5.0	14.0	64.66	23.2	14A	14CA
SMB15J15(C)A-HF	16.70	18.50	1	5.0	15.0	61.48	24.4	15A	15CA
SMB15J16(C)A-HF	17.80	19.70	1	5.0	16.0	57.69	26.0	16A	16CA
SMB15J17(C)A-HF	18.90	20.90	1	5.0	17.0	54.35	27.6	17A	17CA
SMB15J18(C)A-HF	20.00	22.10	1	5.0	18.0	51.37	29.2	18A	18CA
SMB15J19(C)A-HF	21.10	23.30	1	5.0	19.0	48.73	30.8	19A	19CA
SMB15J20(C)A-HF	22.20	24.50	1	5.0	20.0	46.30	32.4	20A	20CA
SMB15J22(C)A-HF	24.40	26.90	1	5.0	22.0	42.25	35.5	22A	22CA
SMB15J24(C)A-HF	26.70	29.50	1	5.0	24.0	38.56	38.9	24A	24CA
SMB15J26(C)A-HF	28.90	31.90	1	5.0	26.0	35.63	42.1	26A	26CA
SMB15J28(C)A-HF	31.10	34.40	1	5.0	28.0	33.04	45.4	28A	28CA
SMB15J30(C)A-HF	33.30	36.80	1	5.0	30.0	30.99	48.4	30A	30CA
SMB15J33(C)A-HF	36.70	40.60	1	5.0	33.0	28.14	53.3	33A	33CA
SMB15J36(C)A-HF	40.00	44.20	1	5.0	36.0	25.82	58.1	36A	36CA
SMB15J40(C)A-HF	44.40	49.10	1	5.0	40.0	23.26	64.5	40A	40CA
SMB15J43(C)A-HF	47.80	52.80	1	5.0	43.0	21.61	69.4	43A	43CA
SMB15J45(C)A-HF	50.00	55.30	1	5.0	45.0	20.63	72.7	45A	45CA
SMB15J48(C)A-HF	53.30	58.90	1	5.0	48.0	19.38	77.4	48A	48CA
SMB15J51(C)A-HF	56.70	62.70	1	5.0	51.0	18.2	82.4	51A	51CA
SMB15J54(C)A-HF	60.00	66.30	1	5.0	54.0	17.22	87.1	54A	54CA
SMB15J58(C)A-HF	64.40	71.20	1	5.0	58.0	16.03	93.6	58A	58CA
SMB15J60(C)A-HF	66.70	73.70	1	5.0	60.0	15.5	96.8	60A	60CA
SMB15J64(C)A-HF	71.10	78.60	1	5.0	64.0	14.56	103.0	64A	64CA
SMB15J70(C)A-HF	77.80	86.00	1	5.0	70.0	13.27	113.0	70A	70CA
SMB15J75(C)A-HF	83.30	92.10	1	5.0	75.0	12.4	121.0	75A	75CA
SMB15J78(C)A-HF	86.70	95.80	1	5.0	78.0	11.9	126.0	78A	78CA
SMB15J80(C)A-HF	88.80	97.60	1	5.0	80.0	11.57	129.6	80A	80CA
SMB15J85(C)A-HF	94.40	104.00	1	5.0	85.0	10.95	137.0	85A	85CA

Notes: 1. Surge current waveform per Fig.3 and derated per Fig.2.

2. For Bi-directional devices, use suffix CA.

Typical Ratings and Characteristics Curve (SMB15Jxx(C)A-HF Series)

