

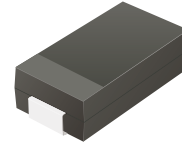
A3.0SMBJxx(C)A-HF Series

Working Peak Reverse Voltage: 12 to 75 V

Peak Pulse Power: 3000 W

RoHS Device

Halogen Free

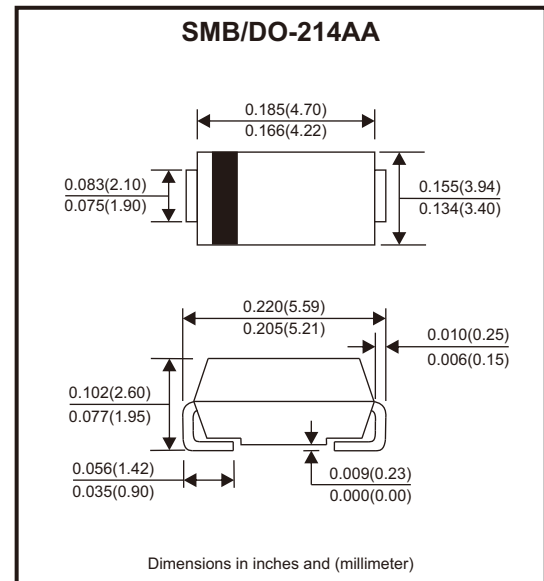


Features

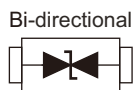
- Glass passivated chip.
- 3000W peak pulse power capability with a 10/1000 μ s waveform, repetition rate (duty cycles): 0.01%.
- Built-in strain relief.
- Low inductance.
- Low leakage.
- Uni and Bidirectional unit.
- Excellent clamping capability.
- Very fast response time.
- IEC-61000-4-2 ESD 30kV (Air/Contact).
- AEC-Q101 Qualified.

Mechanical Data

- Case: SMB/DO-214AA, molded plastic.
- Terminal: Solder plated, solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end except bipolar.
- Mounting position: Any.



Circuit Diagram



Maximum Ratings (TA = 25°C unless otherwise noted)

Parameter	Symbol	Value	Units
Peak power dissipation with a 10/1000 μ s waveform	P _{PP}	3000	W
Peak pulse current with a 10/1000 μ s waveform	I _{PP}	See next table	A
Steady state power dissipation at T _L =75°C	P _D	5	W
Operating junction temperature range	T _J	-55 to +150	°C
Storage temperature range	T _{STG}	-55 to +150	°C

