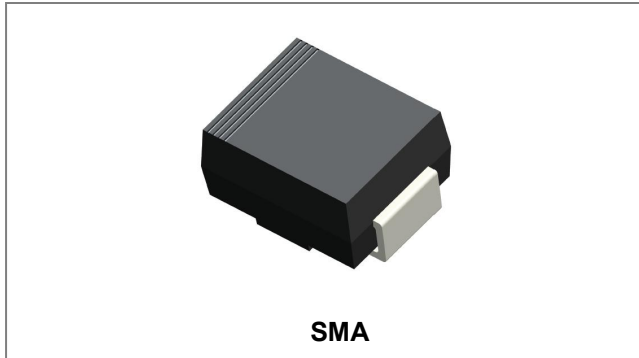


UA1A-UA1M

Ultrafast Avalanche Diodes



Features

- Ideally Suited for Automatic Assembly
- Low Forward Overload Drop, High Efficiency
- Low Power Loss
- Super-Fast Recovery Time
- Plastic Material has UL Classification 94V-O
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- **Case:** Low Profile Molded Plastic
- **Terminals:** Solder Plated, Solderable per MIL-STD-750, Method 2026
- **Polarity:** Cathode Band or Cathode Notch
- **Weight:** 0.06 grams(approx)

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	UA1A	UA1B	UA1D	UA1G	UA1J	UA1K	UA1M	Units
Peak Repetitive Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Surge Peak Reverse Voltage	V _{RSM}	50	100	200	400	600	800	1000	
Max. Average Forward Current @T _L =100°C	I _F	1.0							A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30							A
Maximum Forward voltage @I _F =1.0A	V _F	1		1.25		1.7			V
Maximum Leakage Current @T _A = 25°C	I _R	3							µA
Reverse Recovery Time (Note 1)	T _{rr}	50				75			ns
Max. thermal resistance junction to ambient (Note 2)	R _{θJA}	70							K/W
Non-Repetitive Avalanche Energy(Note 3)	E _{AS}	20							mJ
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150							°C

Note: 1. Measured with I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
 2. Mounted on P.C. Board with 8.0mm² lead area
 3. T_J = 25°C, I_{AS}=1.0mA, L=285mH

Ratings and Characteristics Curves

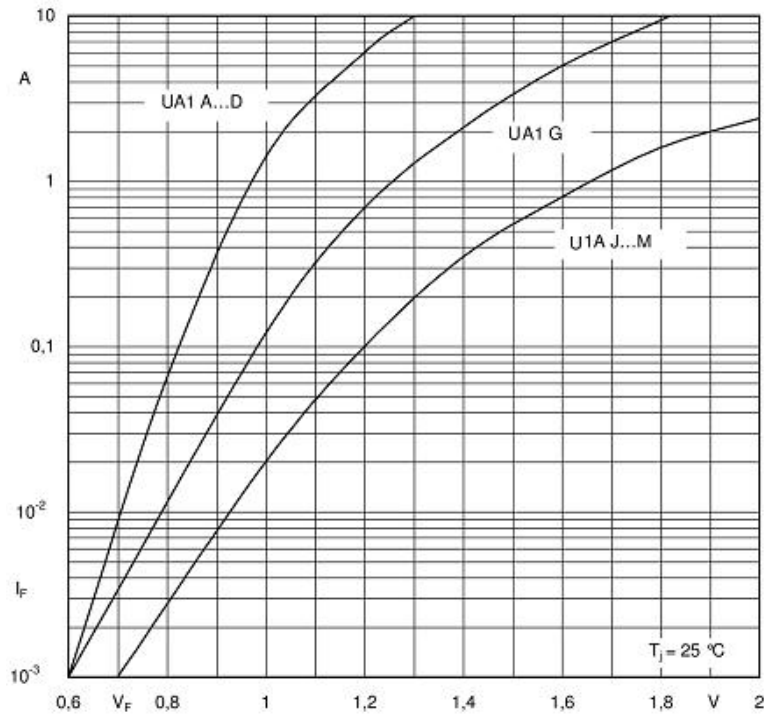


Fig. 1 Forward characteristics (typical values)

