

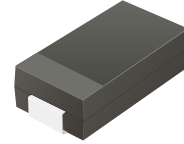
8.0SMDJ12(C)A-HF Thru. 8.0SMDJ36(C)A-HF

Working Peak Reverse Voltage: 12 to 36 V

Peak Pulse Power: 8000 W

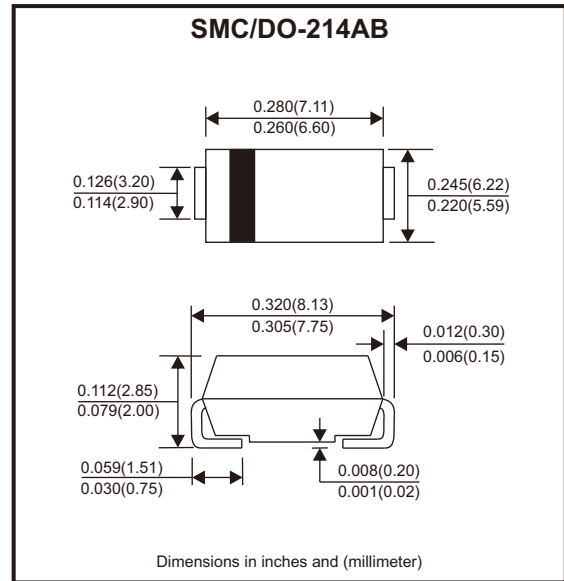
RoHS Device

Halogen Free



Features

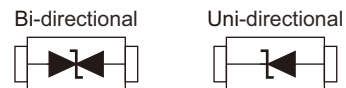
- Glass passivated chip.
- 8000W peak pulse power capability with a 10/1000 μ s waveform, repetition rate (duty cycles): 0.01%.
- Built-in strain relief.
- Low inductance.
- Low leakage.
- Uni and Bidirectional unit.
- Excellent clamping capability.
- Very fast response time.
- Typical maximum temperature coefficient
 $\Delta V_{BR} = 0.1\% \times V_{BR} @ 25^{\circ}C \times \Delta T$
- IEC-61000-4-2 ESD 30kV (Air), 30kV (Contact).
- High temperature soldering:
260 $^{\circ}C$ /40 seconds at terminals.
- Matte tin lead-free plated.



Mechanical Data

- Case: JEDEC SMC/DO-214AB, molded plastic over glass passivated junction.
- Epoxy: UL 94V-0 rated flame retardant.
- Polarity: Color band denotes cathode end except bipolar.
- Terminal: Solderable per MIL-STD-750, method 2026.
- Mounting position: Any.

Circuit Diagram



Maximum Ratings (TA = 25 $^{\circ}C$ unless otherwise noted)

Parameter	Symbol	Value	Units
Peak power dissipation with a 10/1000 μ s waveform (Note 1)	P _{PP}	8000	W
Peak pulse current with a 10/1000 μ s waveform (Note 1)	I _{PP}	See next table	A
Power dissipation on infinite heatsink at T _L =50 $^{\circ}C$	P _D	6.5	W
Peak forward surge current, 8.3ms single half sine-wave unidirectional only (Note 2)	I _{FSM}	300	A
Maximum instantaneous forward voltage at 100A for unidirectional only	V _F	5	V
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	$^{\circ}C$

Notes: 1. Non-repetitive current pulse per Fig.5 and derated above T_A=25 $^{\circ}C$ per Fig.1.
2. Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

