

ER3AA~ER3JA

SUPER FAST RECOVERY RECTIFIER

VOLTAGE 50 to 600 Volt **CURRENT** 3 Ampere

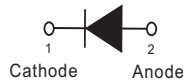
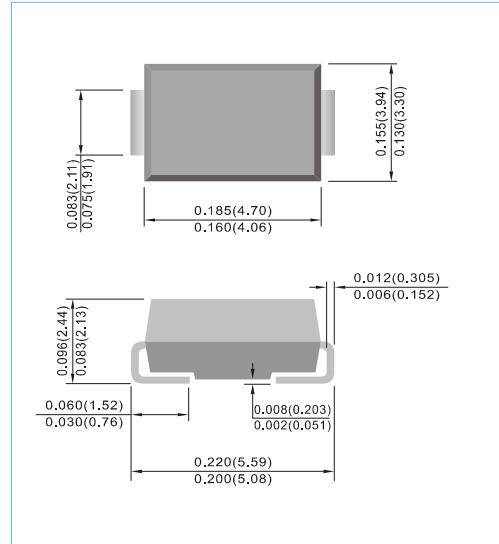
SMB / DO-214AA Unit : inch(mm)

FEATURES

- For surface mounted applications
- High temperature metallurgically bonded-no compression contacts as found in other diode-constructed rectifiers
- Glass passivated junction
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- 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



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	ER3AA	ER3BA	ER3CA	ER3DA	ER3EA	ER3GA	ER3JA	UNITS
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	$I_{F(AV)}$	3							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	80							A
Maximum Forward Voltage at 3A	V_F	0.95				1.25		1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	1							μA
Maximum Reverse Recovery Time (Notes 3)	t_{rr}	35							ns
Typical Junction Capacitance Measured at 1MHz and applied $V_R=4V$	C_J	45							pF
Typical Thermal Resistance (Notes 2) (Notes 1)	$R_{\theta JA}$ $R_{\theta JC}$	135 20							$^{\circ}C / W$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							$^{\circ}C$

NOTES: 1. Mounted on a FR4 PCB, single-sided copper, with 100cm² copper pad area
 2. Mounted on a FR4 PCB, single-sided copper, mini pad.
 3. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=-1A$ $I_{rr}=-0.25A$

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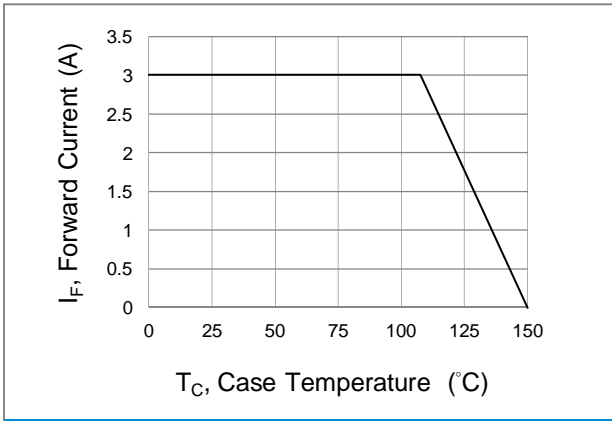


