

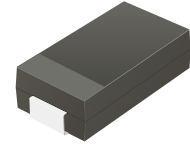
## ATVJ10BxxxJ(B)-HF Series

Reverse Voltage: 15 to 40 V

Peak Pulse Power: 1000 W

RoHS Device

Halogen Free

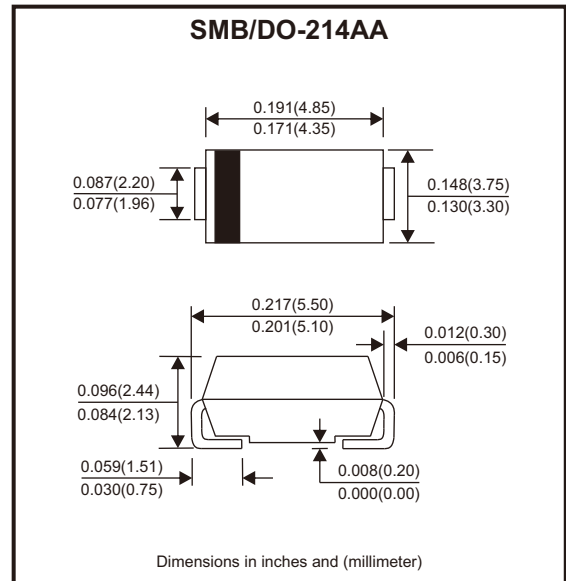


### Features

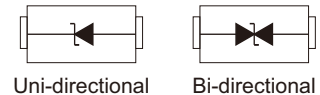
- Glass passivated chip.
- 1000W peak pulse power capability with a 10/1000 $\mu$ s waveform, repetitive rate (duty cycle): 0.01%.
- Low leakage.
- Uni and Bidirectional unit.
- Excellent clamping capability.
- Very fast response time.
- AEC-Q101 Qualified.

### Mechanical Data

- Case: SMB/DO-214AA, molded plastic.
- Epoxy: UL 94V-0 rate flame retardant.
- Lead: 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

Rating at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

Parameter	Symbol	Value	Units
Peak power dissipation with a 10/1000 $\mu$ s waveform (Note 1)	P <sub>PP</sub>	1000	W
Peak pulse current with a 10/1000 $\mu$ s waveform (Note 1)	I <sub>PP</sub>	See Next Table	A
Power dissipation on infinite heatsink at T <sub>L</sub> = 75°C	P <sub>D</sub>	5	W
Peak forward surge current, 8.3ms single half sine-wave unidirectional only (Note 2)	I <sub>FSM</sub>	100	A
Maximum instantaneous forward voltage at 25A for unidirectional only	V <sub>F</sub>	3.5	V
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

Notes: 1. Non-repetitive current pulse per Fig.5 and derated above Ta=25°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 (T<sub>A</sub>=25°C unless otherwise noted)

Part No.	Breakdown voltage V <sub>BR</sub> @ I <sub>T</sub>			Maximum Reverse Leakage @V <sub>RWM</sub> I <sub>R</sub> (μA)	Working Peak Reverse Voltage V <sub>RWM</sub> (V)	Maximum Reverse Surge Current I <sub>PP</sub> (A)	Maximum Clamping Voltage @I <sub>PP</sub> V <sub>C</sub> (V)	Device Marking Code	
	Min. (V)	Max. (V)	I <sub>T</sub> (mA)					UNI	BI
ATVJ10B150J(B)-HF	16.70	18.50	1	1.0	15.0	40.98	24.4	PALM	DABM
ATVJ10B160J(B)-HF	17.80	19.70	1	1.0	16.0	38.46	26.0	PALP	DABP
ATVJ10B170J(B)-HF	18.90	20.90	1	1.0	17.0	36.23	27.6	PALR	DABR
ATVJ10B180J(B)-HF	20.00	22.10	1	1.0	18.0	34.25	29.2	PALT	DABT
ATVJ10B190J(B)-HF	21.10	23.30	1	1.0	19.0	32.49	30.8	PALB	DABB
ATVJ10B200J(B)-HF	22.20	24.50	1	1.0	20.0	30.86	32.4	PALV	DABV
ATVJ10B220J(B)-HF	24.40	26.90	1	1.0	22.0	28.17	35.5	PALX	DABX
ATVJ10B240J(B)-HF	26.70	29.50	1	1.0	24.0	25.71	38.9	PALZ	DABZ
ATVJ10B260J(B)-HF	28.90	31.90	1	1.0	26.0	23.75	42.1	PAME	DACE
ATVJ10B280J(B)-HF	31.10	34.40	1	1.0	28.0	22.03	45.4	PAMG	DACG
ATVJ10B300J(B)-HF	33.30	36.80	1	1.0	30.0	20.66	48.4	PAMK	DACK
ATVJ10B330J(B)-HF	36.70	40.60	1	1.0	33.0	18.76	53.3	PAMM	DACM
ATVJ10B360J(B)-HF	40.00	44.20	1	1.0	36.0	17.21	58.1	PAMP	DACP
ATVJ10B400J(B)-HF	44.40	49.10	1	1.0	40.0	15.50	64.5	PAMR	DACR

