US1A THRU US1M

1.0AMP Ultra Fast Recovery Silicon Rectifier

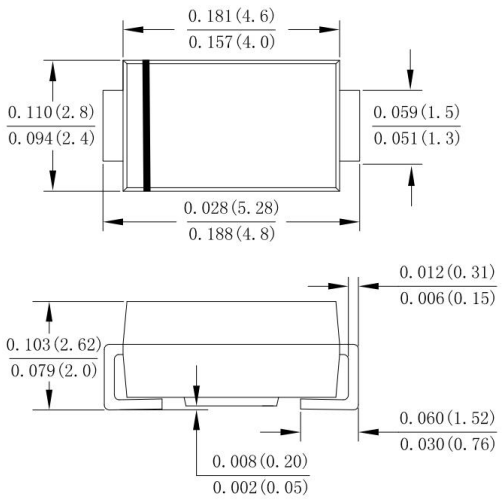
■ FEATURES

* Low Power Loss, High Efficiency
* Ideally Suited for Automatic Assembly
* Guard Ring Die Construction

■ MECHANICAL DATA

* Case: Molded plastic SMA
* Polarity: Color band dentes cathode end
* Mounting position: Any
* Making: Type Number

Case: SMA(DO-214AC)



Dimensions in inches and (millimeters)

■ MAXIMUM RATINGS(Ta=25℃ Unless otherwise specified）

Rating at 25℃ ambient temperature unless otherwise specified
Single phase,half wave,60Hz,resistive or inductive load
For capacitive load derate current by 20%

Type Number	SYMBOL	US1A	US1B	US1D	US1G	US1J	US1K	US1M	Unit
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	V
Average Rectified Output Current @TL=100 ℃	IF (AV)	1.0							A
Non-Repetitive Peak Forward Surge @Tj=25℃ Current 8.3ms Single half sine-wave @Tj=125℃ Superimposed On Rated Load (JEDEC Method)	IFSM	30 24							A
Non-Repetitive Peak Forward Surge @Tj=25℃ Current 1.0ms Single half sine-wave @Tj=125℃ Superimposed On Rated Load (JEDEC Method)	IFSM	60 48							A
10000 times of the wave surge current (time width 1ms, time interval 3s)	IFSM	22.5							A
Rating for fusing (t<8.3ms)	I^2t	3.74							A^2s
Forward Voltage @IF=1.0A	VFM	1.0			1.3	1.7			V
Peak Reverse Current @TA =25 ℃	IR	5.0							uA
At Rated DC Blocking Voltage @TA=125 ℃		200							
Maximum Reverse Recovery Time (Note 1)	Trr	50				75			ns
Typical Junction Capacitance (Note 2)	CJ	8							pF
Typical Thermal Resistance	RθJL RθJA	27 70							℃/W
Operating and Storage Temperature Range	TJ,TSTG	-55 to+150							℃

Note: 1.Reverse Recovery Test Conditions:IF=0.5A,IR=1.0A,IRR=0.25A.
2. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C

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■ TYPICAL CHARACTERISTICS

Fig. 1 Forward Current Derating Curve

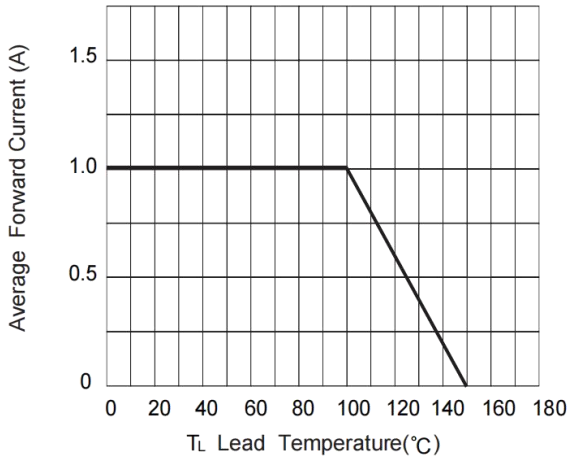

Fig. 2 Typ. Forward Characteristics

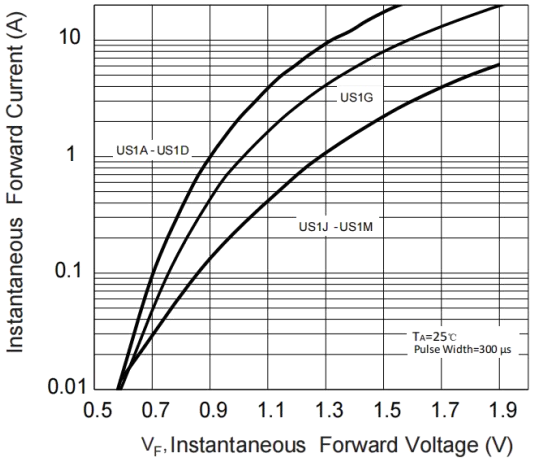

Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

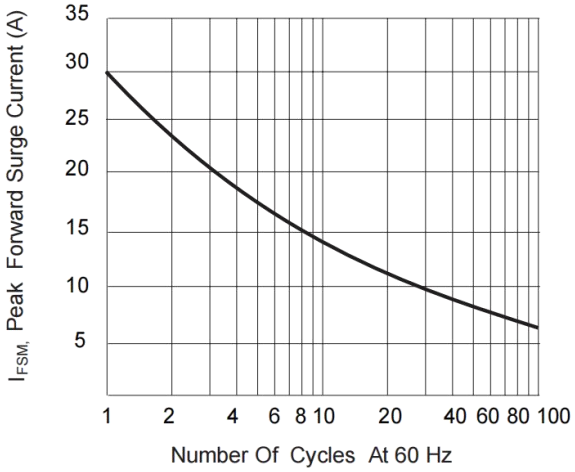

Fig.4 Typical Junction Capacitance

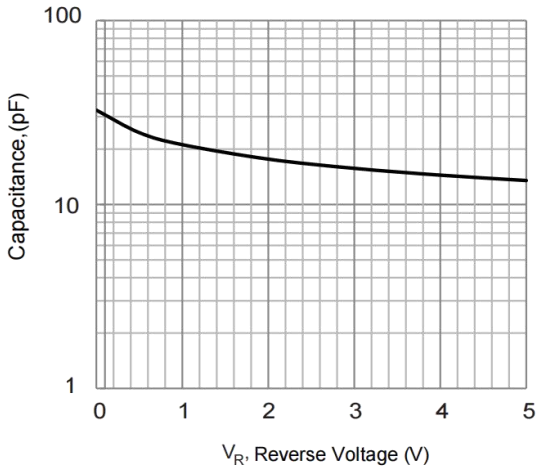

Fig.5 Typical Reverse Chracteristics

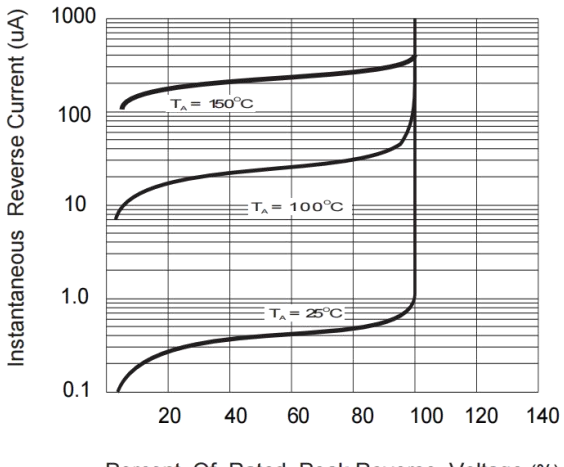

Fig.6 Mounting PAD Layout