

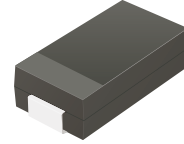
ASMDJxxx(C)A-HF Series

Working Peak Reverse Voltage: 5.0 to 220 V

Peak Pulse Power: 3000 W

RoHS Device

Halogen Free

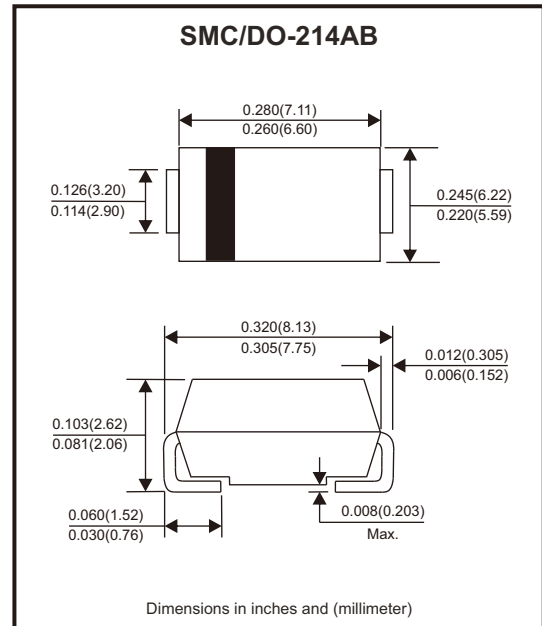


Features

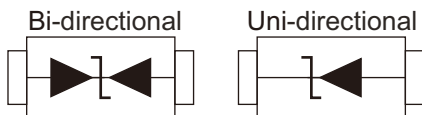
- 3000W peak pulse power capability at 10/1000 μ s waveform, repetition rate (duty cycle):0.01%
- Low incremental surge impedance.
- Excellent clamping capability.
- High temperature soldering guaranteed: 260°C/40 seconds at terminals.
- Uni and Bidirectional unit.
- AEC-Q101 Qualified.

Mechanical Data

- Case: SMC/DO-214AB, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end except bipolar.
- Mounting position: Any.



Circuit Diagram



Maximum Ratings and Electrical Characteristics (at Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Units
Peak pulse power dissipation at 10/1000 μ s waveform (Note 1, 2, Fig.1)	P _{PP}	3000	W
Peak pulse current with a 10/1000 μ s waveform (Note 1, Fig.3)	I _{PP}	See next table	A
Steady state power dissipation at T _A =50°C (Fig.5)	P _D	6.5	W
Maximum instantaneous forward voltage at 100A for unidirectional	V _F	3.5	V
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) (Note 3, Fig.6)	I _{FSM}	300	A
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 T_A=25°C per Fig.2.
 2. Mounted on 8mm x 8mm copper, pads to each terminal.
 3. 8.3ms single half sine-wave, or equivalent square wave, duty cycle = 4 pulses per minutes maximum.

SMD Transient Voltage Suppressor

Electrical Characteristics (ASMDJ5.0(C)A-HF Thru. ASMDJ220(C)A-HF)

