

ATV75PLADxx(C)A-HF Series

Working Peak Reverse Voltage: 10 to 48 V

Peak Pulse Power: 7500 W

RoHS Device

Halogen Free

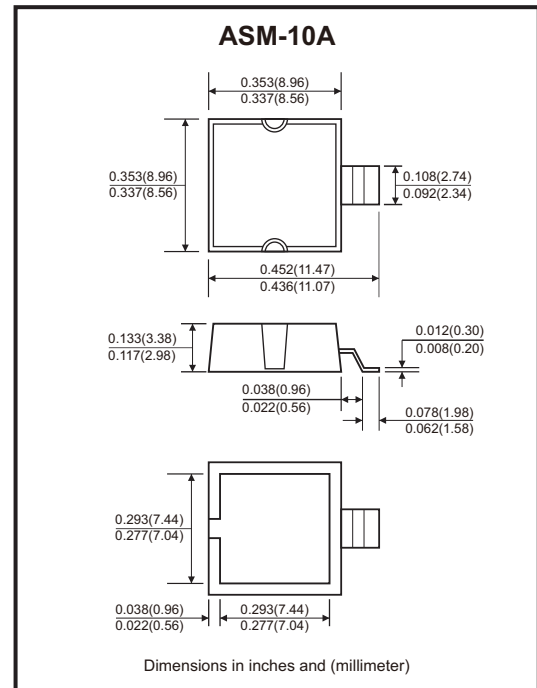


Features

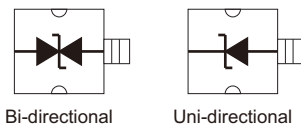
- Available in both unidirectional and bidirectional construction (bidirectional with CA suffix).
- Low profile surface mount package.
- Low incremental surge resistance.
- Clamping (0V to VBR min): Unidirectional < 100ps
Bidirectional < 5 ns
- AEC-Q101 Qualified.

Mechanical data

- Case: Molded plastic, ASM-10A.
- Epoxy: Epoxy, meets UL94V-0.
- Lead: Tin/lead or matte-tin plating.
- Mounting position: Any.



Circuit Diagram



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

Characteristics	Conditions	Symbol	Value	Units
Peak pulse power	at 10/1000µs (Note 2)	P _{PP}	7500	W
Forward surge current	at 8.3ms half-sine wave (unidirectional devices only)	I _{FSM}	500	A
Rated average power dissipation	T _A = 25°C (Note 1)	P _{M(AV)}	2.5	W
Typical thermal resistance junction to ambient	(Note 1)	R _{θJA}	50	°C/W
Typical thermal resistance junction to case		R _{θJC}	1.5	
Operating junction temperature range		T _J	-55 to +150	°C
Storage temperature range		T _{STG}	-55 to +150	°C

Notes: 1. When mounted on FR-4 PC board with recommended mounting pad (see pad layout).
2. Also see Figures 1 and 2. With impulse repetition rate (duty factor) of 0.05% or less.

SMD Transient Voltage Suppressor

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

Part No	Reverse stand-off voltage V _{RWM} (V)	Breakdown voltage V _{BR} @ I _T		Test current	Max. clamping voltage @ I _{PP}		Max. reverse leakage current I _R @ V _{RWM}	Marking Code	
		Min (V)	Max (V)	I _T (mA)	V _C (V)	I _{PP} (A)	(μA)	UNI	BI
ATV75PLAD10(C)A-HF	10	11.1	12.3	5	17.0	441.1	15	ASM7.5KP10A	ASM7.5KP10CA
ATV75PLAD11(C)A-HF	11	12.2	13.5	5	18.2	412.0	10	ASM7.5KP11A	ASM7.5KP11CA
ATV75PLAD12(C)A-HF	12	13.3	14.7	5	19.9	376.8	10	ASM7.5KP12A	ASM7.5KP12CA
ATV75PLAD13(C)A-HF	13	14.4	15.9	5	21.5	348.8	10	ASM7.5KP13A	ASM7.5KP13CA
ATV75PLAD14(C)A-HF	14	15.6	17.2	5	23.2	323.2	10	ASM7.5KP14A	ASM7.5KP14CA
ATV75PLAD15(C)A-HF	15	16.7	18.5	5	24.4	307.3	10	ASM7.5KP15A	ASM7.5KP15CA
ATV75PLAD16(C)A-HF	16	17.8	19.7	5	26.0	288.4	10	ASM7.5KP16A	ASM7.5KP16CA
ATV75PLAD17(C)A-HF	17	18.9	20.9	5	27.6	271.7	10	ASM7.5KP17A	ASM7.5KP17CA
ATV75PLAD18(C)A-HF	18	20.0	22.1	5	29.2	256.8	10	ASM7.5KP18A	ASM7.5KP18CA
ATV75PLAD20(C)A-HF	20	22.2	24.5	5	32.4	231.4	10	ASM7.5KP20A	ASM7.5KP20CA
ATV75PLAD22(C)A-HF	22	24.4	26.9	5	35.5	211.2	10	ASM7.5KP22A	ASM7.5KP22CA
ATV75PLAD24(C)A-HF	24	26.7	29.5	5	38.9	192.8	10	ASM7.5KP24A	ASM7.5KP24CA
ATV75PLAD26(C)A-HF	26	28.9	31.9	5	42.1	178.1	10	ASM7.5KP26A	ASM7.5KP26CA
ATV75PLAD28(C)A-HF	28	31.1	34.4	5	45.4	165.1	10	ASM7.5KP28A	ASM7.5KP28CA
ATV75PLAD30(C)A-HF	30	33.3	36.8	5	48.4	154.9	10	ASM7.5KP30A	ASM7.5KP30CA
ATV75PLAD33(C)A-HF	33	36.7	40.6	5	53.3	140.7	10	ASM7.5KP33A	ASM7.5KP33CA
ATV75PLAD36(C)A-HF	36	40.0	44.2	5	58.1	129.0	10	ASM7.5KP36A	ASM7.5KP36CA
ATV75PLAD40(C)A-HF	40	44.4	49.1	5	64.5	116.2	10	ASM7.5KP40A	ASM7.5KP40CA
ATV75PLAD43(C)A-HF	43	47.8	52.8	5	69.4	108.0	10	ASM7.5KP43A	ASM7.5KP43CA
ATV75PLAD45(C)A-HF	45	50.0	55.3	5	72.7	103.1	10	ASM7.5KP45A	ASM7.5KP45CA
ATV75PLAD48(C)A-HF	48	53.3	58.9	5	77.4	96.8	10	ASM7.5KP48A	ASM7.5KP48CA

