

ER3D-S1

SURFACE MOUNT SUPERFAST RECTIFIER

VOLTAGE	200 Volt	CURRENT	3Ampere
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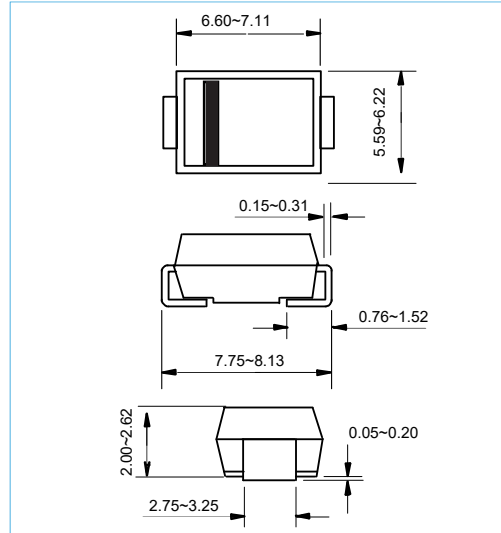
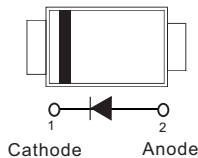
SMC / DO-214AB Unit:mm

FEATURES

- Superfast Recovery Times For High Efficiency
- Glass Passivated Junction
- Easy Pick And Place
- 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	ER3D-S1	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	V
Maximum RMS Voltage	V_{RMS}	140	V
Maximum DC Blocking Voltage	V_{DC}	200	V
Maximum Average Forward Current (see FIG.1)	$I_{F(AV)}$	3	A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	100	A
Maximum Forward Voltage at 3 A	V_F	1.0	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	5.0 200	uA
Maximum Reverse Recovery Time(Note 1)	t_{rr}	30	ns
Thermal Resistance	$R_{\theta JL}$	16	°C / W
Typical Junction Capacitance (Note2)	C_J	45	pF
Operating Junction Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°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

