

## ALT4ME5.0A - ALT4ME75A

SURFACE MOUNT  
UNIDIRECTIONAL  
TRANSIENT VOLTAGE SUPPRESSORS

## FEATURES

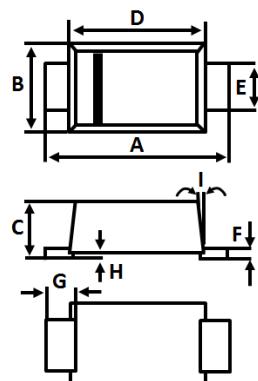
- For surface mounted applications
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has UL flammability classification 94V-O
- Typical IR less than 1uA above 10V
- Fast response time: typically less than 1.0ns for Uni-direction.
- RoHS compliant
- IEC6100-4-2, >30KV(air); >30KV(Contact).(Note.4)
- AEC-Q101 qualified
- PPAP capable
- Automotive grade
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

## MECHANICAL DATA

- Package : Molded plastic
- Polarity : by cathode band denotes uni-directional device.
- Weight : 0.002 ounces, 0.0165 gram

## STAND-OFF VOLTAGE - 5.0 to 75 Volts

## DO-219



DO-219			
DIM.	MIN.	TYP.	MAX
A	3.50	3.80	3.90
B	1.70	1.90	2.00
C	0.81	1.18	1.20
D	2.70	2.80	2.90
E	0.80	1.00	1.35
F	0.05	0.15	0.30
G	0.35	0.60	0.85
H	0.03	0.07	0.10
I	0°	5°	8°

All Dimensions in millimeter

CATHODE → ANODE

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

## ABSOLUTE RATINGS

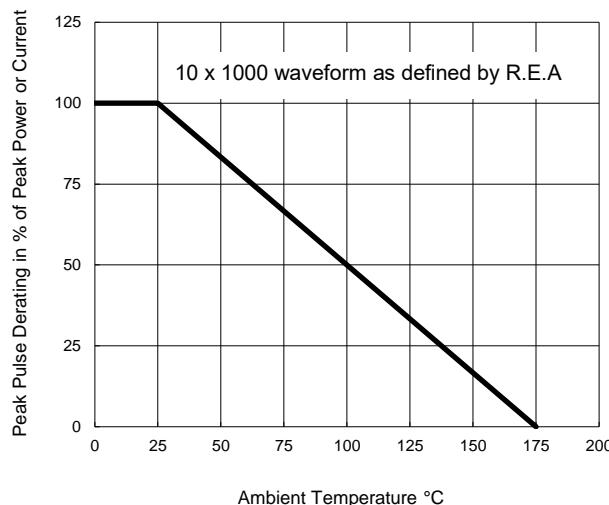
PARAMETER	SYMBOL	VALUE	UNIT
Peak Power Dissipation at TA = 25°C , TP = 1ms (Note 5)	P <sub>PP</sub>	400	W
Peak Forward Surge Current 8.3ms single half sine-wave @ TJ = 25 °C (Note 6)	I <sub>FSM</sub>	40	A
Steady State Power Dissipation at TL =120°C	PM(AV)	1.0	W
Maximum Instantaneous forward voltage at 16A for unidirectional devices only (Note 7)	VF	3	V
Operating junction temperature range	T <sub>J</sub>	-55 to +175	°C
Storage temperature range	T <sub>STG</sub>	-55 to +175	°C

## NOTES :

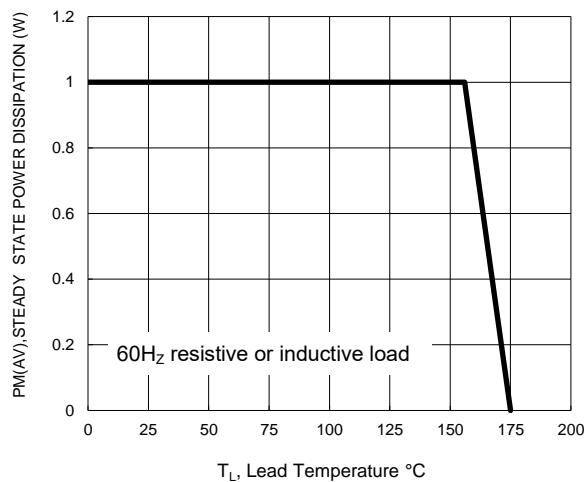
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. ALT4ME5.0A thru ALT4ME24A devices that comply IEC 61000-4-2 levels.
5. Non-repetitive current pulse, per fig. 3 and derated above TA= 25°C per fig.1.
6. Only for unidirectional units.
7. VF max=3V at IF=16 A 300us square wave pulse.