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

Part No.	Breakdown voltage V _{BR} @ I _T			Max. reverse leakage I _R @ V _{RWM}	Working peak reverse voltage	Max. reverse surge current (Note 1)	Max. clamping voltage V _C @ I _{PP}	Marking code	
	Min (V)	Max (V)	I _T (mA)	I _R (μA)	V _{RWM} (V)	I _{PP} (A)	V _C (V)	UNI	BI
A3.0SMBJ12(C)A-HF	13.3	14.7	1	1	12	150.75	19.9	12A	12CA
A3.0SMBJ13(C)A-HF	14.4	15.9	1	1	13	139.53	21.5	13A	13CA
A3.0SMBJ14(C)A-HF	15.6	17.2	1	1	14	129.31	23.2	14A	14CA
A3.0SMBJ15(C)A-HF	16.7	18.5	1	1	15	122.95	24.4	15A	15CA
A3.0SMBJ16(C)A-HF	17.8	19.7	1	1	16	115.38	26.0	16A	16CA
A3.0SMBJ17(C)A-HF	18.9	20.9	1	1	17	108.70	27.6	17A	17CA
A3.0SMBJ18(C)A-HF	20.0	22.1	1	1	18	102.74	29.2	18A	18CA
A3.0SMBJ20(C)A-HF	22.2	24.5	1	1	20	92.59	32.4	20A	20CA
A3.0SMBJ22(C)A-HF	24.4	26.9	1	1	22	84.51	35.5	22A	22CA
A3.0SMBJ24(C)A-HF	26.7	29.5	1	1	24	77.12	38.9	24A	24CA
A3.0SMBJ26(C)A-HF	28.9	31.9	1	1	26	71.26	42.1	26A	26CA
A3.0SMBJ28(C)A-HF	31.1	34.4	1	1	28	66.08	45.4	28A	28CA
A3.0SMBJ30(C)A-HF	33.3	36.8	1	1	30	61.98	48.4	30A	30CA
A3.0SMBJ33(C)A-HF	36.7	40.6	1	1	33	56.29	53.3	33A	33CA
A3.0SMBJ36(C)A-HF	40.0	44.2	1	1	36	51.64	58.1	36A	36CA
A3.0SMBJ40(C)A-HF	44.4	49.1	1	1	40	46.51	64.5	40A	40CA
A3.0SMBJ43(C)A-HF	47.8	52.8	1	1	43	43.23	69.4	43A	43CA
A3.0SMBJ45(C)A-HF	50.0	55.3	1	1	45	41.27	72.7	45A	45CA
A3.0SMBJ48(C)A-HF	53.3	58.9	1	1	48	38.76	77.4	48A	48CA
A3.0SMBJ51(C)A-HF	56.7	62.7	1	1	51	36.41	82.4	51A	51CA
A3.0SMBJ54(C)A-HF	60.0	66.3	1	1	54	34.44	87.1	54A	54CA
A3.0SMBJ58(C)A-HF	64.4	71.2	1	1	58	32.05	93.6	58A	58CA
A3.0SMBJ60(C)A-HF	66.7	73.7	1	1	60	30.99	96.8	60A	60CA
A3.0SMBJ64(C)A-HF	71.1	78.6	1	1	64	29.13	103	64A	64CA
A3.0SMBJ70(C)A-HF	77.8	86.0	1	1	70	26.55	113	70A	70CA
A3.0SMBJ75(C)A-HF	83.3	92.1	1	1	75	24.79	121	75A	75CA

Notes: 1. Surge waveform: 10/1000μs.
2. For Bi-directional devices, use suffix "CA".

Typical Rating and Characteristic Curves (A3.0SMBJ-HF Series)