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

Part No.	Working peak reverse voltage	Breakdown voltage			Max. reverse leakage	Max. reverse surge current	Max. clamping voltage	Marking code	
	V_{RWM} (V)	$V_{BR} @ I_T$			$I_R @ V_{RWM}$		$V_C @ I_{PP}$	UNI	BI
		Min (V)	Max (V)	I_T (mA)	(μA)	I_{PP} (A)	(V)		
8.0SMDJ12(C)A-HF	12.0	13.30	14.70	10	800	402.1	19.9	8PEP	8BEP
8.0SMDJ13(C)A-HF	13.0	14.40	15.90	10	500	372.1	21.5	8PEQ	8BEQ
8.0SMDJ14(C)A-HF	14.0	15.60	17.20	10	200	344.9	23.2	8PER	8BER
8.0SMDJ15(C)A-HF	15.0	16.70	18.50	1	100	327.9	24.4	8PES	8BES
8.0SMDJ16(C)A-HF	16.0	17.80	19.70	1	50	307.7	26.0	8PET	8BET
8.0SMDJ17(C)A-HF	17.0	18.90	20.90	1	20	290.0	27.6	8PEU	8BEU
8.0SMDJ18(C)A-HF	18.0	20.00	22.10	1	10	274.0	29.2	8PEV	8BEV
8.0SMDJ20(C)A-HF	20.0	22.20	24.50	1	2	247.0	32.4	8PEW	8BEW
8.0SMDJ22(C)A-HF	22.0	24.40	26.90	1	2	225.4	35.5	8PEX	8BEX
8.0SMDJ24(C)A-HF	24.0	26.70	29.50	1	2	205.7	38.9	8PEZ	8BEZ
8.0SMDJ26(C)A-HF	26.0	28.90	31.90	1	2	190.1	42.1	8PFE	8BFE
8.0SMDJ28(C)A-HF	28.0	31.10	34.40	1	2	176.2	45.4	8PFG	8BFG
8.0SMDJ30(C)A-HF	30.0	33.30	36.80	1	2	165.3	48.4	8PFK	8BFK
8.0SMDJ33(C)A-HF	33.0	36.70	40.60	1	2	150.1	53.3	8PFM	8BFM
8.0SMDJ36(C)A-HF	36.0	40.00	44.20	1	2	137.8	58.1	8PFP	8BFP

Notes: 1. For bidirectional type having V_R of 20 volts and less, the I_R limit is double.
 2. For Bi-directional devices, use suffix CA.

Rating and Characteristic Curves (8.0SMDJ-HF Series)

