

Features

- Low profile package
- Ideal for automated placement
- Fast switching for high efficiency
- Glass passivated chip junctions
- High forward surge capability
- High temperature soldering:
260°C/10 seconds at terminals
- Meets MSL level 1, per J-STD-020
- Component in accordance to
RoHS 2011/65/EU and WEEE 2002/96/EC
- AEC-Q101 Qualified and PPAP Capable



DO-214AA (SMB)



RoHS
COMPLIANT

HALOGEN
FREE
Available

Major Ratings and Characteristics

$I_{F(AV)}$	3.0A
V_{RRM}	50V to 1000V
I_{FSM}	100A
t_{rr}	150ns,250ns,500ns
V_F	1.3V
$T_Jmax.$	150°C

Mechanical Data

- **Case:** JEDEC DO-214AA(SMB)
Molding compound meets
UL 94 V-0 flammability rating
- **Terminals:** Solder plated, solderable per
MIL-STD-750, Method 2026
- **Polarity:** Laser band denotes cathode end

Maximum Ratings & Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Item	Symbol	S-FR3A	S-FR3B	S-FR3D	S-FR3G	S-FR3J	S-FR3K	S-FR3M	Unit
Maximum repetitive 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 rectified current at $T_L=60^\circ\text{C}$	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	100							A
Operating and storage temperature range	T_J, T_{STG}	-65 to +150							°C
Thermal resistance from junction to lead ⁽¹⁾	$R_{\theta JL}$	25							°C/W

Note1: Mounted on PCB with 0.28x0.28" (7.0mmx7.0mm) copper pad areas.

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Item	Test conditions	Symbol	S-FR3A	S-FR3B	S-FR3D	S-FR3G	S-FR3J	S-FR3K	S-FR3M	Unit
Maximum instantaneous forward voltage	$I_F=3.0\text{A}$	V_F	1.3							V
Maximum DC reverse current at rated DC blocking voltage	$T_A=25^\circ\text{C}$	I_R	5.0							μA
	$T_A=100^\circ\text{C}$		50							
Typical reverse recovery time	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$	t_{rr}	150			250	500		ns	
Typical junction capacitance	4.0 V, 1 MHz	C_J	30.0							pF

Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Output Current Derating Curve