Fig.1 - Pulse Derating Curve

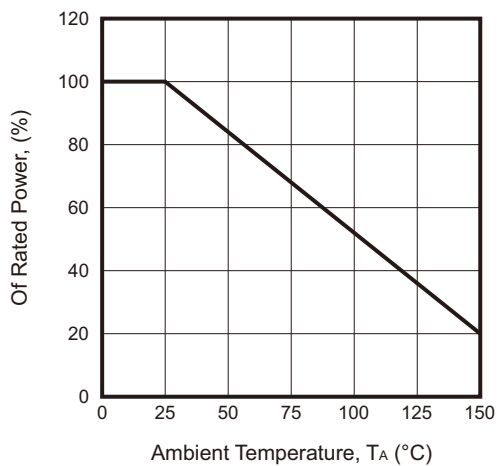


Fig.2 - Pulse Waveform

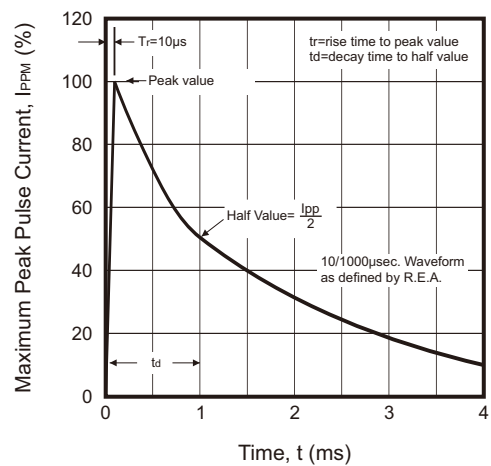


Fig.3 - Peak Pulse Power Rating Curve

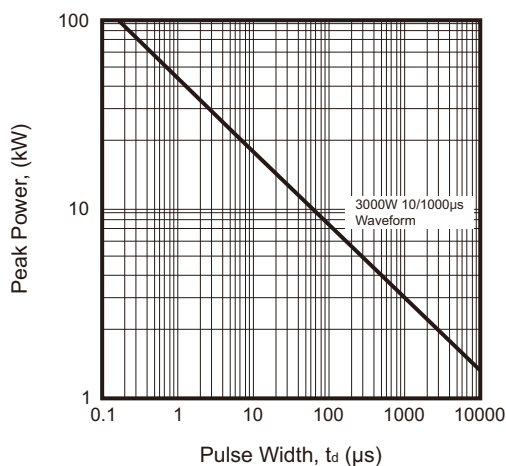
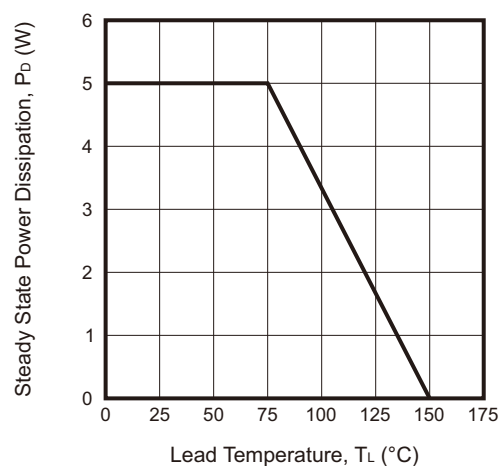
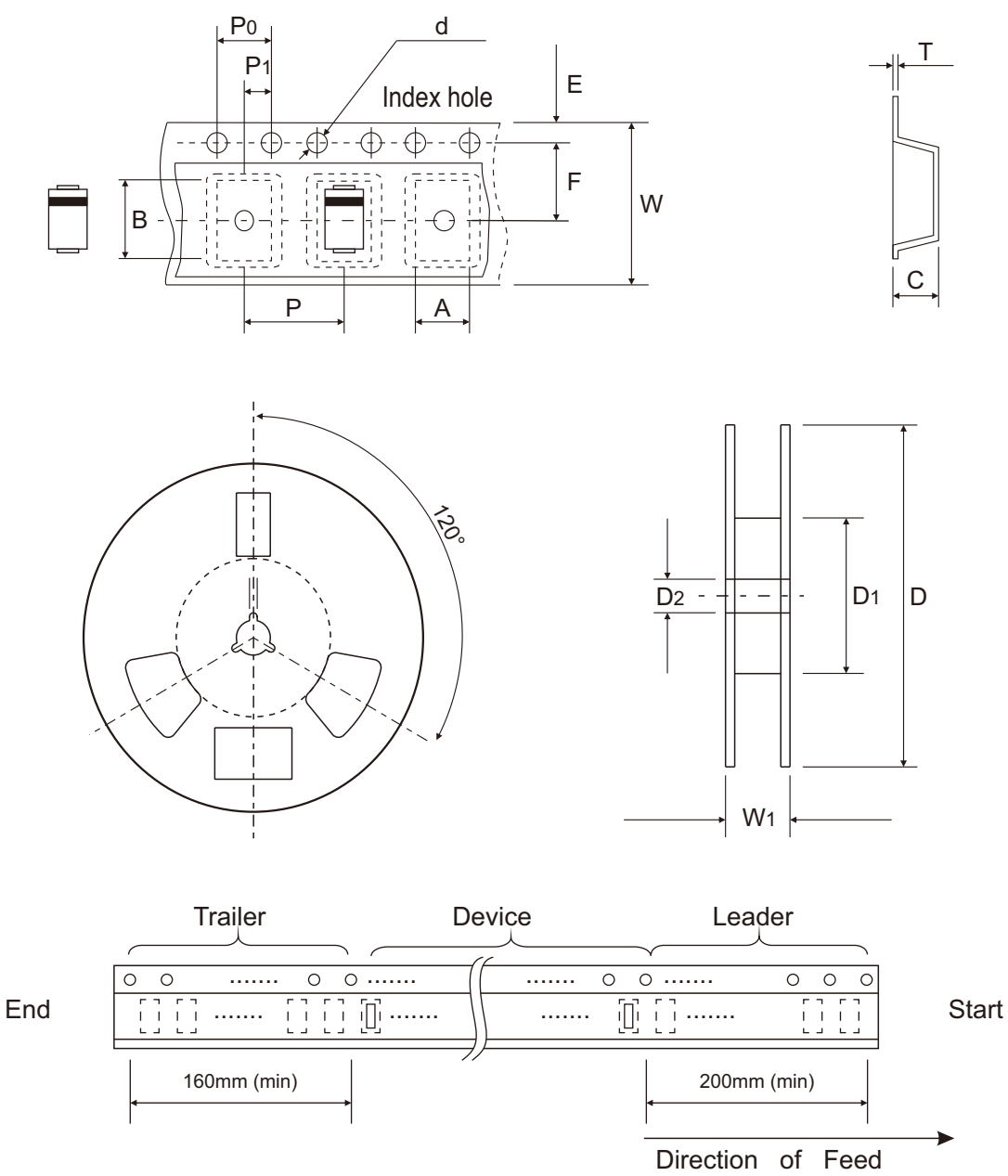


