

US5A~US5M

SURFACE MOUNT ULTRAFAST RECTIFIER

VOLTAGE 50 to 1000 Volt **CURRENT** 5 Ampere

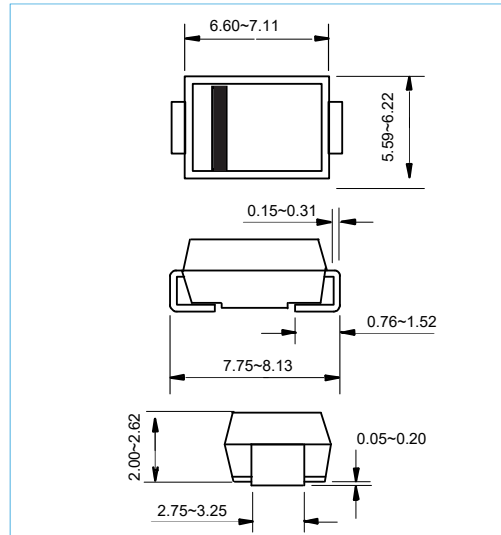
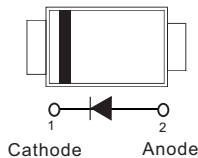
SMC / DO-214AB Unit:mm

FEATURES

- Ultra-Fast Recovery Time for High Efficiency
- Glass Passivated Junction
- High Current Capability
- Moisture Sensitivity Level 1
- Lead free in compliance with EU RoHS 2.0

MECHANICAL DATA

- Case Material: Molded Plastic.
- UL Flammability Classification Rating 94V-0



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	US5A	US5B	US5D	US5G	US5J	US5K	US5M	UNITS
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
Maximum Average Forward Current (see FIG.1)	$I_{F(AV)}$	5							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150							A
Maximum Forward Voltage at 5 A	V_F	1.0		1.3		1.7			V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^{\circ}C$ $T_J=100^{\circ}C$	I_R	10 250							μA
Maximum Reverse Recovery Time(Note 1)	t_{rr}	50				75			ns
Thermal Resistance	$R_{\theta JA}$	47							$^{\circ}C / W$
Typical Junction Capacitance (Note2)	C_J	70							pF
Operating Junction Temperature Range	T_J	-55 to +150							$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to +150							$^{\circ}C$

NOTES:

1. Reverse Recovery Test Conditions: $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
2. Measured at 1.0MHz and applied reverse voltage of 4.0 volt

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RATING AND CHARACTERISTIC CURVES