Part No.	Breakdown Voltage $V_{BR} @ I_T$			Maximum Reverse Leakage @ V_{RWM}	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Clamping Voltage @ I_{PP} V_C (V)	Maximum Reverse Surge Current I_{PP} (A)	Marking Code	
	Min (V)	Max (V)	I_T (mA)					Uni	Bi
ASMDJ5.0(C)A-HF	6.40	7.00	10	800	5.0	9.2	326.1	RDE	DDE
ASMDJ6.0(C)A-HF	6.67	7.37	10	800	6.0	10.3	291.3	RDG	DDG
ASMDJ6.5(C)A-HF	7.22	7.98	10	500	6.5	11.2	267.9	RDK	DDK
ASMDJ7.0(C)A-HF	7.78	8.60	10	200	7.0	12.0	250.0	PDM	DDM
ASMDJ7.5(C)A-HF	8.33	9.21	1	100	7.5	12.9	232.6	PDP	DDP
ASMDJ8.0(C)A-HF	8.89	9.83	1	50	8.0	13.6	220.6	PDR	DDR
ASMDJ8.5(C)A-HF	9.44	10.40	1	20	8.5	14.4	208.3	PDT	DDT
ASMDJ9.0(C)A-HF	10.00	11.10	1	10	9.0	15.4	194.8	PDV	DDV
ASMDJ10(C)A-HF	11.10	12.30	1	5	10.0	17.0	176.5	PDX	DDX
ASMDJ11(C)A-HF	12.20	13.50	1	2	11.0	18.2	164.8	PDZ	DDZ
ASMDJ12(C)A-HF	13.30	14.70	1	2	12.0	19.9	150.8	PEE	DEE
ASMDJ13(C)A-HF	14.40	15.90	1	2	13.0	21.5	139.5	PEG	DEG
ASMDJ14(C)A-HF	15.60	17.20	1	2	14.0	23.2	129.3	PEK	DEK
ASMDJ15(C)A-HF	16.70	18.50	1	2	15.0	24.4	123.0	PEM	DEM
ASMDJ16(C)A-HF	17.80	19.70	1	2	16.0	26.0	115.4	PEP	DEP
ASMDJ17(C)A-HF	18.90	20.90	1	2	17.0	27.6	108.7	PER	DER
ASMDJ18(C)A-HF	20.00	22.10	1	2	18.0	29.2	102.7	PET	DET
ASMDJ20(C)A-HF	22.20	24.50	1	2	20.0	32.4	92.6	PEV	DEV
ASMDJ22(C)A-HF	24.40	26.90	1	2	22.0	35.5	84.5	PEX	DEX
ASMDJ24(C)A-HF	26.70	29.50	1	2	24.0	38.9	77.1	PEZ	DEZ
ASMDJ26(C)A-HF	28.90	31.90	1	2	26.0	42.1	71.3	PFE	DFE
ASMDJ28(C)A-HF	31.10	34.40	1	2	28.0	45.4	66.1	PFG	DFG
ASMDJ30(C)A-HF	33.30	36.80	1	2	30.0	48.4	62.0	PFK	DFK
ASMDJ33(C)A-HF	36.70	40.60	1	2	33.0	53.3	56.3	PFM	DFM
ASMDJ36(C)A-HF	40.00	44.20	1	2	36.0	58.1	51.6	PFP	DFP
ASMDJ40(C)A-HF	44.40	49.10	1	2	40.0	64.5	46.5	PFR	DFR
ASMDJ43(C)A-HF	47.80	52.80	1	2	43.0	69.4	43.2	PFT	DFT
ASMDJ45(C)A-HF	50.00	55.30	1	2	45.0	72.7	41.3	PFV	DFV
ASMDJ48(C)A-HF	53.30	58.90	1	2	48.0	77.4	38.8	PFX	DFX
ASMDJ51(C)A-HF	56.70	62.70	1	2	51.0	82.4	36.4	PFZ	DFZ
ASMDJ54(C)A-HF	60.00	66.30	1	2	54.0	87.1	34.4	PGE	DGE
ASMDJ58(C)A-HF	64.40	71.20	1	2	58.0	93.6	32.1	PGG	DGG
ASMDJ60(C)A-HF	66.70	73.70	1	2	60.0	96.8	31.0	PGK	DGK
ASMDJ64(C)A-HF	71.10	78.60	1	2	64.0	103.0	29.1	PGM	DGM
ASMDJ70(C)A-HF	77.80	86.00	1	2	70.0	113.0	26.5	PGP	DGP
ASMDJ75(C)A-HF	83.30	92.10	1	2	75.0	121.0	24.8	PGR	DGR
ASMDJ78(C)A-HF	86.70	95.80	1	2	78.0	126.0	23.8	PGT	DGT
ASMDJ85(C)A-HF	94.40	104.00	1	2	85.0	137.0	21.9	PGV	DGV
ASMDJ90(C)A-HF	100.00	111.00	1	2	90.0	146.0	20.5	PGX	DGX
ASMDJ100(C)A-HF	111.00	123.00	1	2	100.0	162.0	18.5	PGZ	DGZ
ASMDJ110(C)A-HF	122.00	135.00	1	2	110.0	177.0	16.9	PHE	DHE
ASMDJ120(C)A-HF	133.00	147.00	1	2	120.0	193.0	15.5	PHG	DHG
ASMDJ130(C)A-HF	144.00	159.00	1	2	130.0	209.0	14.4	PHK	DHK
ASMDJ150(C)A-HF	167.00	185.00	1	2	150.0	243.0	12.3	PHM	DHM

