YEA SHIN TECHNOLOGY CO., LTD

US1A THRU US1M

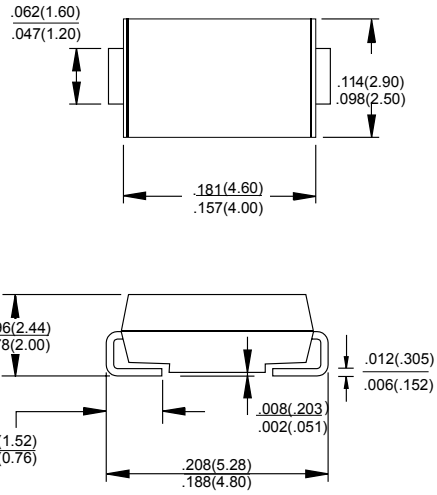
ULTRA FAST RECTIFIERS

VOLTAGE- 50 to 1000 Volts CURRENT - 1.0 Amperes

FEATURES

- Glass passivated chip
- Ultra fast switching for high efficiency
- For surface mounted applications
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0
- High temperature soldering : 260°C /10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

SMA/DO-214AC Unit:inch(mm)



MECHANCAL DATA

- Case: DO-214AC(SMA)
- Case : Molded plastic
- Polarity : Indicated by cathode band

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%

CHARACTERISTICS	SYMBOL	US1A	US1B	US1D	US1G	US1J	US1K	US1M	UNITS
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
Maximum Average Forward Rectified Current @TL =75°C	IAV	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD)	IFSM	30							A
Maximum forward Voltage at 1.0A	VF	1.0			1.3	1.7			V
Maximum DC Reverse Current @TJ =25°C at Rated DC Blocking Voltage @TJ =100°C	IR	5 100							uA
Typical Junction Capacitance (Note 1)	CJ	20				10			pF
Maximum Reverse Recovery Time (Note 2)	TRR	50				75			ns
Typical Thermal Resistance (Note 3)	RθJC	30							°C/W
Operating Temperature Range	TJ	-55 to +150							°C
Storage Temperature Range	TSTG	-55 to +150							°C

NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1A, I_{rr}=0.25A.
3. Thermal resistance from Junction to ambient and from junction to lead 0.375" (9.5mm) P.C.B mounted.

DEVICE CHARACTERISTICS

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Fig.1-Forward Current Derating Curve

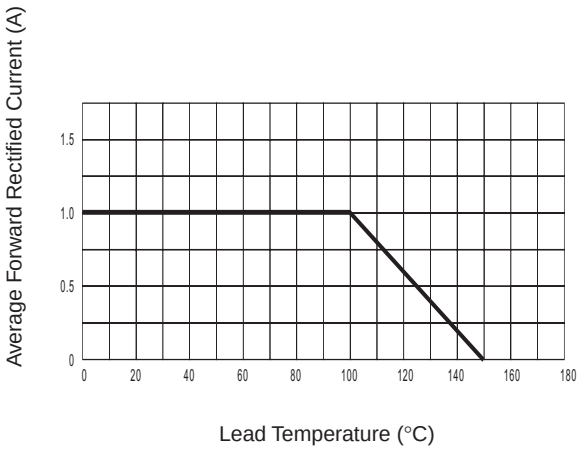

Fig.2-Maximum Non-Repetitive Peak Forward Surge Current

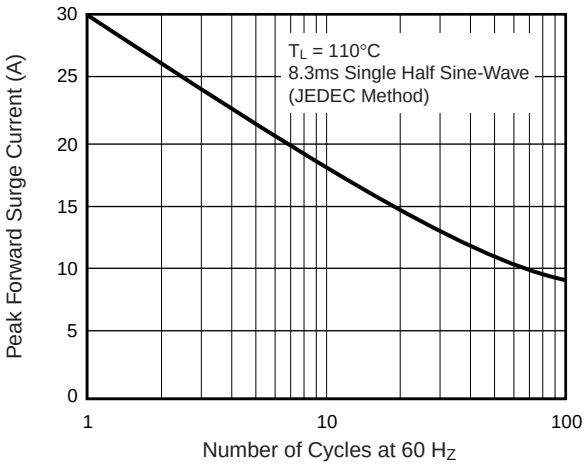

Fig.3-Typical Instantaneous

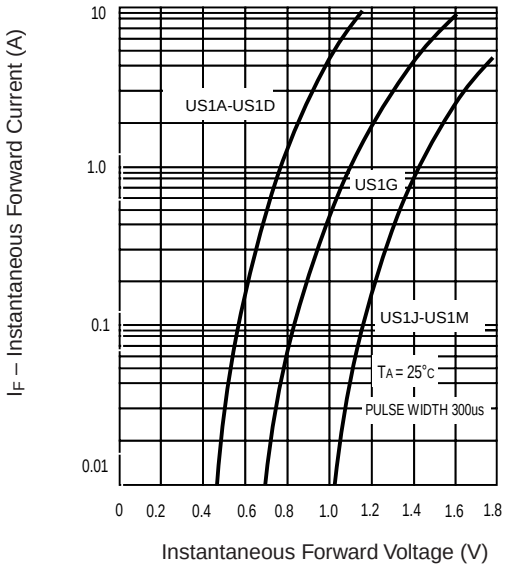

Fig.4-Typical Reverse Characteristics

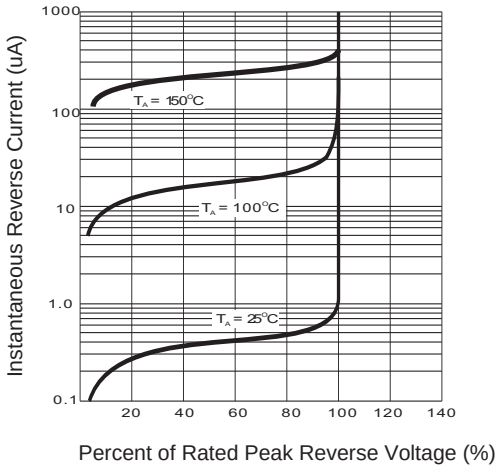

Fig.5-Typical Junction Capacitance