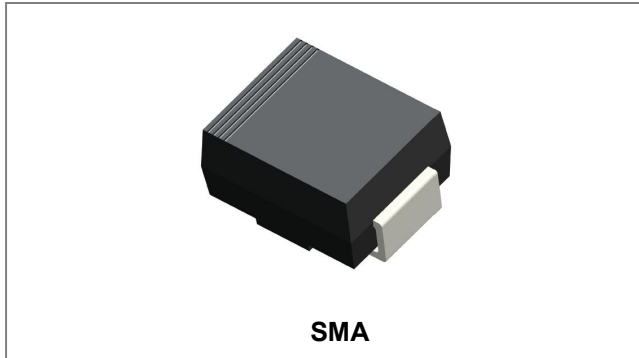


US2A-US2M SURFACE MOUNT SUPER FAST RECTIFIER



Features

- Low cost
- Ultra fast switching for high efficiency
- High current capability
- Plastic Case Material has UL Flammability Classification Rating 94V- 0
- Terminals finish: 100% Pure Tin
- 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
- Marking: Type Number
- Weight: 0.06 grams(approx)

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	US2A	US2B	US2D	US2G	US2J	US2K	US2M	Units
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	34	70	140	280	420	560	700	
Average Rectified Output Current @ $T_L=100^\circ\text{C}$	I_o	2.0							A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	60							A
Rating for fusing ($t < 8.3\text{ms}$)	I^2t	14.94							A^2s
Forward voltage @ $I_F=2.0\text{A}$	V_F	1.0		1.3		1.7		V	
Peak Reverse Current @ $T_A=25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	I_R	5 200							μA
Typical junction capacitance (Note 1)	C_J	15							pF
Reverse Recovery Time (Note 2)	T_{rr}	50			75				ns
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	90							K/W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 V_{DC}
 2. Measured with $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

