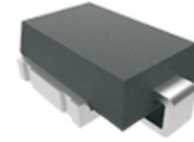


## ATV66SM8-G Series

**Working Voltage: 14 to 43 Volts**

**Peak Pulse Power: 6600 Watts**

**RoHS Device**

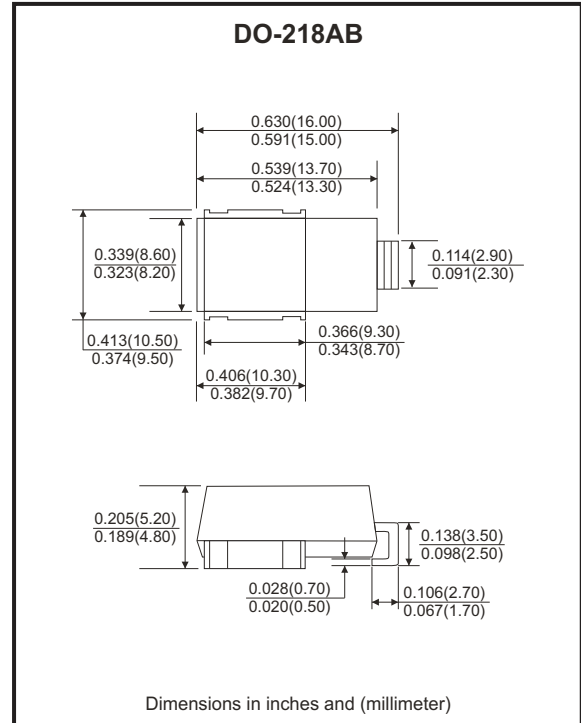


### Features

- Glass passivated chip.
- 6600W peak pulse power capability with a 10/1000µs waveform, repetitive rate (duty cycle):0.01%
- Meets ISO7637-2 5a surge specification.
- Low leakage.
- Uni-directional polarity.
- Excellent clamping capability.
- Very fast response time.
- RoHS compliant.
- Comply with AEC-Q101

### Mechanical Data

- Case: DO-218AB
- Epoxy: UL 94V-0 rate flame retardant.
- Polarity: Heatsink is anode.



### 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 10/1000µs waveform (Note 1)	P <sub>PP</sub>	6600	W
Peak power dissipation with a 10/10,000µs waveform	P <sub>PP</sub>	5200	W
Peak pulse current with a 10/1000µs waveform (Note 1)	I <sub>PP</sub>	See Next Table	A
Power dissipation on infinite heatsink at T <sub>L</sub> =25°C	P <sub>D</sub>	8.0	W
Peak forward surge current, 8.3ms single half sine-wave uni-directional only	I <sub>FSM</sub>	700	A
Operation junction temperature range	T <sub>J</sub>	-55 to +175	°C
Storage temperature range	T <sub>STG</sub>	-55 to +175	°C

Note:  
 1. Non-repetitive current pulse per Fig.2 and derated above T<sub>A</sub>=25°C per Fig.1

Company reserves the right to improve product design , functions and reliability without notice.