Fig.4 - Steady State Power Dissipation



Reel Taping Specification

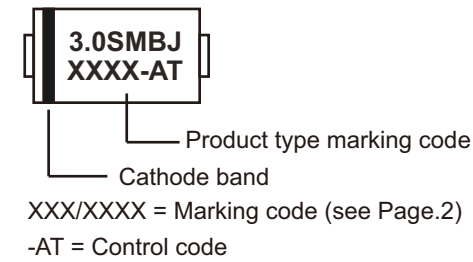


DO-214AA (SMB)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.81 ± 0.20	5.74 ± 0.20	2.67 ± 0.10	1.55 ± 0.10	333.00 ± 4.00	101.00 ± 2.00	13.50 ± 0.20
	(inch)	0.150 ± 0.008	0.226 ± 0.008	0.105 ± 0.004	0.061 ± 0.004	13.110 ± 0.157	3.976 ± 0.079	0.531 ± 0.008

DO-214AA (SMB)	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.20	5.50 ± 0.10	8.00 ± 0.20	4.00 ± 0.20	2.00 ± 0.20	0.30 ± 0.10	12.00 ± 0.30	16.00 ± 4.00
	(inch)	0.069 ± 0.008	0.217 ± 0.004	0.315 ± 0.008	0.157 ± 0.008	0.079 ± 0.008	0.012 ± 0.004	0.472 ± 0.012	0.630 ± 0.157

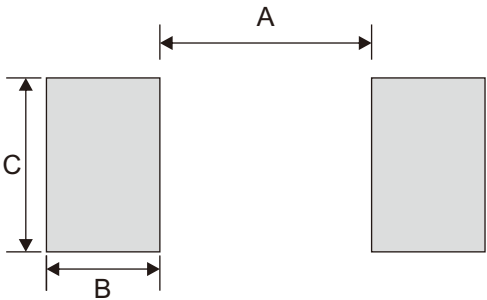
Marking Code

Part Number	Marking Code
A3.0SMBJ-HF Series	See Page.2



Suggested P.C.B. PAD Layout

SIZE	SMB/DO-214AA	
	(mm)	(inch)
A	2.80 Max	0.110 Max
B	1.50 Min	0.059 Min
C	2.30 Min	0.091 Min



Standard Packaging

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