

ER1A~ER1J

SURFACE MOUNT SUPERFAST RECTIFIER

VOLTAGE 50 to 600 Volt **CURRENT** 1 Ampere

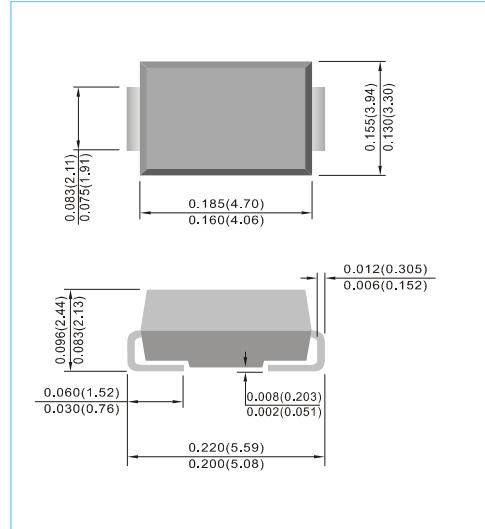
FEATURES

- For surface mounted applications in order to optimize board space
- Easy pick and place
- Superfast 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-214AA 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: 0.0032 ounces, 0.092 grams

SMB / DO-214AA Unit : inch(mm)



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	ER1A	ER1B	ER1C	ER1D	ER1E	ER1G	ER1J	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Current at $T_L=100^{\circ}C$	$I_{F(AV)}$	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	0.95				1.25	1.7		V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^{\circ}C$ $T_J=100^{\circ}C$	I_R	1 150							μA
Maximum Reverse Recovery Time (Note 1)	t_{rr}	35							ns
Typical Junction Capacitance (Note 2)	C_J	10							pF
Maximum Thermal Resistance (Note 3)	$R_{\theta JL}$	34							$^{\circ}C / W$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150							$^{\circ}C$

NOTES :

- 1.Reverse Recovery Tset Conditions : $I_F=0.5A, I_R=-1A, I_{rr}=-0.25A$
- 2.Measured at 1MHz and applied reverse voltage of 4 volts.
- 3.8mm²(0.013mm thick) land areas.

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RATING AND CHARACTERISTIC CURVES