Ratings and Characteristics Curves

Fig. 1 Forward Current Derating Curve

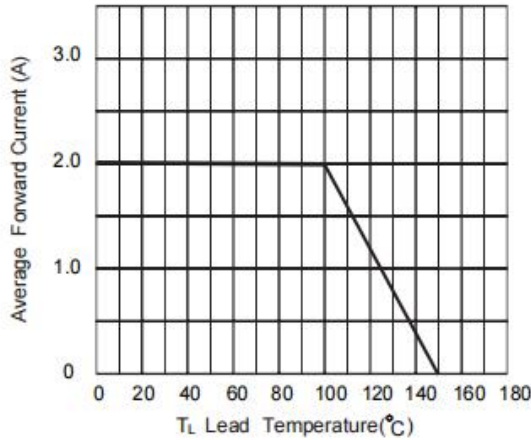


Fig. 2 Typ. Forward Characteristics

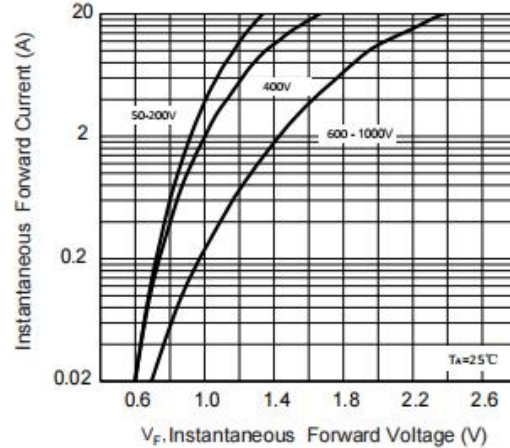


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

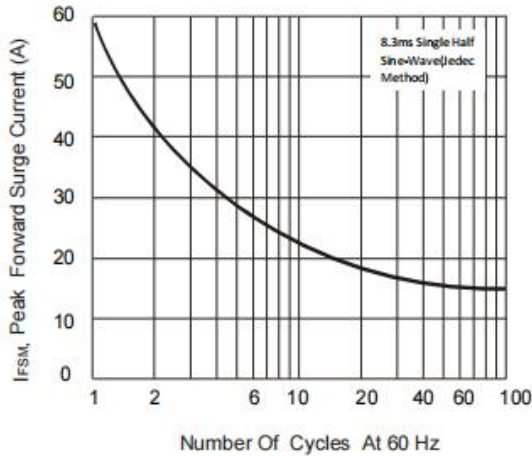


Fig. 4 Typical Junction Capacitance

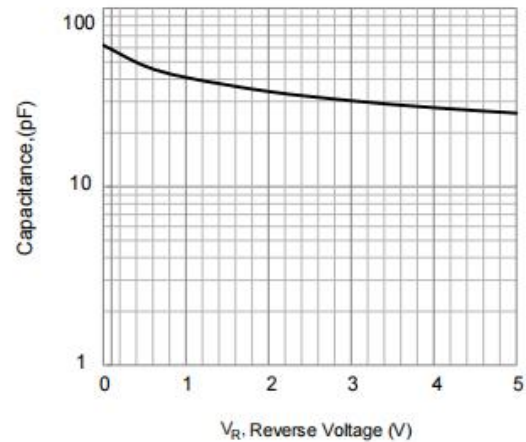


Fig. 5 Typical Reverse Characteristics

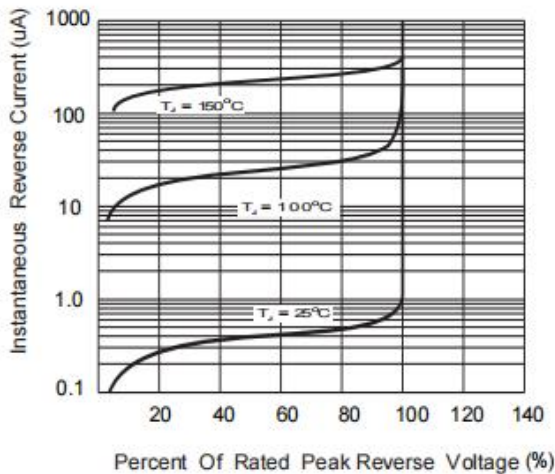
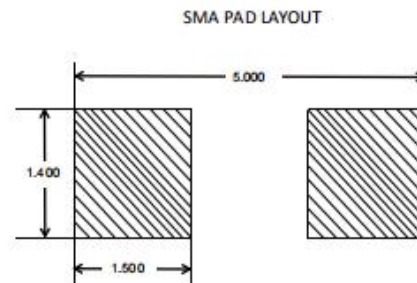
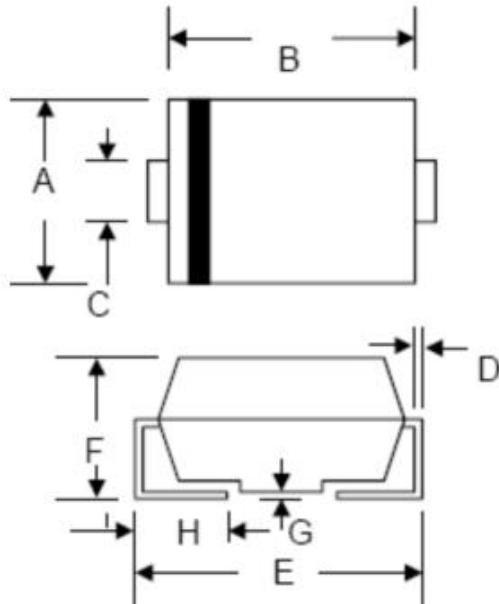


Fig. 6 Mounting PAD Layout



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
US2A-US2M	SMA (Pb-Free)	5000pcs / reel
US2ATR-US2MTR	SMA (Pb-Free)	5000pcs / reel

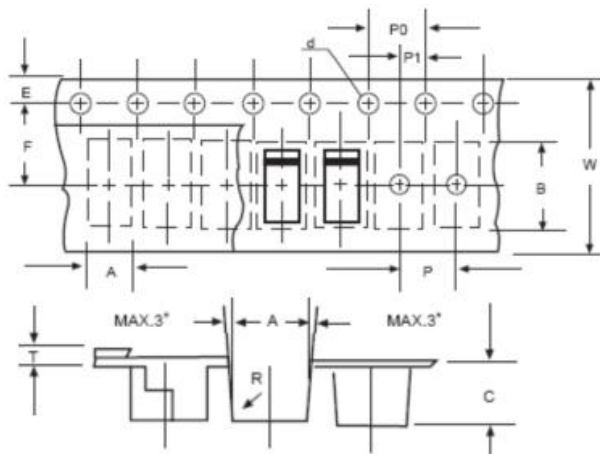
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram


Where XXXXX is YYWWL

US = Device Type
 2 = Forward Current (2A)
 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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