REV: B

## Rating and Characteristics Curves (ATV66SM8-G Series)

Fig.1 - Pulse Derating Curve

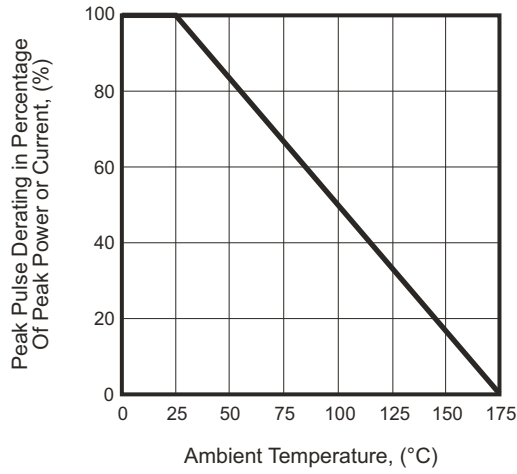


Fig.2 - Pulse Waveform

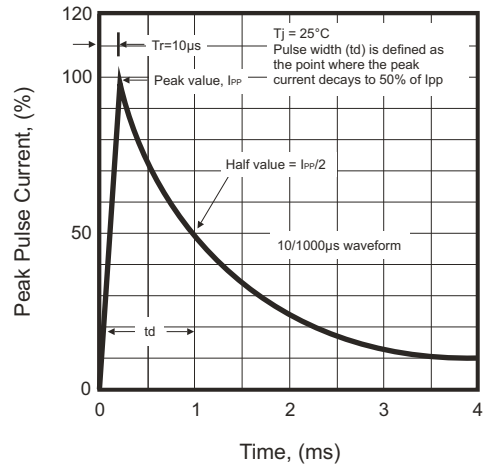


Fig.3 - Steady State Power Derating Curve

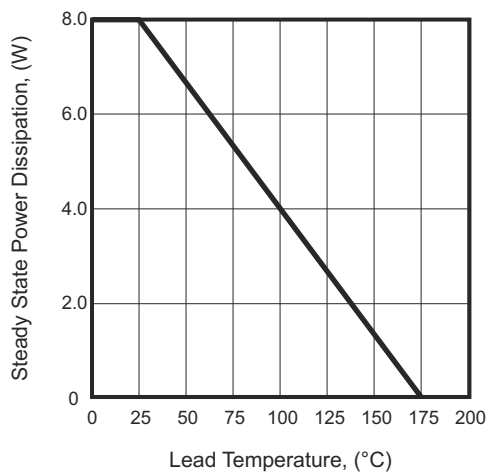
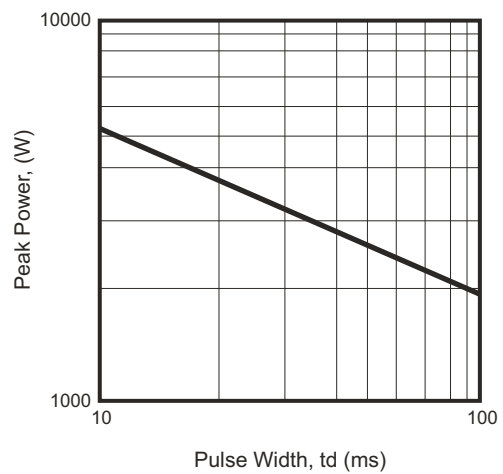