Fig.1 - Pulse Derating Curve

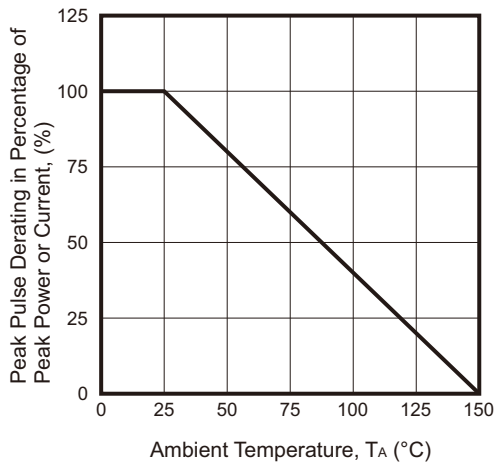


Fig.2 - Maximum Non-Repetitive Surge Current

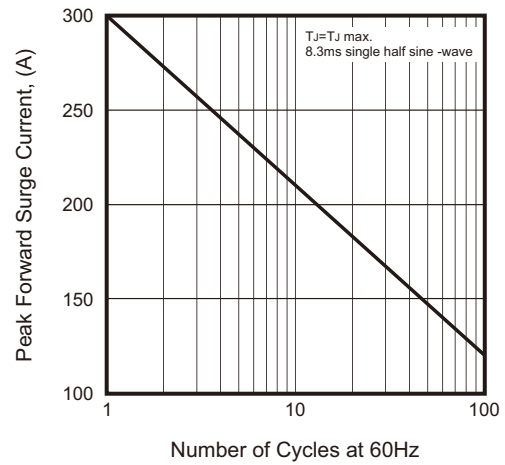


Fig.3 - Typical Junction Capacitance

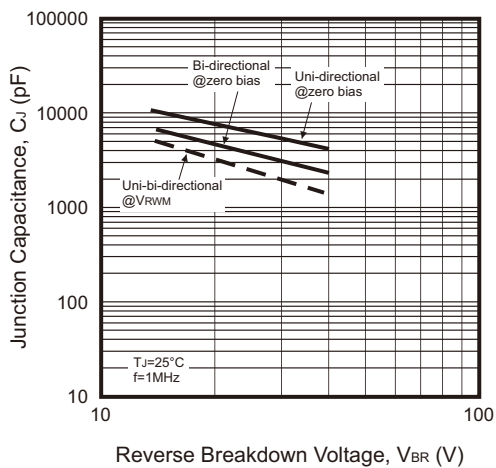


Fig.4 - Peak Pulse Power Rating Curve

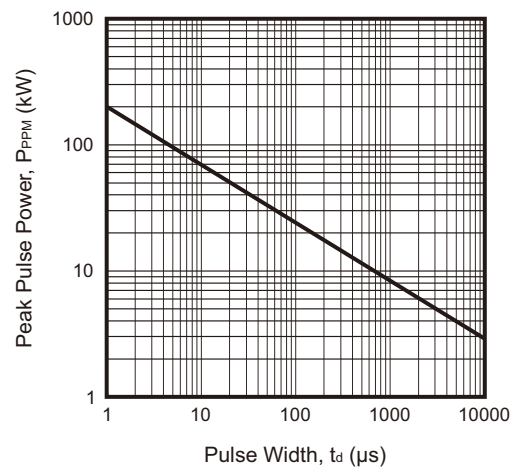
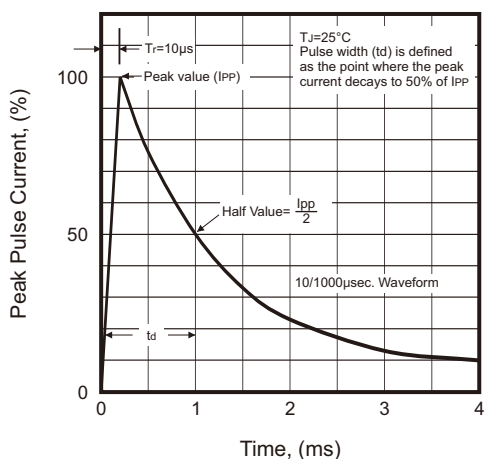
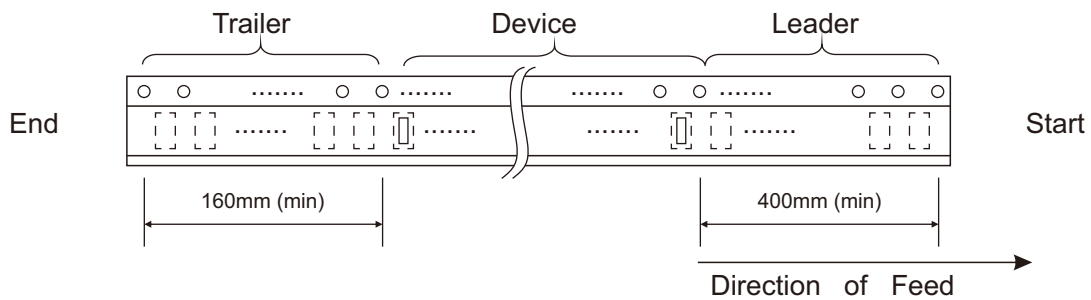
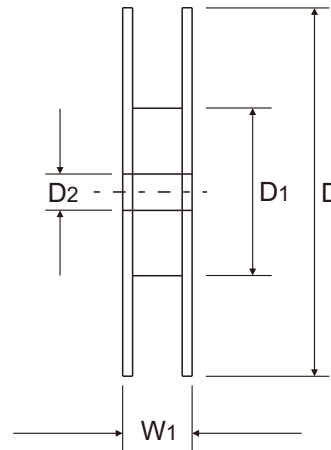
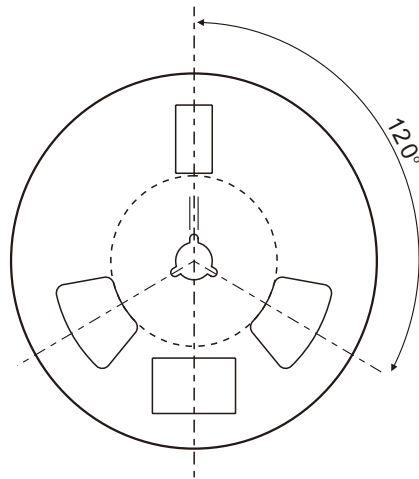
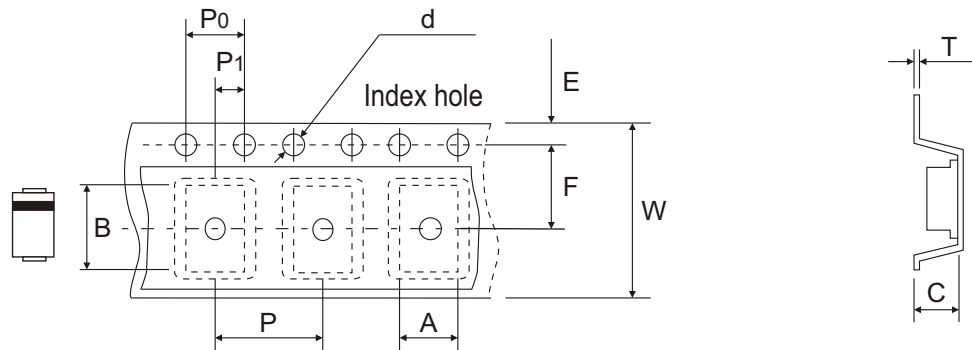