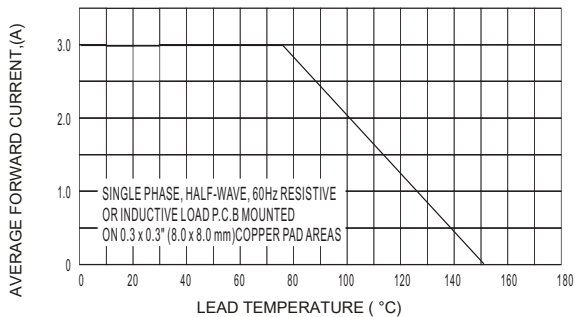


Fig. 1 Forward Current Derating Curve

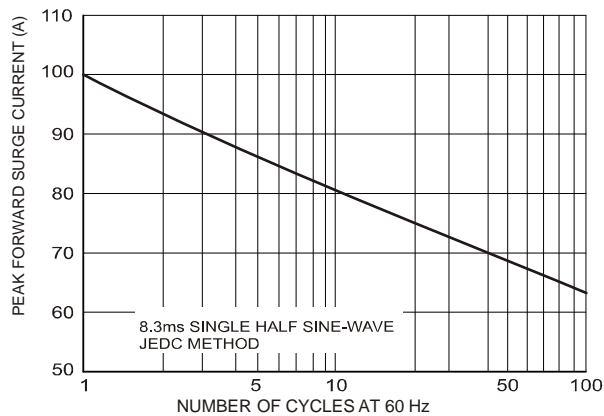


Fig. 3 Surge Current Derating Curve

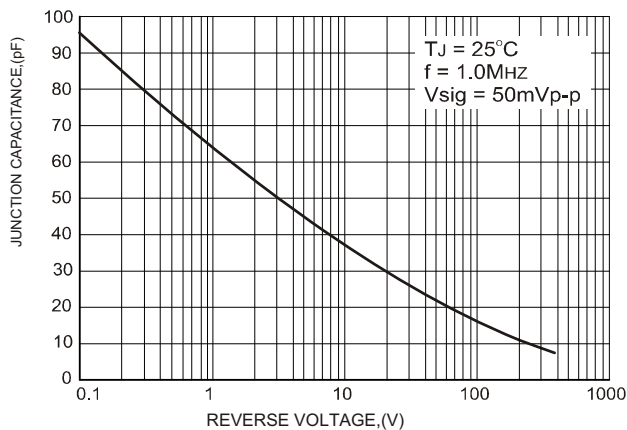


Fig. 5 Typical Junction Capacitance

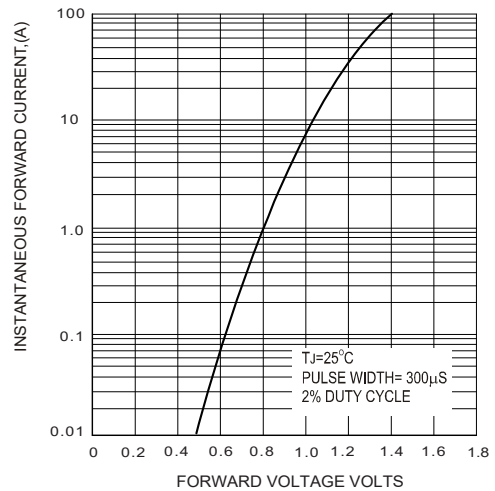


Fig. 2 Typical Forward Characteristics

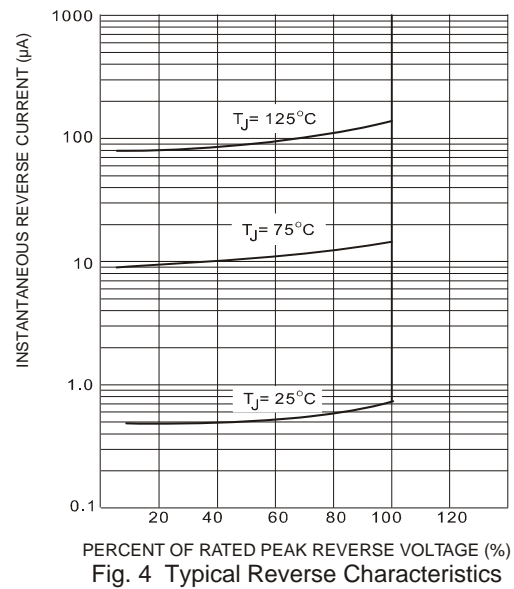
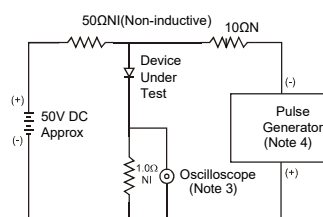


Fig. 4 Typical Reverse Characteristics



Notes:
 3. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
 4. Rise Time = 10ns max. Input Impedance = 50Ω.

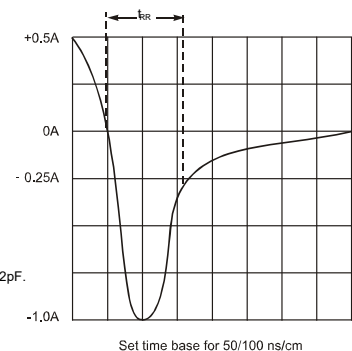


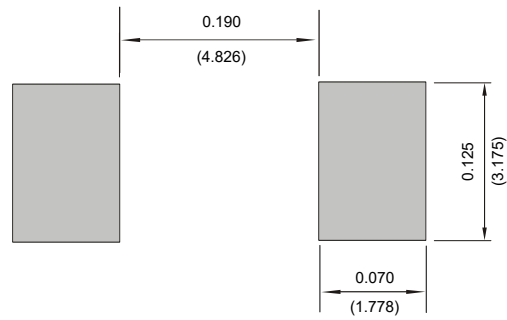
Fig. 6 Reverse Recovery Time Characteristic and Test Circuit

ER3D-S1

MOUNTING PAD LAYOUT

SMC / DO-214AB

Unit:Inch(mm)



ORDER INFORMATION

- Packing information

Part Number	Case	Reel Size	QUANTITY
ER3D-S1	SMC	13 Inch	3000