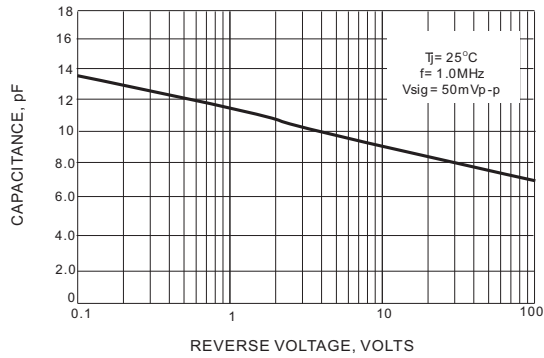


FIG.1 TYPICAL JUNCTION CAPACITANCE

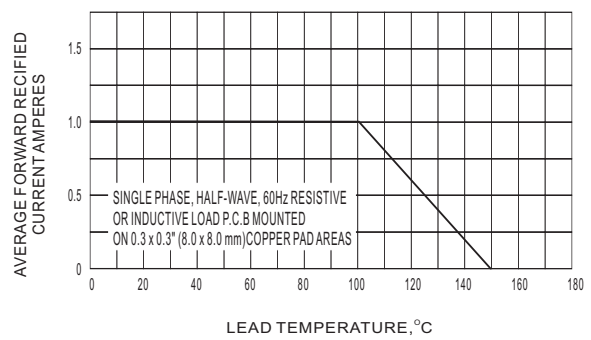


FIG.2 MAXIMUM AVERAGE FORWARD CURRENT DERATING

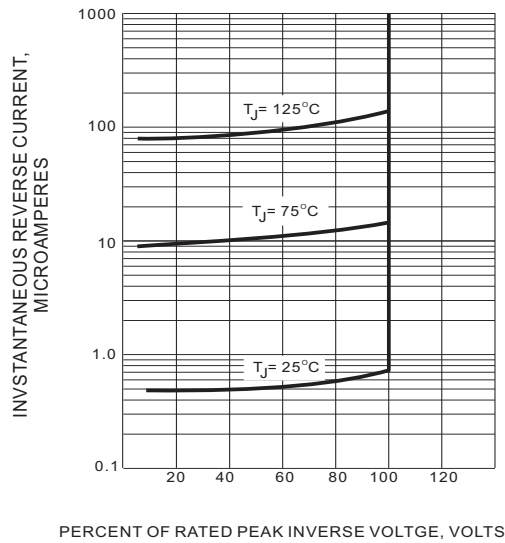


FIG.3 TYPICAL REVERSE CHARACTERISTICS

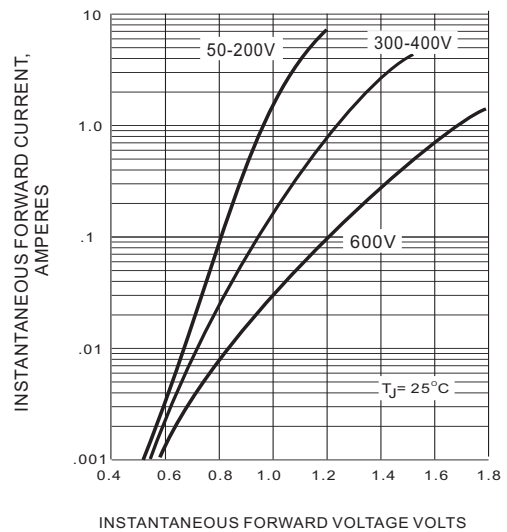


FIG.4 TYPICAL FORWARD CHARACTERISTICS

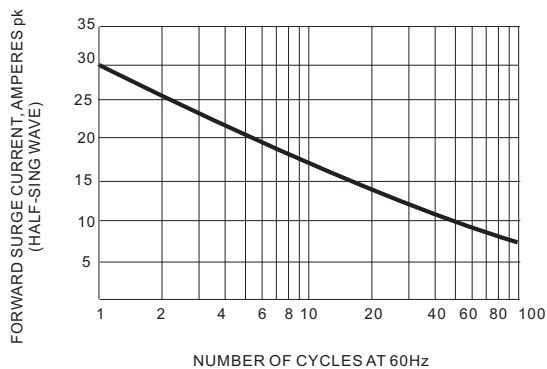


FIG.5 MAXIMUM NON-REPEITIVE SURGE CURRENT

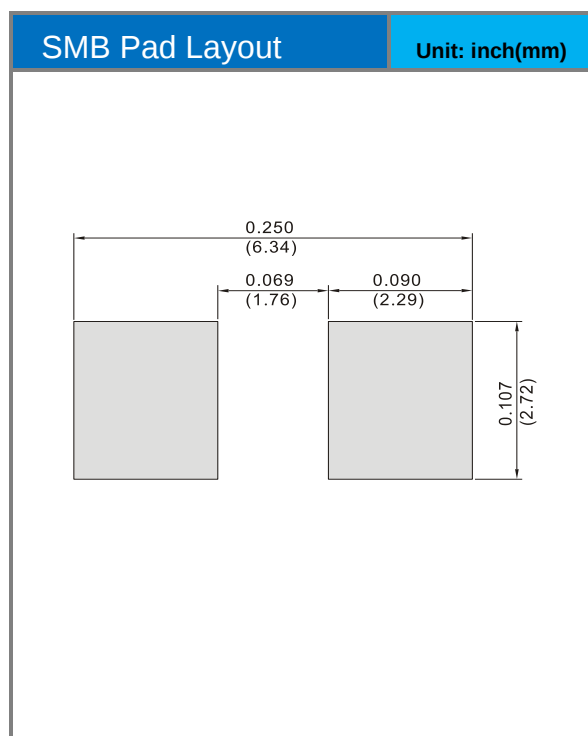
ER1A~ER1J

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
ER1A	SMB	0.8K pcs / 7" reel	ER1A
ER1A	SMB	3K pcs / 13" reel	ER1A
ER1B	SMB	0.8K pcs / 7" reel	ER1B
ER1B	SMB	3K pcs / 13" reel	ER1B
ER1C	SMB	0.8K pcs / 7" reel	ER1C
ER1C	SMB	3K pcs / 13" reel	ER1C
ER1D	SMB	0.8K pcs / 7" reel	ER1D
ER1D	SMB	3K pcs / 13" reel	ER1D
ER1E	SMB	0.8K pcs / 7" reel	ER1E
ER1E	SMB	3K pcs / 13" reel	ER1E
ER1G	SMB	0.8K pcs / 7" reel	ER1G
ER1G	SMB	3K pcs / 13" reel	ER1G
ER1J	SMB	0.8K pcs / 7" reel	ER1J
ER1J	SMB	3K pcs / 13" reel	ER1J

ER1A~ER1J

Mounting Pad Layout



ER1A~ER1J

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