Fig.5 - Pulse Waveform



Reel Taping Specification

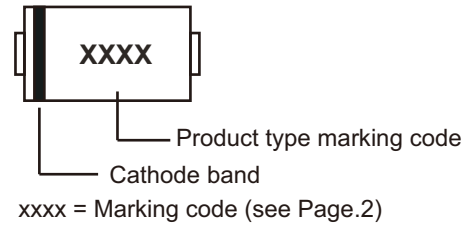


DO-214AB (SMC)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	6.25 ± 0.10	8.20 ± 0.10	2.75 ± 0.10	1.50 ± 0.10	330 ± 0.30	72.00 Min	13.00 ± 0.20
	(inch)	0.246 ± 0.004	0.323 ± 0.004	0.108 ± 0.004	0.059 ± 0.004	12.992 ± 0.012	2.835 Min	0.512 ± 0.008

DO-214AB (SMC)	SYMBOL	E	F	P	P_0	P_1	T	W	W_1
	(mm)	1.75 ± 0.10	7.50 ± 0.10	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.30 ± 0.10	16.00 ± 0.30	22.00 Min
	(inch)	0.069 ± 0.004	0.295 ± 0.004	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.012 ± 0.004	0.630 ± 0.012	0.866 Min

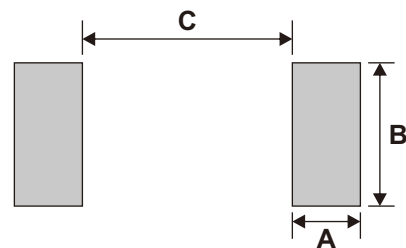
Marking Code

Part Number	Marking Code
8.0SMDJ-HF Series	See Page.2



Suggested P.C.B. PAD Layout

SIZE	DO-214AB (SMC)	
	(mm)	(inch)
A	1.52 Min	0.060 Min
B	3.20 Min	0.126 Min
C	4.69 Max	0.185 Max



Standard Packaging

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