**RATING AND CHARACTERISTIC CURVES**  
**ALT4ME5.0A - ALT4ME75A**

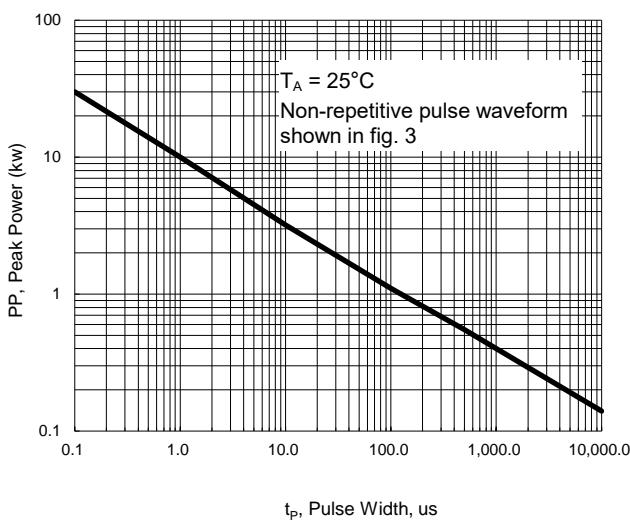
**FIG.1- Pulse Derating Curve**



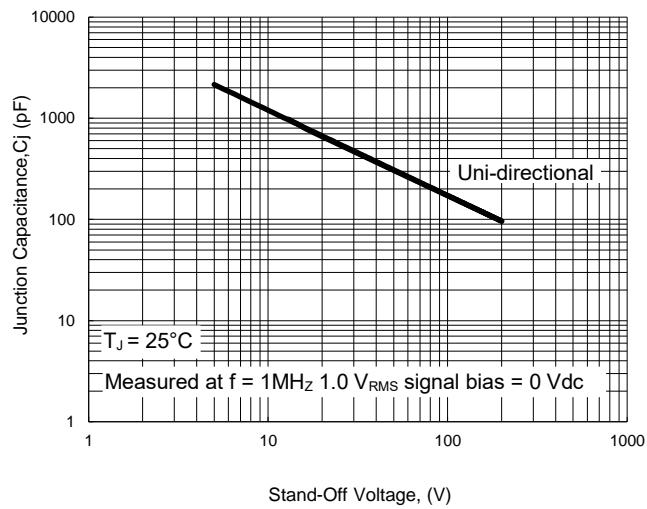
**FIG.2- Steady State Power Derating Curve**