Electrical Characteristics (ASMDJ5.0(C)A-HF Thru. ASMDJ220(C)A-HF)

Part No.	Breakdown Voltage V_{BR} @ I_T			Maximum Reverse Leakage @ V_{RWM} I_R (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Clamping Voltage @ I_{PP} V_C (V)	Maximum Reverse Surge Current I_{PP} (A)	Marking Code	
	Min (V)	Max (V)	I_T (mA)					Uni	Bi
ASMDJ160(C)A-HF	178.0	197.0	1	2	160.0	259.0	11.6	PHP	DHP
ASMDJ170(C)A-HF	189.0	209.0	1	2	170.0	275.0	10.9	PHR	DHR
ASMDJ180(C)A-HF	201.0	222.0	1	2	180.0	292.0	10.3	HHT	IHT
ASMDJ190(C)A-HF	211.0	233.0	1	2	190.0	308.0	9.7	HHV	IHV
ASMDJ200(C)A-HF	224.0	247.0	1	2	200.0	324.0	9.3	HHX	IHX
ASMDJ210(C)A-HF	237.0	263.0	1	2	210.0	340.0	8.8	HHZ	IHZ
ASMDJ220(C)A-HF	246.0	272.0	1	2	220.0	356.0	8.4	HIE	IIE

Notes: 1. For bidirectional type having V_{RWM} of 10V and less, the I_R limit is double.
2. For Bi-directional devices, use suffix CA.
3. Suffix A denotes 5% tolerance devices.

Typical Rating and Characteristic Curves (ASMDJxxx(C)A-HF)