Fig.1 Forward Current Derating Curve

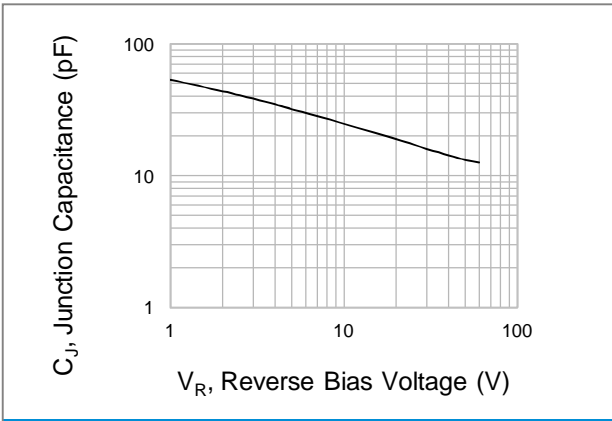


Fig.2 Typical Junction Capacitance

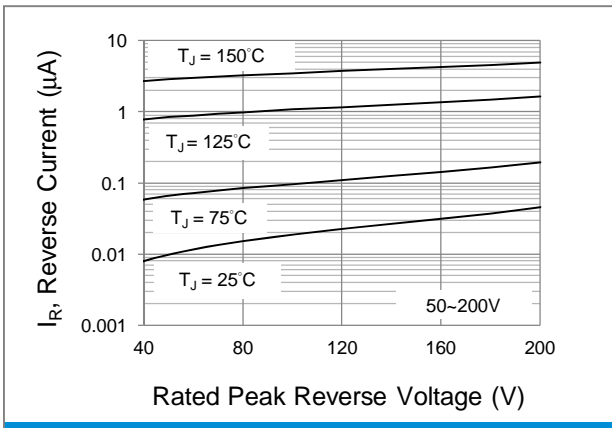


Fig.3 Typical Reverse Characteristics

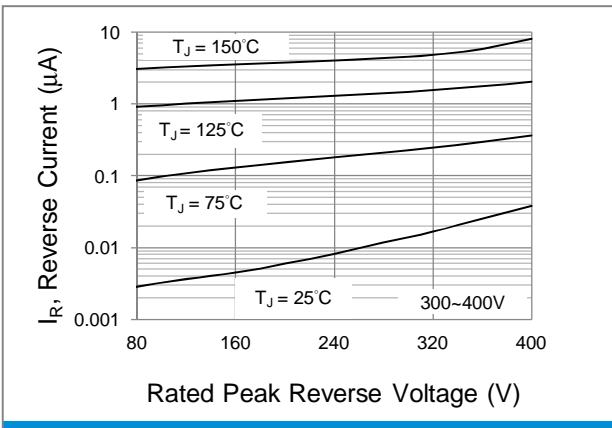


Fig.4 Typical Reverse Characteristics

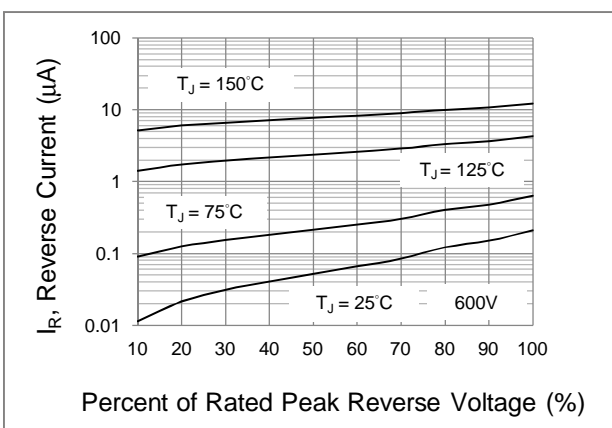


Fig.5 Typical Reverse Characteristics

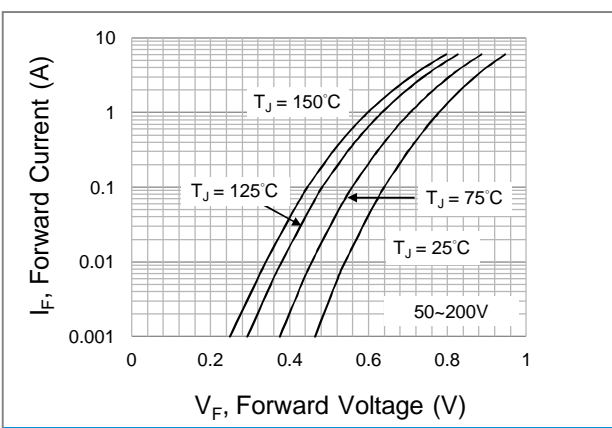


Fig.6 Typical Forward Characteristics

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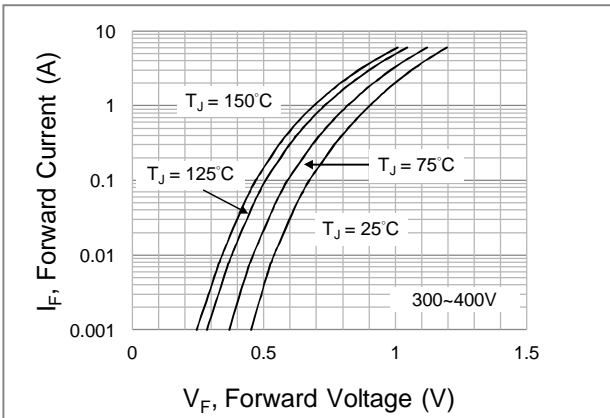


