



US1R

SURFACE MOUNT ULTRAFAST RECTIFIER

VOLTAGE 1300 Volt **CURRENT** 1 Ampere

SMA / DO-214AC

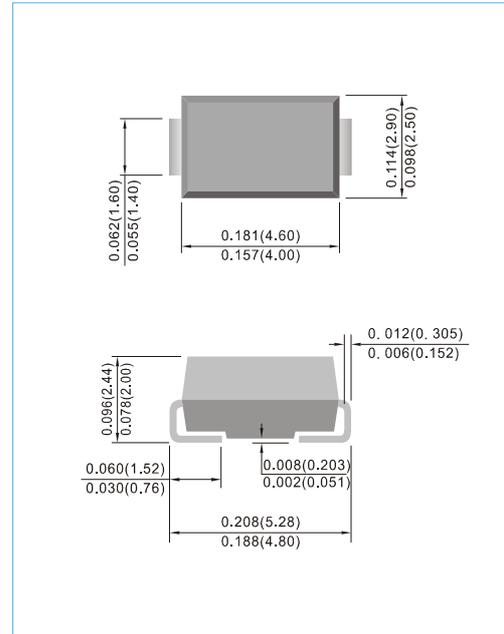
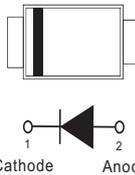
Unit : inch(mm)

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-0
- 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



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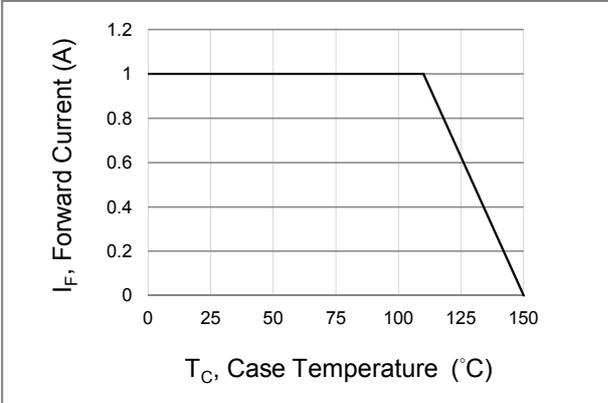


Fig.1 Forward Current Derating Curve

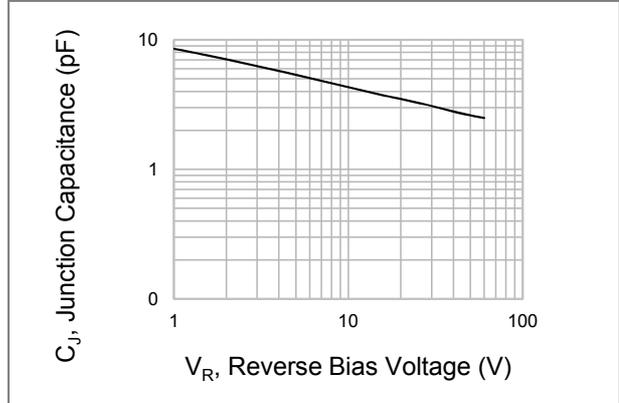


Fig.2 Typical Junction Capacitance

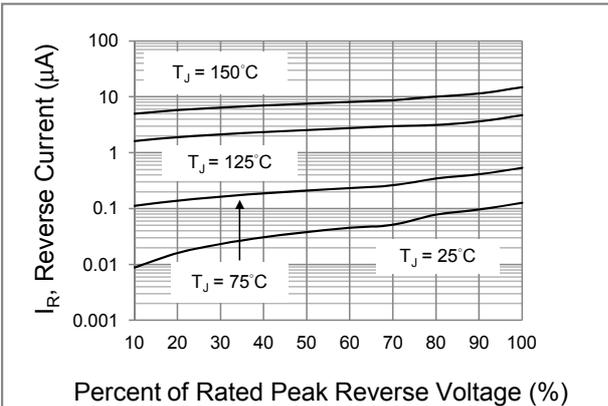


Fig.3 Typical Reverse Characteristics

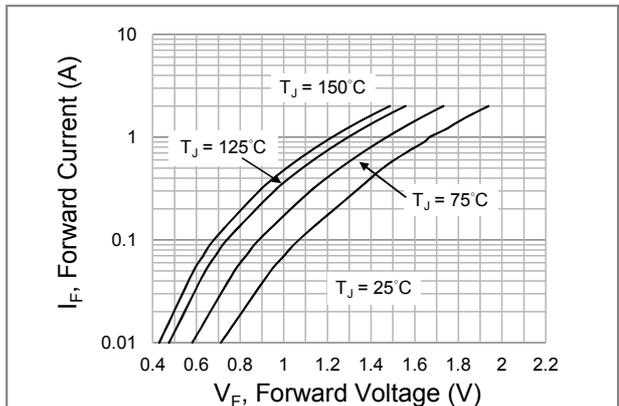
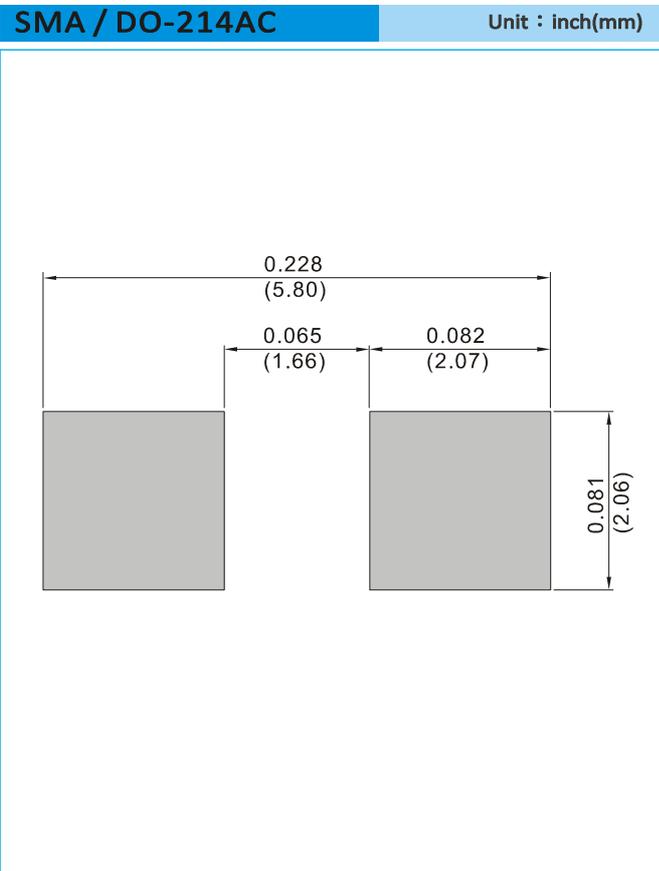


Fig.4 Typical Forward Characteristics



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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
T/R - 7.5K per 13" plastic Reel
T/R - 1.8K per 7" plastic Reel



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Part No_packing code_Version

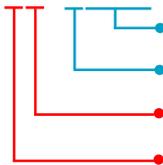
US1R_R1_00001

US1R_R2_00001

For example :

RB500V-40_R2_00001

Part No.



Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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