Fig.1 - Peak Pulse Power Rating Curve

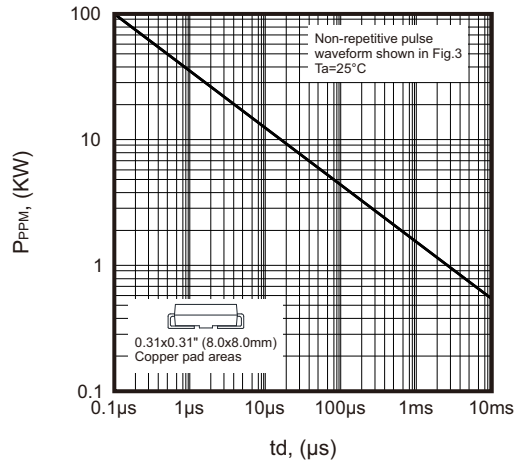


Fig.2 - Pulse Power or Current vs. Initial Junction Temperature

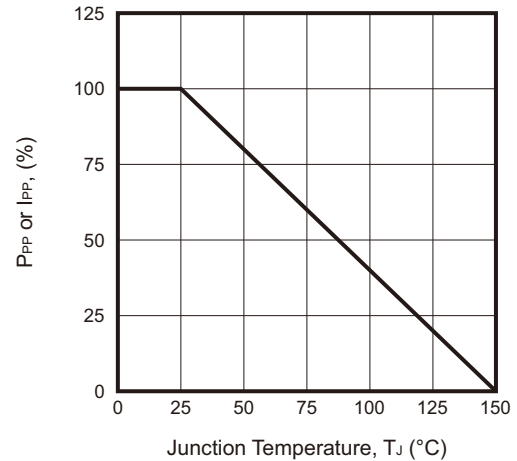


Fig.3 - Pulse Waveform

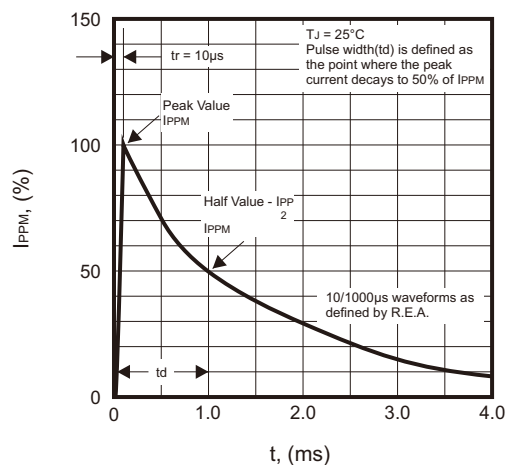


Fig.4 - Maximum Non-Repetitive Surge Current

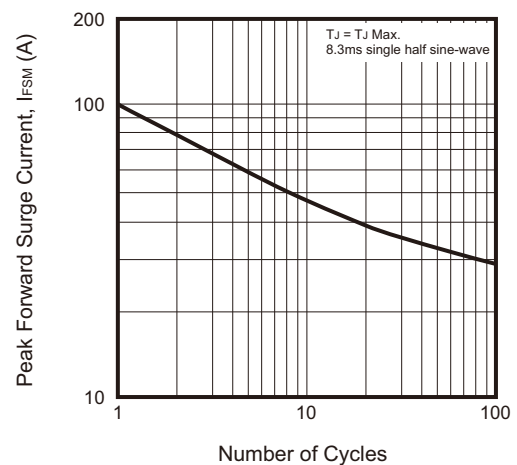
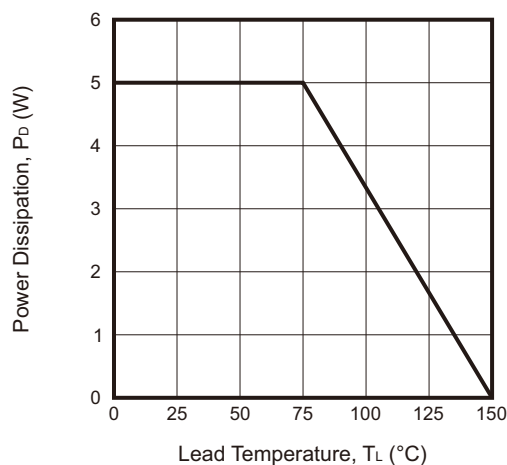
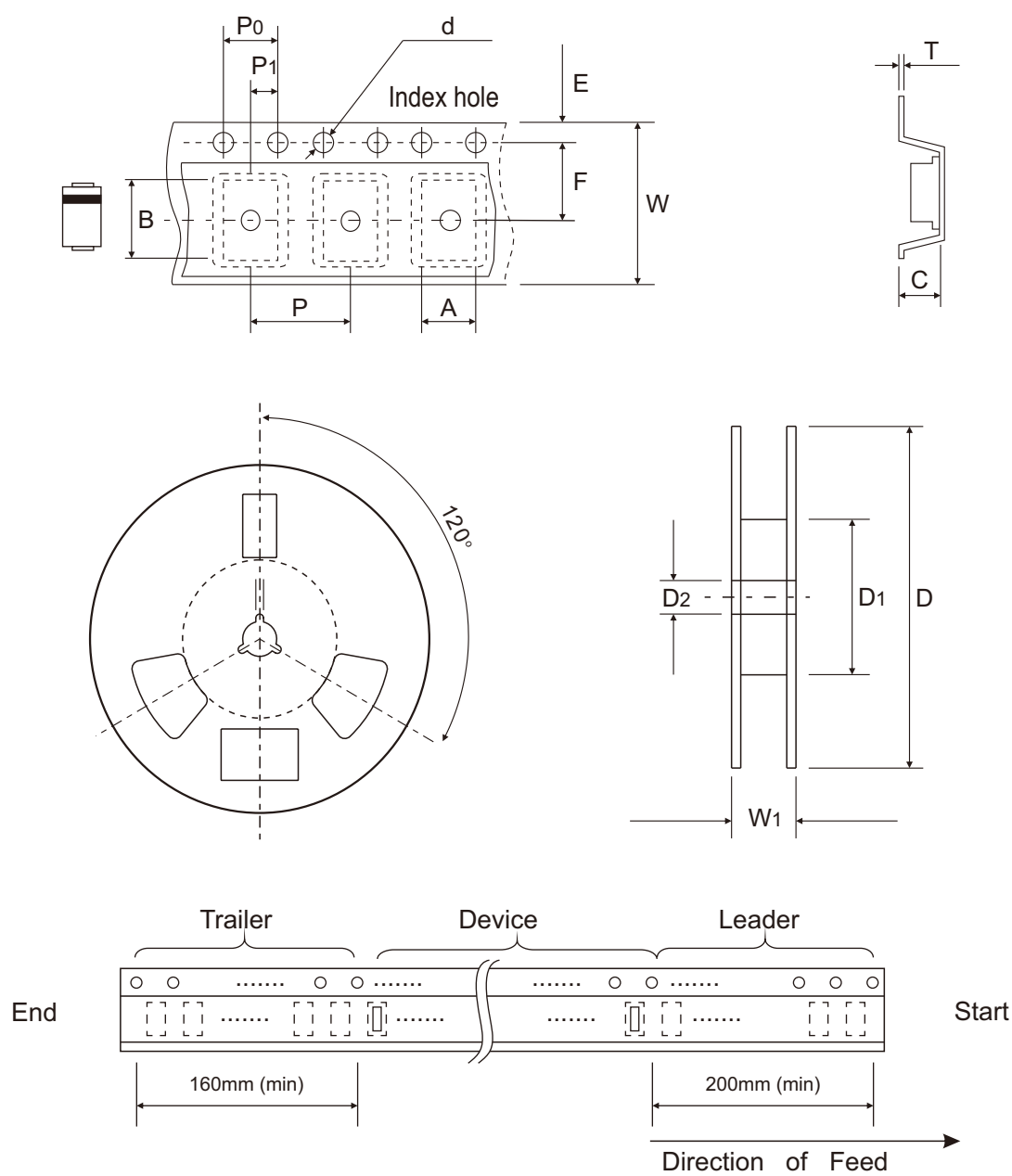