Fig.1 - Peak Pulse Power Rating Curve

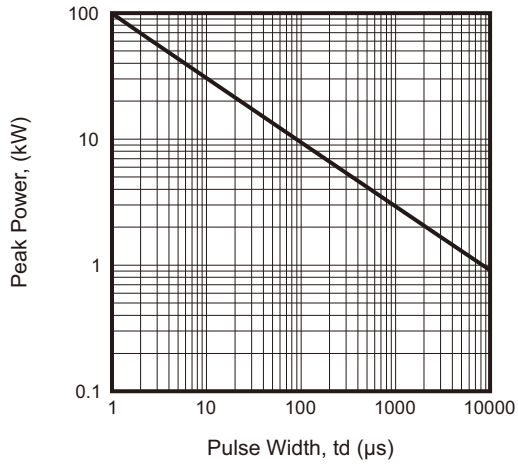


Fig.2 - Pulse Power Curve

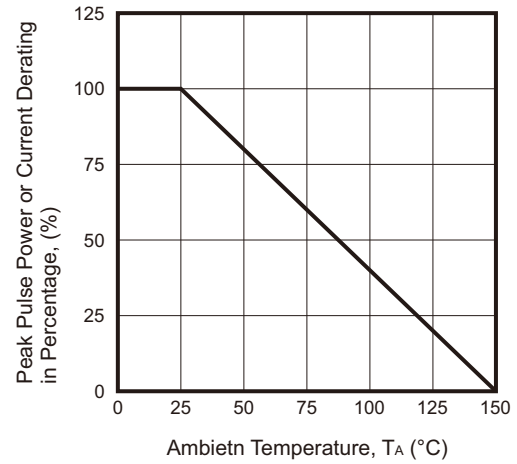


Fig.3 - Pulse Waveform

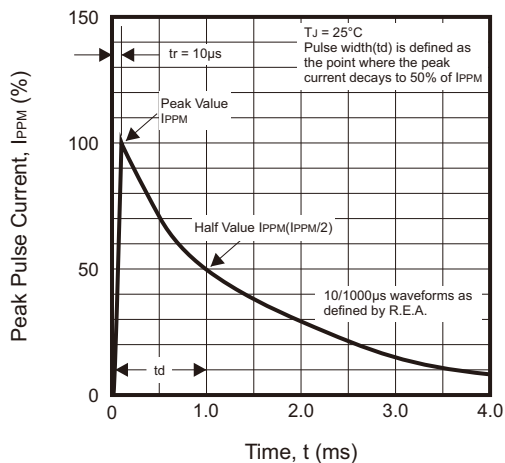


Fig.4 - Typical Junction Capacitance

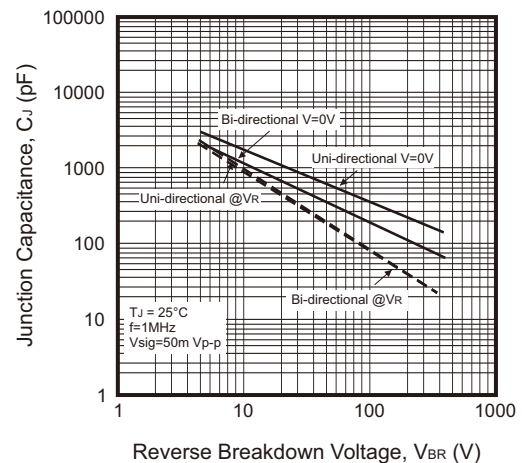


Fig.5 - Steady State Power Dissipation Derating Curve

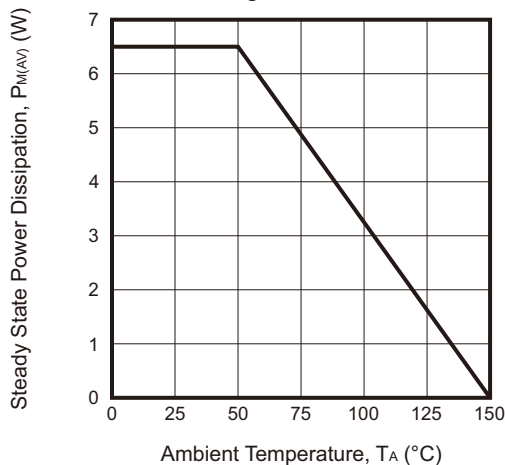
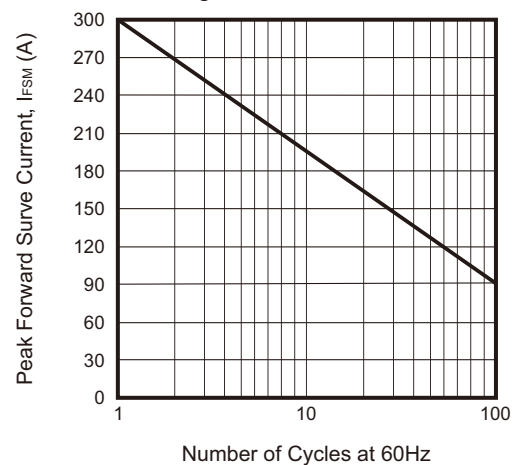
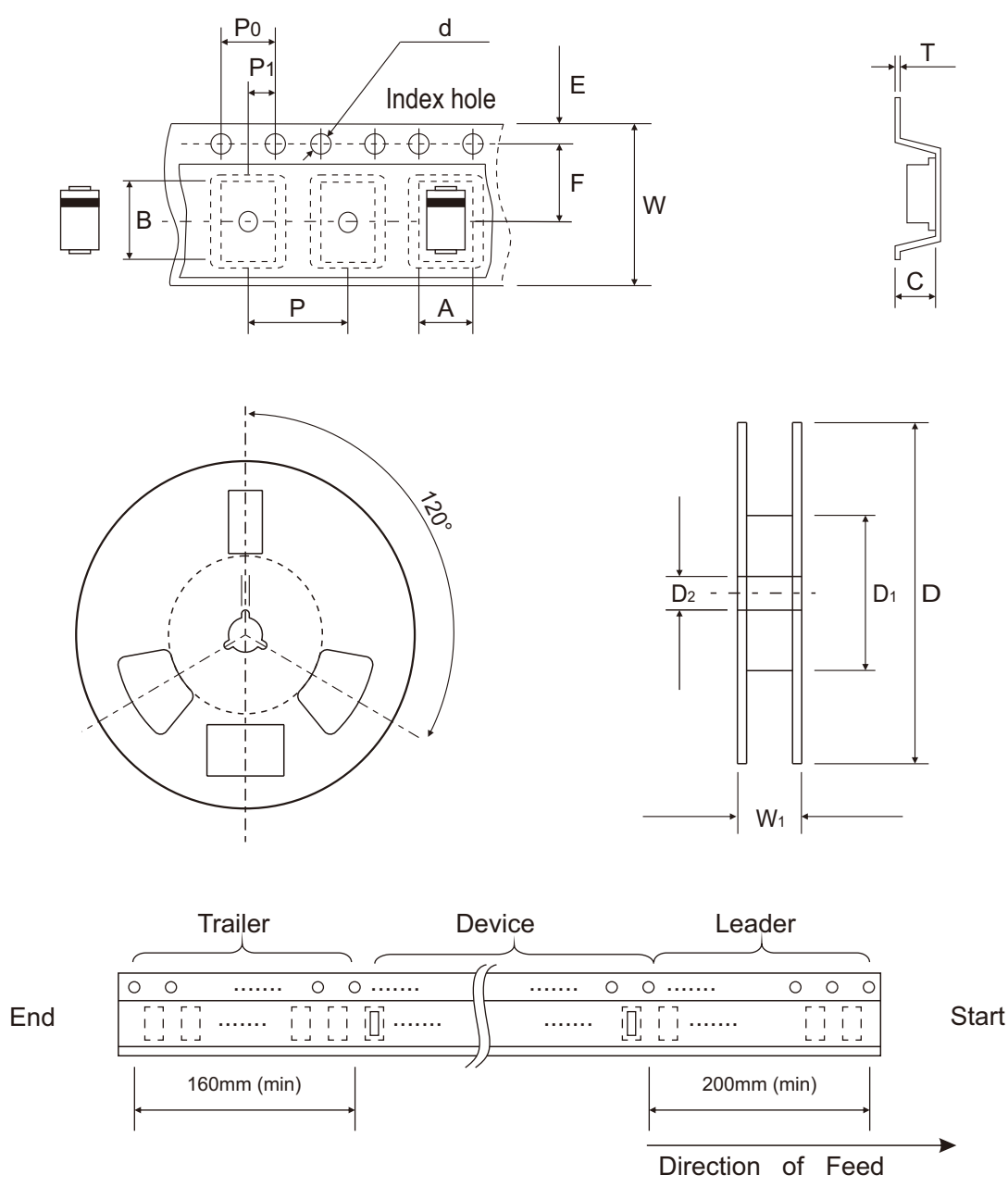