Note: For Bi-directional devices, use suffix CA.

Rating and Characteristic Curves (ATV75PLAD10(C)A-HF Thru. ATV75PLAD48(C)A-HF)

Fig.1 - Peak Pulse Power vs. Pulse Time
(to 50% of Exponentially decaying pulse)

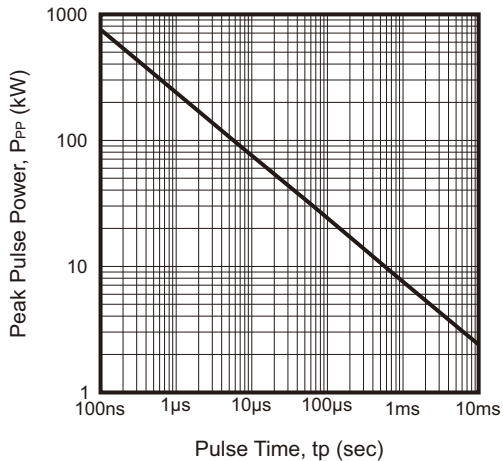


Fig.2 - Pulse Waveform

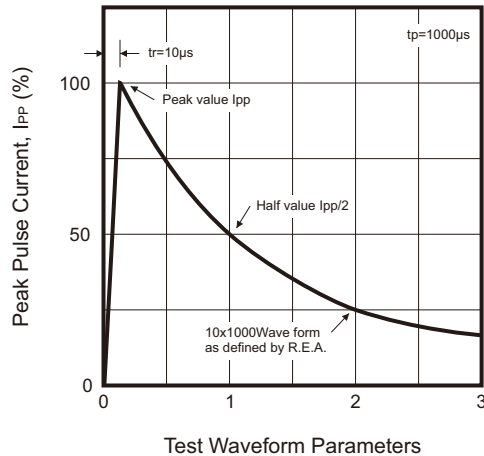
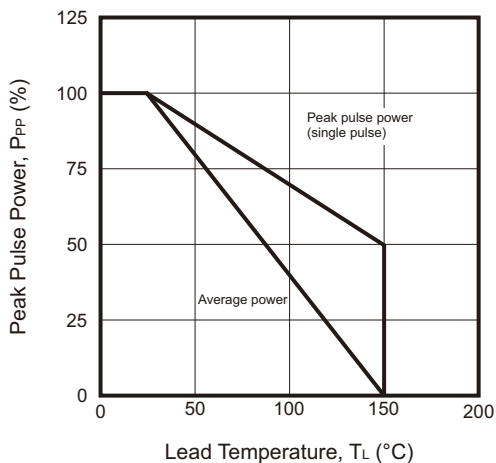
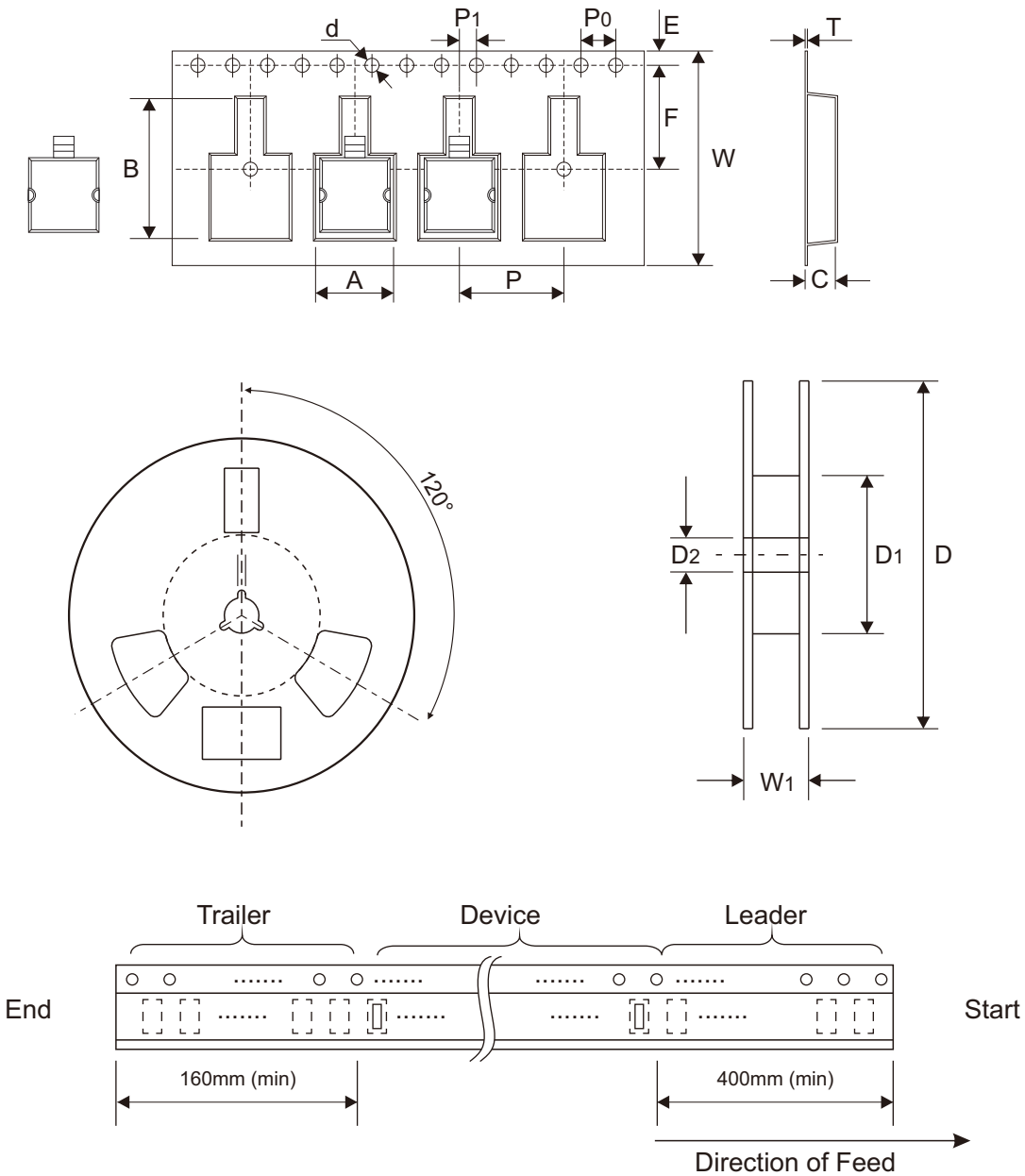


Fig.3 - Derating Curve



Reel Taping Specification

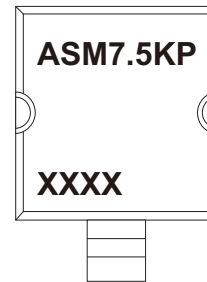


ASM-10A	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	9.10 ± 0.10	15.50 ± 0.10	3.46 ± 0.10	1.50 ± 0.10	330.00 ± 2.00	50.00 Min	13.00 ± 0.50
	(inch)	0.358 ± 0.004	0.610 ± 0.004	0.136 ± 0.004	0.059 ± 0.004	12.992 ± 0.079	1.969 Min	0.512 ± 0.020