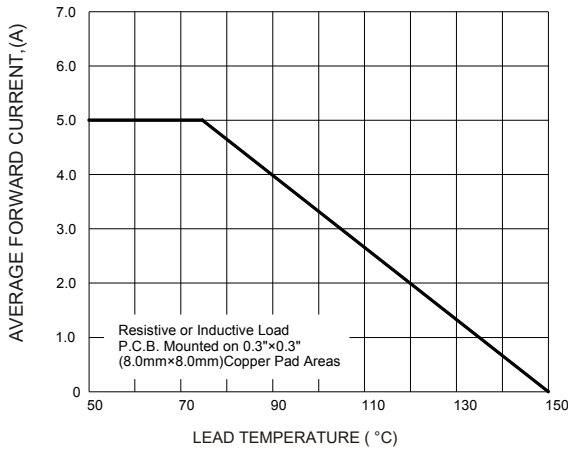


Fig. 1 Forward Current Derating Curve

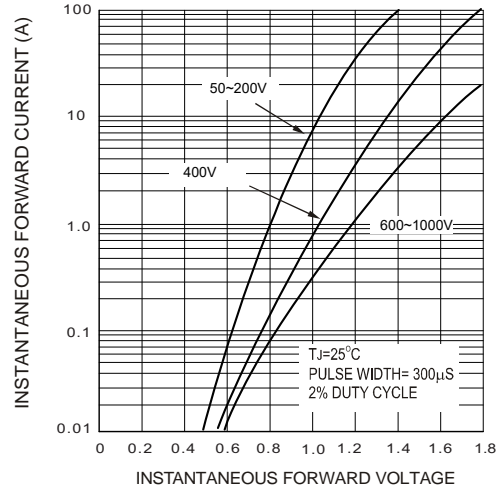


Fig. 2 Typical Forward Characteristics

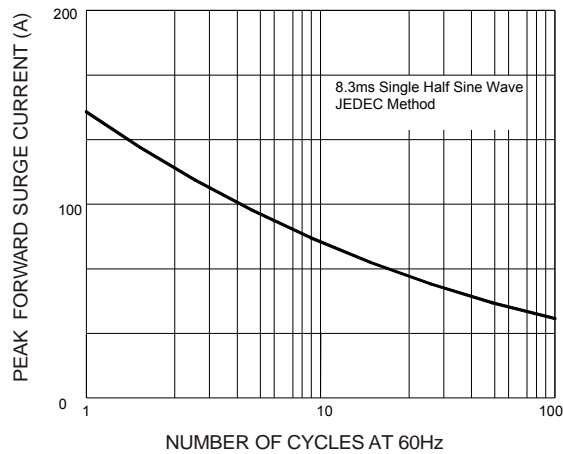


Fig. 3 Forward Surge Current Derating Curve

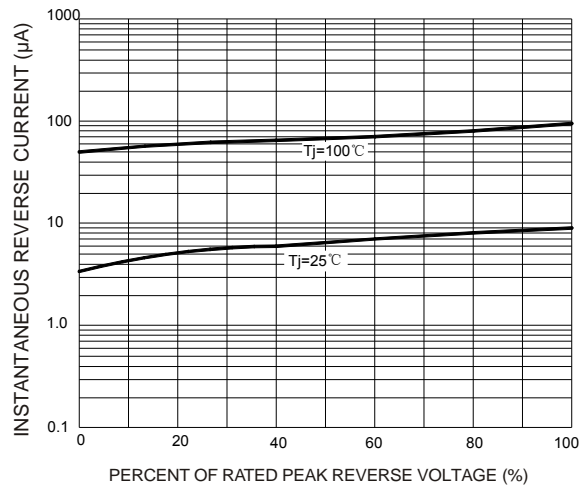


Fig. 4 Typical Reverse Characteristics

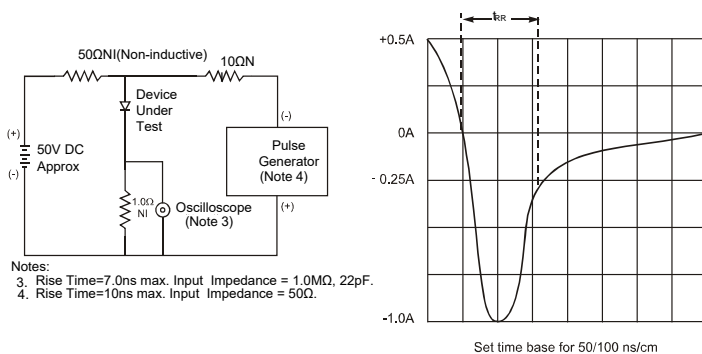


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

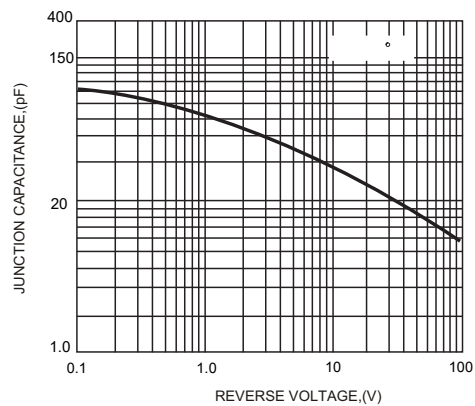


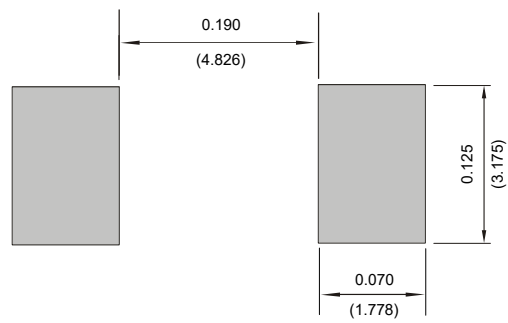
Fig. 6 Typical Junction Capacitance

US5A~US5M

MOUNTING PAD LAYOUT

SMC / DO-214AB

Unit:Inch(mm)



ORDER INFORMATION

- Packing information

Part Number	Case	Reel Size	QUANTITY
US5A~US5M	SMC	13 Inch	3000