Fig.6 - Maximum Non-Repetitive Forward Surge Current



Reel Taping Specification



DO-214AB (SMC)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	6.50 ± 0.10	8.80 ± 0.10	2.54 ± 0.10	1.55 ± 0.05	330.00 ± 2.00	100.00 ± 1.00	13.00 ± 0.20
	(inch)	0.256 ± 0.004	0.364 ± 0.004	0.100 ± 0.004	0.061 ± 0.002	12.992 ± 0.079	3.937 ± 0.039	0.512 ± 0.008

DO-214AB (SMC)	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.05	7.50 ± 0.10	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.25 ± 0.05	16.00 ± 0.15	21.50 ± 1.00
	(inch)	0.069 ± 0.002	0.295 ± 0.004	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.010 ± 0.002	0.630 ± 0.006	0.846 ± 0.039

Marking Code

Part Number	Marking Code
ASMDJxxx(C)A-HF	See Page.2~3

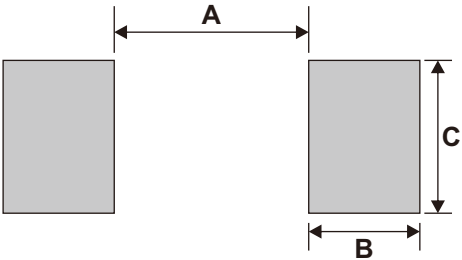


┃ = Cathode band

XXX = Marking code (see Page.2~3)

Suggested P.C.B. PAD Layout

SIZE	SMC/DO-214AB	
	(mm)	(inch)
A	4.20 Max	0.165 Max
B	2.40 Min	0.094 Min
C	3.30 Min	0.130 Min



Standard Packaging

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