

US1R

SURFACE MOUNT ULTRAFAST RECTIFIER

VOLTAGE 1300 Volt **CURRENT** 1 Ampere

SMA / DO-214AC

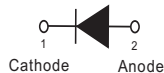
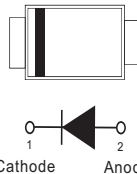
Unit : inch(mm)

FEATURES

- For surface mounted applications in order to optimize board space
- Easy pick and place
- Ultrafast recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated junction
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

- Case: JEDEC DO-214AC molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.0023 ounces, 0.0679 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

PARAMETER	SYMBOL	VALUE	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	1300	V
Maximum RMS Voltage	V_{RMS}	910	V
Maximum DC Blocking Voltage	V_{DC}	1300	V
Maximum Average Forward Current	$I_{F(AV)}$	1	A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30	A
Maximum Forward Voltage at 1A	V_F	1.9	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	1	μA
Typical Junction Capacitance ($V_R=4V$, $f=1MHz$)	C_J	6	pF
Typical Thermal Resistance (Note 1) (Note 2)	$R_{\theta JL}$ $R_{\theta JA}$	32 150	$^{\circ}C / W$
Maximum Reverse Recovery Time (Note 3)	T_{RR}	75	ns
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^{\circ}C$

NOTES : 1. Mounted on an FR4 PCB, single-sided copper, with 100cm² copper pad area.
2. Mounted on an FR4 PCB, single-sided copper, mini pad.
3. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, Recover to 0.25A

US1R

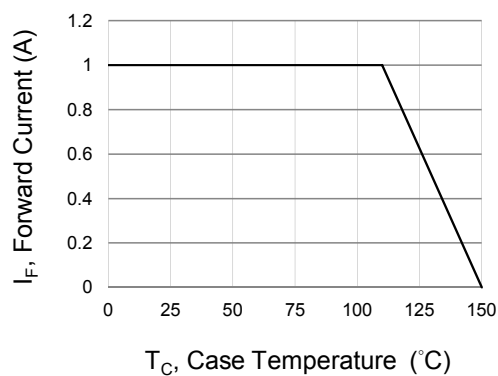


Fig.1 Forward Current Derating Curve

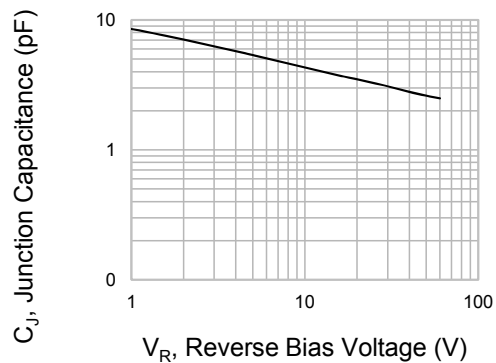


Fig.2 Typical Junction Capacitance

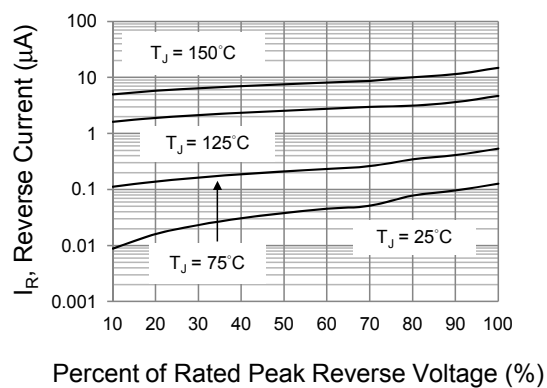


Fig.3 Typical Reverse Characteristics

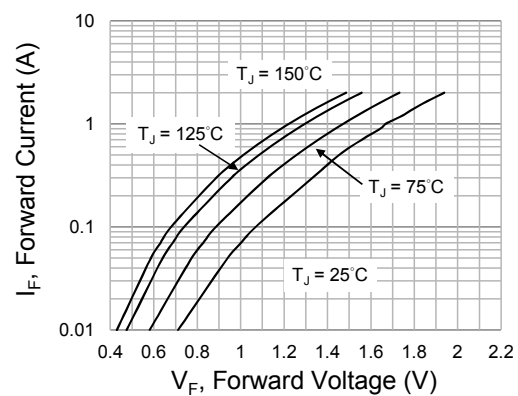


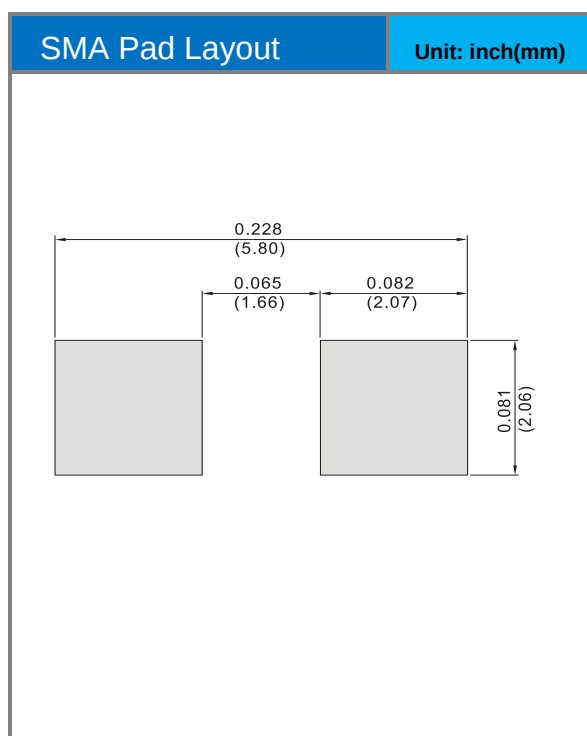
Fig.4 Typical Forward Characteristics

US1R

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
US1R	SMA	1.8K pcs / 7" reel	US1R
US1R	SMA	7.5K pcs / 13" reel	US1R

Mounting Pad Layout



US1R

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.