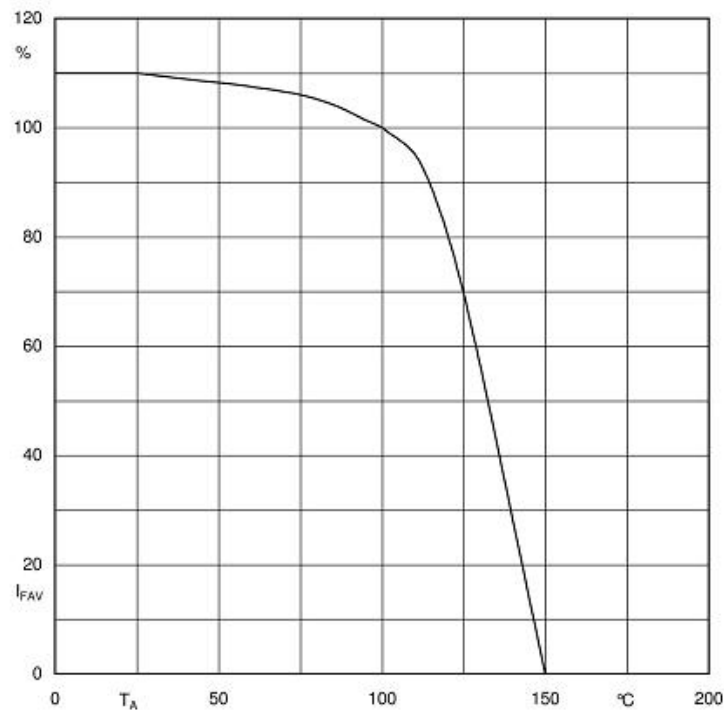
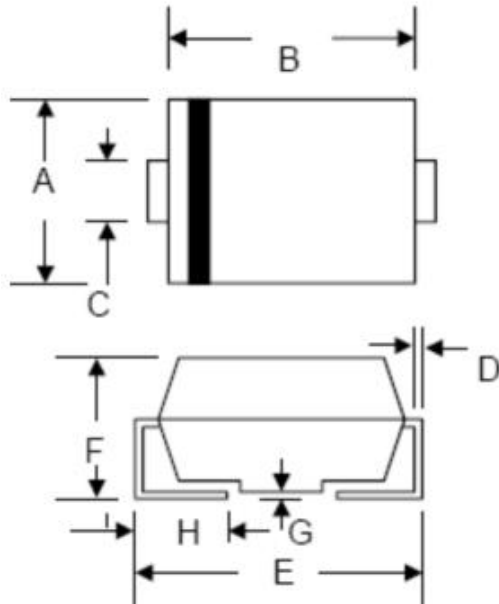


Fig. 2 Rated forward current vs. temp. of the terminals⁴⁾

Mechanical Dimensions SMA



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.40	2.84	0.094	0.112
B	3.99	4.75	0.157	0.187
C	1.05	1.70	0.041	0.067
D	0.15	0.51	0.006	0.020
E	4.80	5.66	0.189	0.223
F	1.90	2.95	0.075	0.116
G	0.05	0.203	0.002	0.008
H	0.76	1.52	0.030	0.600

Ordering Information

Device	Package	Shipping
UA1A-UA1M	SMA (Pb-Free)	5000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

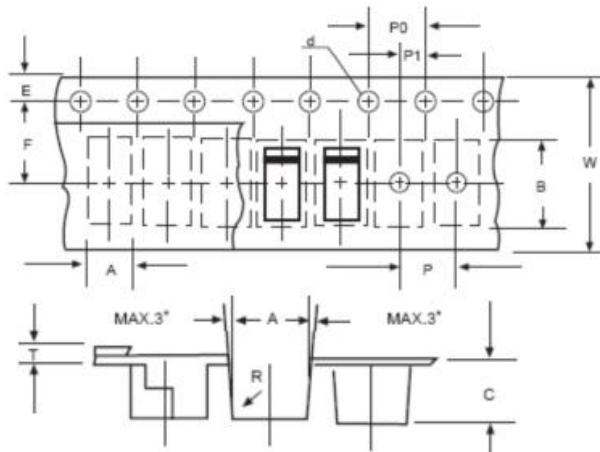


Where XXXXX is YYWWL

- UA = Device Type
- 1 = Forward Current (1A)
- A = Reverse Voltage (50V)
- YY = Year
- WW = Week
- L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Carrier Tape Specification SMA



SYMBOL	Millimeters	
	Min.	Max.
A	2.97	3.17
B	5.70	5.90
C	2.32	2.52
d	1.40	1.60
E	1.40	1.60
F	5.60	5.70
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
T	0.25	0.35
W	11.80	12.20

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