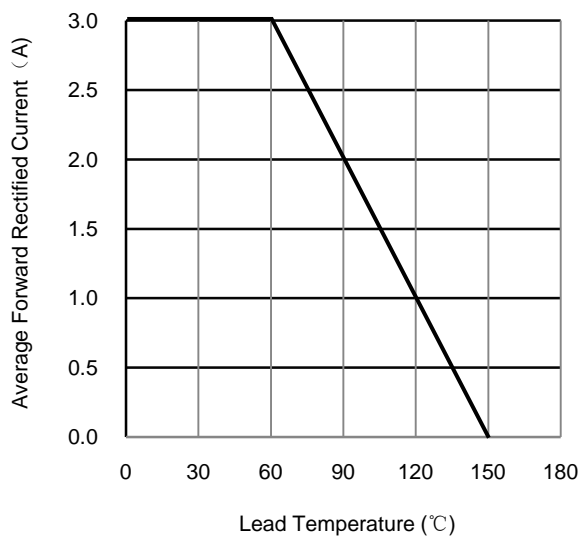


Fig.2 Maximum Peak Forward Surge Current

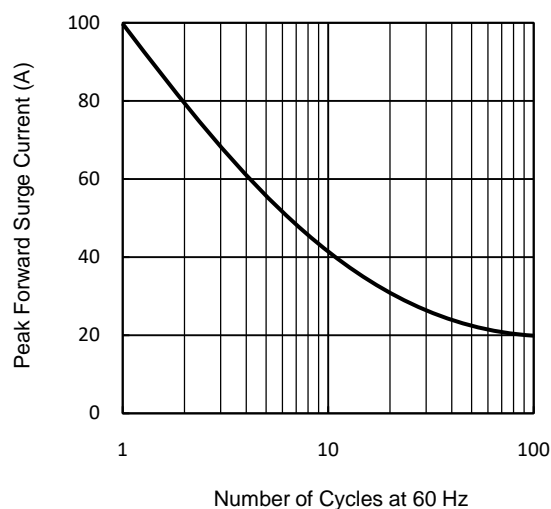


Fig.3 Typical Instantaneous Forward Characteristics

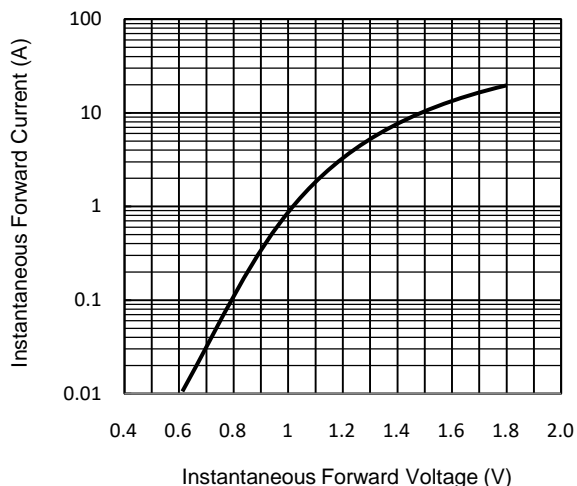
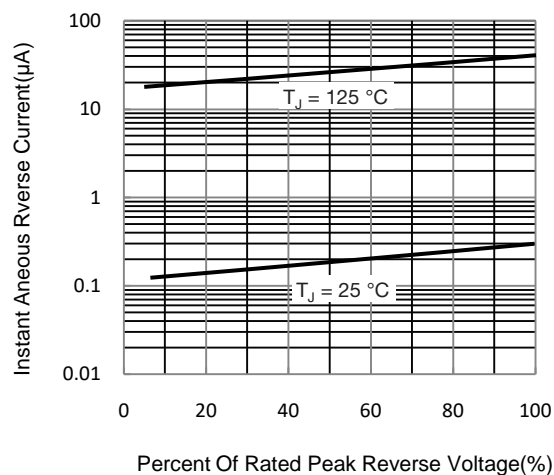
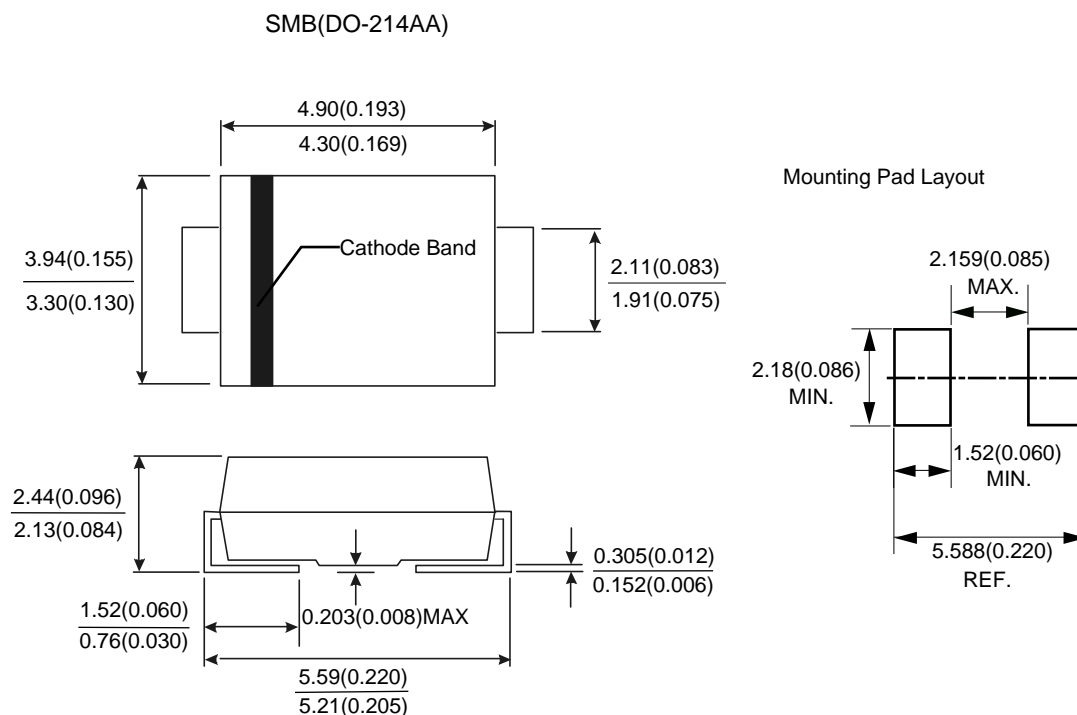


Fig.4 Typical Reverse Characteristics



Package Outline



Dimensions in millimeters and (inches)

Ordering Information

Outline	Reel (PCS)	Per Carton (PCS)	Reel Diameters (mm)
Taping	3,000		330/13"