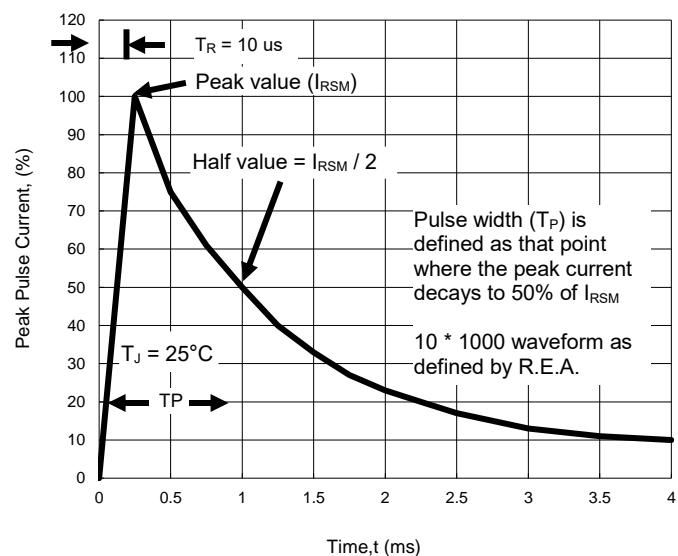
**FIG3- Pulse Rating Curve**



**FIG4- Typical Junction Capacitance**



**FIG.5- Pulse waveform**



Device Uni- Directional	Device Marking Code	Reverse Standoff Voltage	Breakdown Voltage V <sub>BR</sub> Volts			Max. Clamping Voltage @I <sub>pp</sub>	Max. Peak Pulse Current	Max. Reverse Leakage @ V <sub>R</sub>	
			(UNI)	V <sub>R</sub> (V)	Min.	Max.	@I <sub>t</sub> (mA)	V <sub>c</sub> (V)	I <sub>PP</sub> (A)
ALT4ME5.0A	AHE	5.0	5.0	6.40	7.07	10	9.2	43.5	150
ALT4ME6.0A	AHG	6.0	6.0	6.67	7.37	10	10.3	38.8	150
ALT4ME6.5A	AHK	6.5	6.5	7.22	7.98	10	11.2	35.7	150
ALT4ME7.0A	AHM	7.0	7.0	7.78	8.60	10	12.0	33.3	150
ALT4ME7.5A	AHP	7.5	7.5	8.33	9.21	1	12.9	31.0	100
ALT4ME8.0A	AHR	8.0	8.0	8.89	9.83	1	13.6	29.4	50
ALT4ME8.5A	AHT	8.5	8.5	9.44	10.43	1	14.4	27.7	10
ALT4ME9.0A	AHV	9.0	9.0	10.0	11.1	1	15.4	26.0	5
ALT4ME10A	AHX	10	10	11.1	12.3	1	17.0	23.5	5
ALT4ME11A	AHZ	11	11	12.2	13.5	1	18.2	22.0	0.5
ALT4ME12A	AIE	12	12	13.3	14.7	1	19.9	20.1	0.5
ALT4ME13A	AIG	13	13	14.4	15.9	1	21.5	18.6	0.5
ALT4ME14A	AIK	14	14	15.6	17.2	1	23.2	17.2	0.5
ALT4ME15A	AIM	15	15	16.7	18.5	1	24.4	16.4	0.5
ALT4ME16A	AIP	16	16	17.8	19.7	1	26.0	15.3	0.5
ALT4ME17A	AIR	17	17	18.9	20.9	1	27.6	14.5	0.5
ALT4ME18A	AIT	18	18	20.0	22.1	1	29.2	13.7	0.5
ALT4ME20A	AIV	20	20	22.2	24.5	1	32.4	12.3	0.5
ALT4ME22A	AIX	22	22	24.4	27.0	1	35.5	11.2	0.5
ALT4ME24A	AIZ	24	24	26.7	29.5	1	38.9	10.3	0.5
ALT4ME26A	AJE	26	26	28.9	31.9	1	42.1	9.5	0.5
ALT4ME28A	AJG	28	28	31.1	34.4	1	45.4	8.8	0.5
ALT4ME30A	AJK	30	30	33.3	36.8	1	48.4	8.3	0.5
ALT4ME33A	AJM	33	33	36.7	40.6	1	53.3	7.5	0.5
ALT4ME36A	AJP	36	36	40.0	44.2	1	58.1	6.9	0.5
ALT4ME40A	AJR	40	40	44.4	49.1	1	64.5	6.2	0.5
ALT4ME43A	AJT	43	43	47.8	52.8	1	69.4	5.7	0.5
ALT4ME45A	AJV	45	45	50.0	55.3	1	72.7	5.5	0.5
ALT4ME48A	AJX	48	48	53.3	58.9	1	77.4	5.2	0.5
ALT4ME51A	AJZ	51	51	56.7	62.7	1	82.4	4.9	0.5
ALT4ME54A	ARE	54	54	60.0	66.3	1	87.1	4.6	0.5
ALT4ME58A	ARG	58	58	64.4	71.2	1	93.6	4.3	0.5
ALT4ME60A	ARK	60	60	66.7	73.7	1	96.8	4.1	0.5
ALT4ME64A	ARM	64	64	71.1	78.6	1	103	3.9	0.5
ALT4ME70A	ARP	70	70	77.8	86.0	1	113	3.5	0.5
ALT4ME75A	ARR	75	75	83.3	92.1	1	121	3.3	0.5

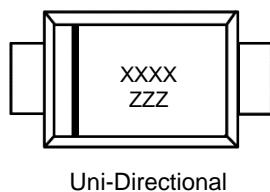
**NOTE :** Suffix 'A' denotes 5% tolerance device.

8. Only Uni-directional units on ALT4ME series.

## Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
ALT4MEx.xA	DO-219	10000pcs	Reel
ALT4MExxA	DO-219	10000pcs	Reel

## Marking Information :



Uni-Directional

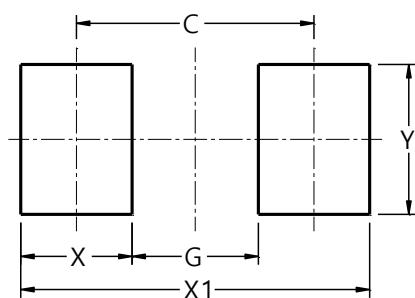
XXXX : Assembly Tracking code

ZZZ : Product Type Marking code

## Packaging Information :

DEVICE	REEL DIA.	Q'TY/REEL	REEL/BOX	Q'TY/BOX	BOX/CARTON	Q'TY/CARTON	BOX SIZE	CARTON SIZE
	(INCH)	(PCS)	(REEL)	(PCS)	(BOX)	(PCS)	(mm)	(mm)
ALT4MEx.xA ALT4MExxA	13	10000	2	10000	8	160000	334*334*39	350*350*340

## Suggested Pad Layout :



Dimensions	Value (in mm)
C	2.86
G	1.52
X	1.34
X1	4.20
Y	1.80

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