Notes: 1. Suffix "J" denotes 5% tolerance device.

2. Suffix "B" after part number to specify Bi-directional devices.

## Rating and Characteristics Curves (ATVJ10BxxxJ(B)-HF Series)

Fig.1 - Pulse Derating Curve

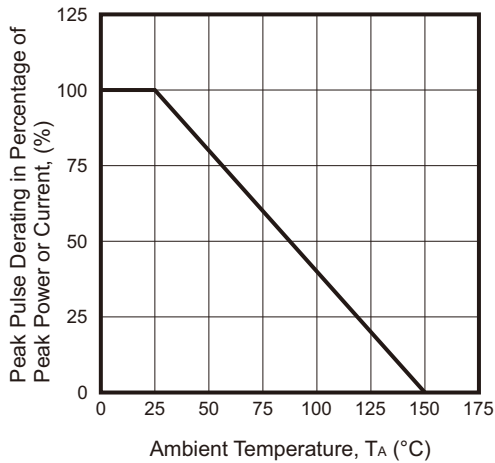


Fig.2 - Max. Non-Repetitive Surge Current

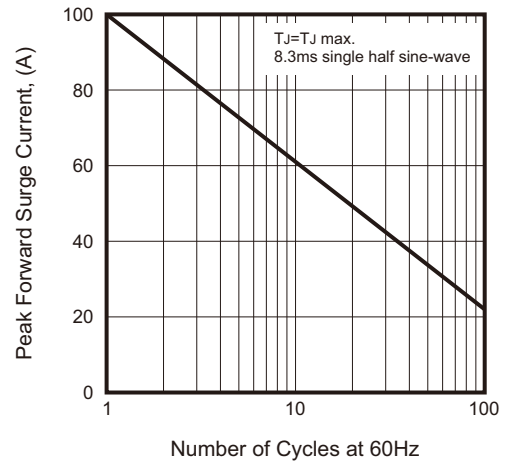


Fig.3 - Steady State Power Derating Curve