Fig.5 - Steady State Power Dissipation



Reel Taping Specification

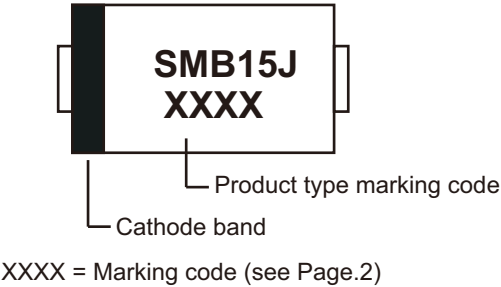


SMB /DO-214AA	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.76 ± 0.20	5.69 ± 0.10	2.67 ± 0.10	1.50 ± 0.05	330.00 ± 2.00	101.00 ± 2.00	13.70 ± 0.50
	(inch)	0.148 ± 0.008	0.224 ± 0.004	0.105 ± 0.004	0.059 ± 0.002	12.992 ± 0.079	3.976 ± 0.079	0.539 ± 0.020

SMB /DO-214AA	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	5.50 ± 0.05	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.23 ± 0.10	12.00 ± 0.30	17.70 ± 2.00
	(inch)	0.069 ± 0.004	0.217 ± 0.002	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.004	0.472 ± 0.012	0.697 ± 0.079

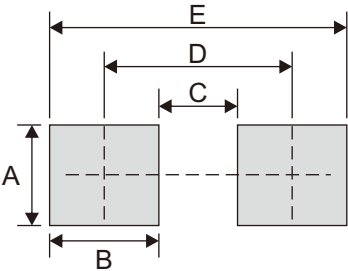
Marking Code

Part Number	Marking Code
SMB15Jxx(C)A-HF	See Page.2



Suggested P.C.B. PAD Layout

SIZE	SMB/DO-214AA	
	(mm)	(inch)
A	2.30	0.091
B	2.50	0.098
C	1.80	0.071
D	4.30	0.169
E	6.80	0.268



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DO-214AA (SMB)	3,000	13