Fig.4 - Peak Pulse Power Rating Curve



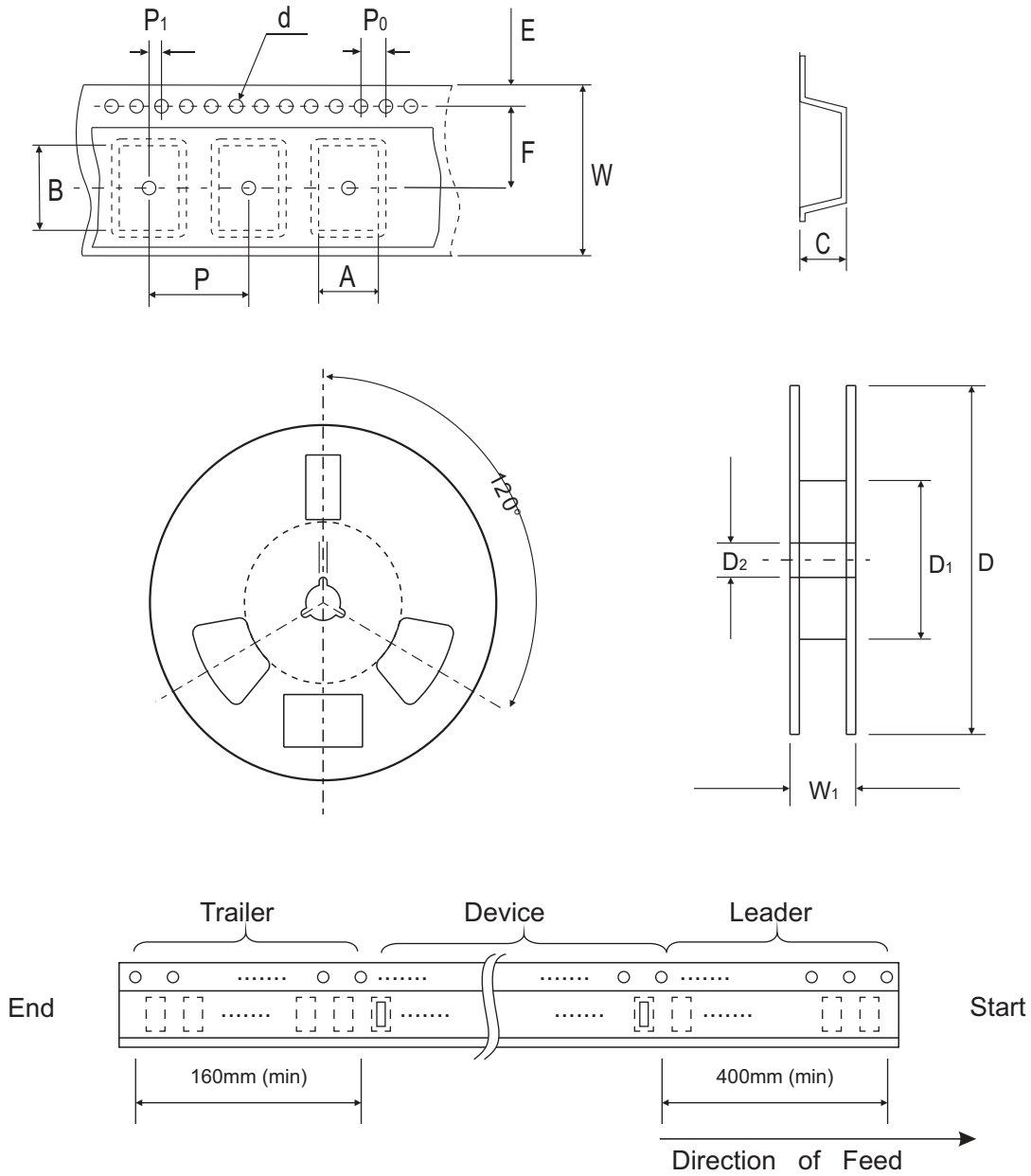
## Electrical Characteristics (ATV66SM814A-G Thru. ATV66SM843A-G)

Part No.	Breakdown voltage VBR @ IT			Maximum Reverse Leakage @VRWM IR (uA)	Maximum IR@VRWM TJ=175°C IR (uA)	Working Peak Reverse Voltage VRWM (V)	Maximum Reverse Surge Current IPP (A) <sup>(1)</sup>	Maximum Clamping Voltage @IPP Vc (V)	Marking Code
	Min. (V)	Max. (V)	IT (mA)						
ATV66SM814A-G	15.60	17.20	5	10	150	14	284.0	23.2	14A
ATV66SM815A-G	16.70	18.50	5	10	150	15	270.0	24.4	15A
ATV66SM816A-G	17.80	19.70	5	10	150	16	254.0	26.0	16A
ATV66SM817A-G	18.90	20.90	5	10	150	17	239.0	27.6	17A
ATV66SM818A-G	20.00	22.10	5	10	150	18	226.0	29.2	18A
ATV66SM820A-G	22.20	24.50	5	10	150	20	204.0	32.4	20A
ATV66SM822A-G	24.40	26.90	5	10	150	22	186.0	35.5	22A
ATV66SM824A-G	26.70	29.50	5	10	150	24	170.0	38.9	24A
ATV66SM826A-G	28.90	31.90	5	10	150	26	157.0	42.1	26A
ATV66SM828A-G	31.10	34.40	5	10	150	28	145.0	45.4	28A
ATV66SM830A-G	33.30	36.80	5	10	150	30	136.0	48.4	30A
ATV66SM833A-G	36.70	40.60	5	10	150	33	124.0	53.3	33A
ATV66SM836A-G	40.00	44.20	5	10	150	36	114.0	58.1	36A
ATV66SM840A-G	44.40	49.10	5	10	150	40	102.0	64.5	40A
ATV66SM843A-G	47.80	52.80	5	10	150	43	95.1	69.4	43A