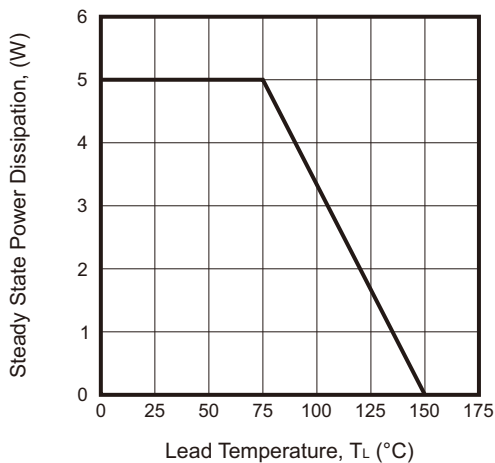


Fig.4 - Peak Pulse Power Rating Curve

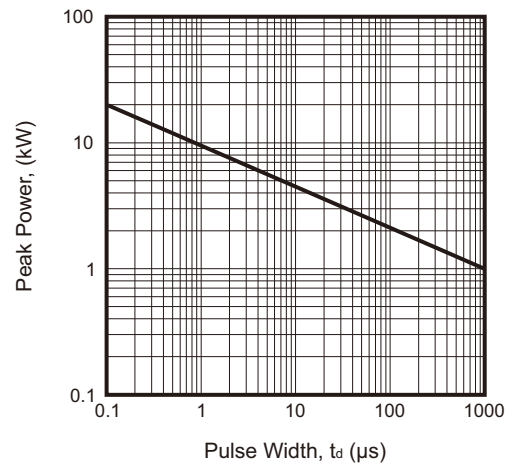


Fig.5 - Pulse Waveform

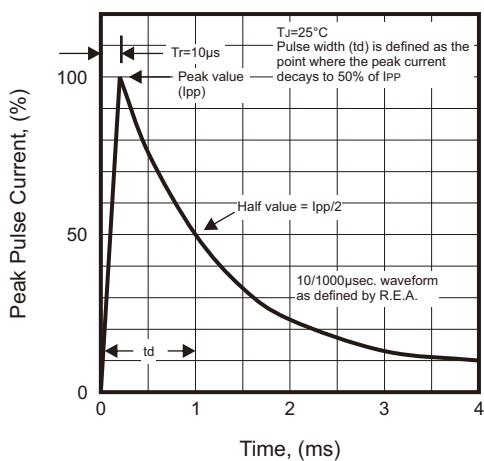
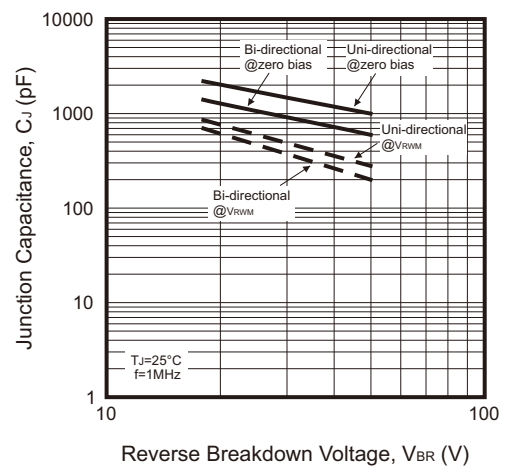
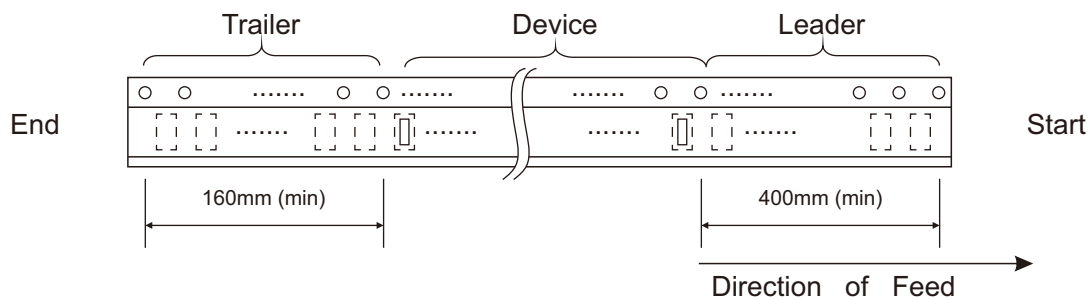
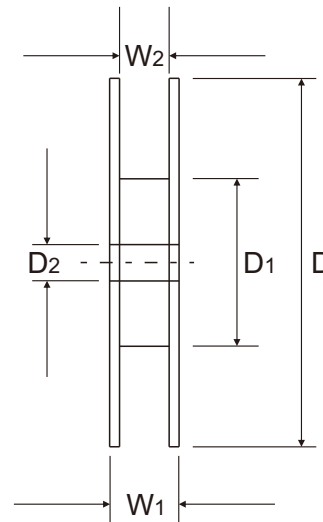
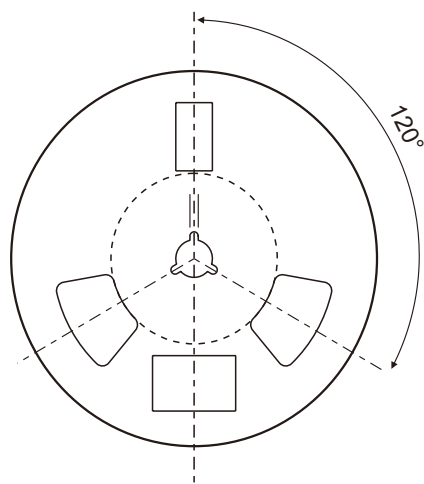
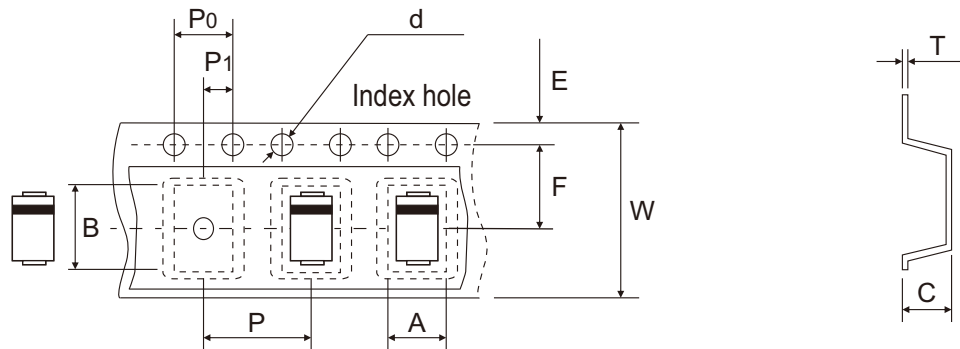