ASM-10A	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	11.50 ± 0.10	12.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.35 ± 0.05	24.00 ± 0.30	30.00 ± 1.00
	(inch)	0.069 ± 0.004	0.453 ± 0.004	0.472 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.014 ± 0.002	0.945 ± 0.012	1.181 ± 0.039

Marking Code

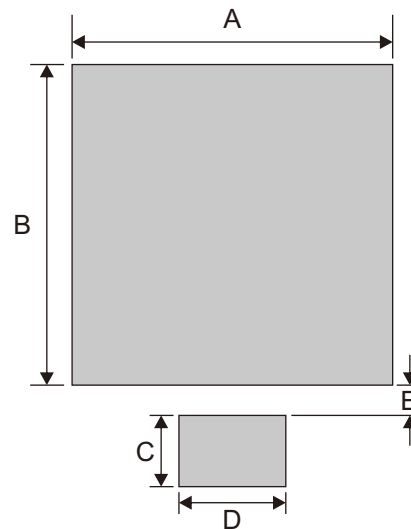
Part Number	Marking Code
ATV75PLADxx(C)A-HF	See Page. 2



XXX/XXXX = Marking code (see Page.2)

Suggested P.C.B. PAD Layout

SIZE	ASM-10A	
	(mm)	(inch)
A	9.00	0.354
B	9.00	0.354
C	2.00	0.079
D	3.00	0.118
E	0.85	0.033



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
ASM-10A	1,500	13