Note:

1) Surge current waveform is defined at 10/1000uS waveform.

## Reel Taping Specification



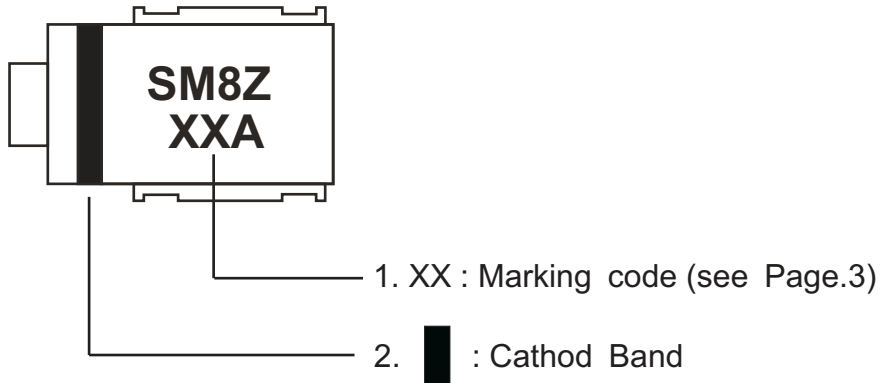
DO-218AB	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	10.77 ± 0.10	16.33 ± 0.10	6.02 ± 0.10	1.50 ± 0.10	330 ± 2.00	50.0 (MIN.)	20.2 (MIN.)
	(inch)	0.424 ± 0.004	0.643 ± 0.004	0.237 ± 0.004	0.059 ± 0.004	13.00 ± 0.079	1.97 (MIN.)	0.795 (MIN.)

DO-218AB	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	11.50 ± 0.10	16.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	24.00+0.30/-0.10	30.4 (MAX.)
	(inch)	0.069 ± 0.004	0.453 ± 0.002	0.630 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.945+0.012/-0.004	1.197 (MAX.)

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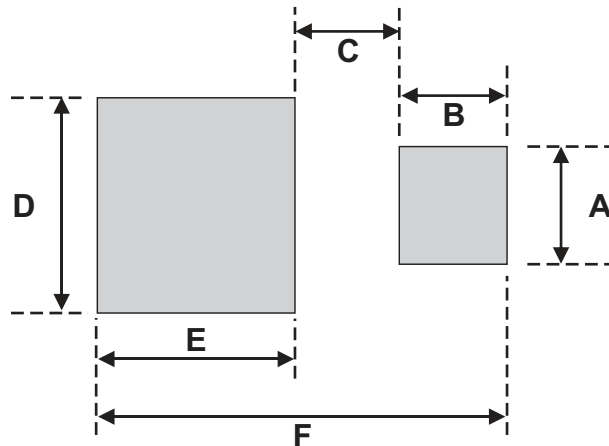
REV: B

## Marking Code



## Suggested PAD Layout

SIZE	DO-218AB	
	(mm)	(inch)
A	3.50	0.138
B	3.00	0.118
C	3.30	0.130
D	11.00	0.433
E	9.50	0.374
F	15.80	0.622



## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
DO-218AB	500	13