Fig.6 - Typical Junction Capacitance



## Reel Taping Specification



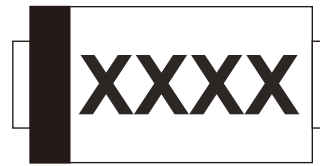
DO-214AA (SMB)	SYMBOL	A	B	C	d	D	D1	D2	E
	(mm)	See Note 1			1.55 ± 0.05	330.00	50.00 (Min.)	13.00 ± 0.50	1.75 ± 0.05
	(inch)	See Note 1			0.061 ± 0.002	12.992	1.969 (Min.)	0.512 ± 0.020	0.069 ± 0.002

DO-214AA (SMB)	SYMBOL	F	P	P0	P1	T	W	W1	W2
	(mm)	5.50 ± 0.05	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.40 (Max.)	12.00 ± 0.10	18.40 (Max.)	14.40 (Max.)
	(inch)	0.217 ± 0.002	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.016 (Max.)	0.472 ± 0.004	0.724 (Max.)	0.567 (Max.)

Notes: 1. A, B, and C the clearance between the component and the cavity must be within 0.5mm max. for 8mm tape and 12mm tape, 1.0mm max. for 16mm tape and 24mm tape.

## Marking Code

Part Number	Marking Code
ATVJ10B150J(B)-HF Thru. ATVJ10B400J(B)	See Page.2

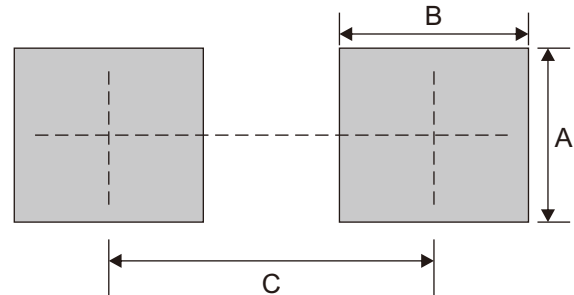


█ = Cathode band

xxxx = Marking code (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	4.30	0.169



## Standard Packaging

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