Fig.7 Typical Forward Characteristics

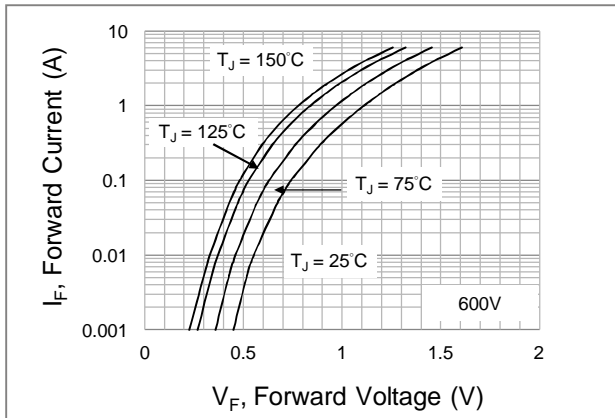
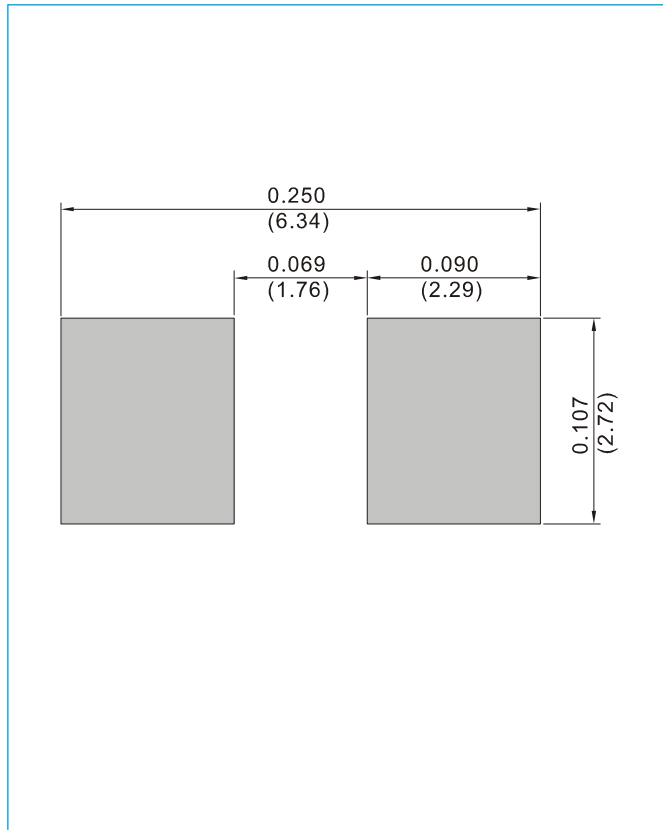


Fig.8 Typical Forward Characteristics

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MOUNTING PAD LAYOUT

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



ORDER INFORMATION

- Packing information
T/R - 3K per 13" plastic Reel
T/R - 0.8K per 7" plastic Reel

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