



US2A-US2MA

Surface Mount Ultra Fast Rectifiers

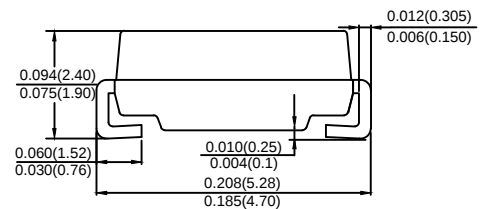
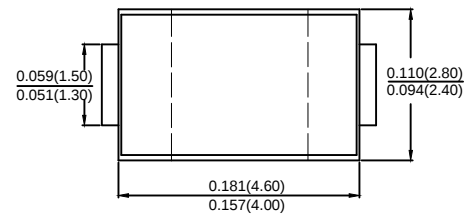
Features

- Low profile space
- Ideal for automated placement
- Glass passivated chip junctions
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering:
260°C/10 seconds at terminals
- Component in accordance to
RoHS 2002/95/1 and WEEE 2002/96/EC

Mechanical Date

- **Case:** JEDEC DO-214AC (SMA) molded plastic body over glass passivated chip
- **Terminals:** Solder plated, solderable per J-STD-002B and JESD22-B102D
- **Polarity:** Laser band denotes cathode end

SMA/DO-214AC



Dimensions in inches and (millimeters)

Maximum Ratings & Thermal 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%

Type Number	SYMBOL	US2A	US2BA	US2DA	US2GA	US2JA	US2KA	US2MA	Unit
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Average Rectified Output Current @T _L =100℃	I _{F(AV)}	2.0							A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	50							A
Rating for fusing (t<8.3ms)	I ² t	14.94							A ² s
Forward Voltage @IF=2.0A	V _{FM}	1.0			1.25	1.65			V
Peak Reverse Current @T _A =25℃	I _R	5.0							uA
At Rated DC Blocking Voltage @T _A =125℃		200							
Maximum Reverse Recovery Time (Note 1)	T _{rr}	50				75			ns
Typical Junction Capacitance (Note 2)	C _J	28							pF
Typical Thermal Resistance Junction to Ambient(Note 3)	R _{θJA}	65							℃/W
Operating Temperature Range	T _J	-55 to+150							℃
Storage Temperature Range	T _{STG}	-55 to +150							℃

Note: 1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $IRR = 0.25\text{A}$.
2. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C
3. 8.0MM² (.013mm Thick) Land Areas.



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Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

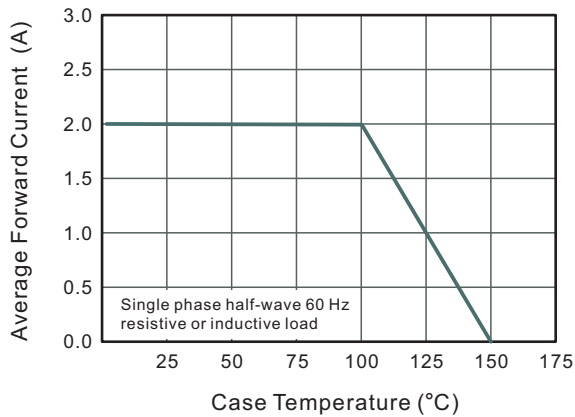


Fig.2 Typical Reverse Characteristics

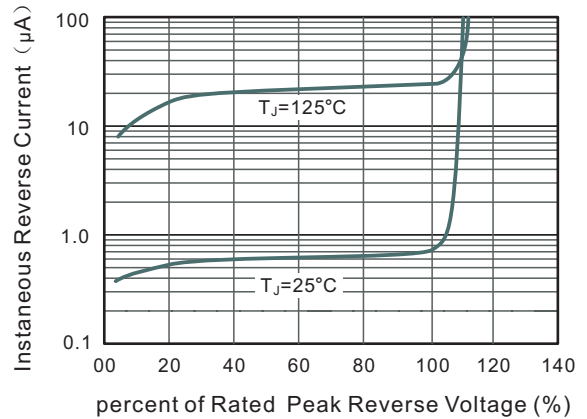


Fig.3 Typical Forward Characteristics

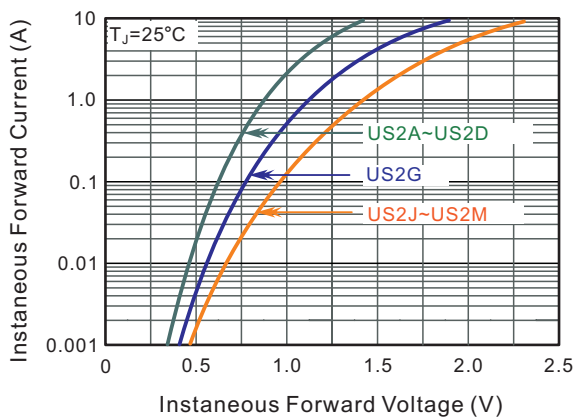
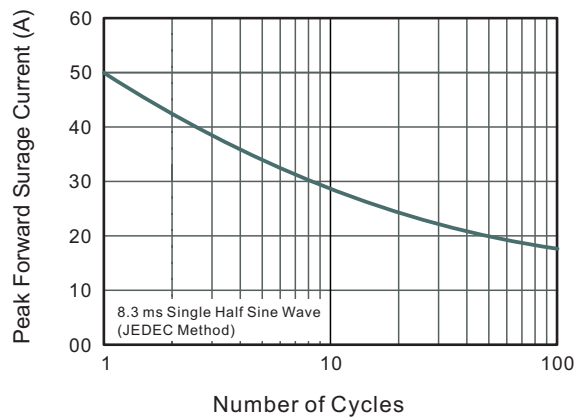


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



SMA PAD LAYOUT

