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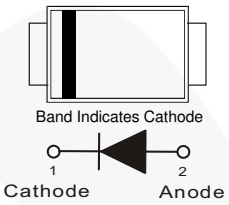
August 2015

SS13FL / SS14FL
Surface Mount Schottky Barrier Rectifier

Features

- Ultra Thin Profile – Maximum Height of 1.08 mm
- UL Flammability 94V-0 Classification
- MSL 1
- RoHS Compliant / Green Mold Compound
- Industrial Device Qualified per AEC-Q101 Standards.
  * see authorized use policy

SOD-123F



Ordering Information

Part Number	Top Mark	Package	Packing Method
SS13FL	G3	SOD-123F	Tape and Reel
SS14FL	G4	SOD-123F	Tape and Reel

Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Value		Unit
		SS13FL	SS14FL	
V_{RRM}	Peak Reverse Voltage	30	40	V
V_R	Reverse Voltage	30	40	V
$I_{F(AV)}$	Average Rectified Current at T_A = 75°C	1.0		A
I_{FSM}	Non-Repetitive Peak Forward Surge Current at t = 8.3 ms	40		A
T_J	Operating Junction Temperature Range	-55 to +125		°C
T_{STG}	Storage Temperature Range	-55 to +125		°C

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Thermal Characteristics[1]

Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Value	Unit
ψ_{JL}	Typical Thermal Characteristics, Junction-to-Lead[2]	25	°C/W
$R_{\theta JA}$	Typical Thermal Resistance, Junction-to-Ambient	140	°C/W

Note:

1. Per JESD51-3 recommended thermal test board. Device mounted on FR-4 PCB, board size = 76.2 mm x 114.3 mm.
2. Thermocouple soldered at cathode lead.

Electrical Characteristics

Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Conditions		Min.	Typ.	Max.	Unit
BV_R	Reverse Breakdown Voltage	I_R = 500 µA	SS13FL	30			V
			SS14FL	40			
V_F	Forward Voltage	I_F = 1.0 A				0.55	V
I_R	Reverse Leakage Current	$V_R = V_{RRM}$				30	µA
T_{rr}	Reverse Recovery Time	I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A	SS13FL		5.875		ns
			SS14FL		5.695		
C_J	Junction Capacitance	V_R = 0			60		pF

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Typical Performance Characteristics

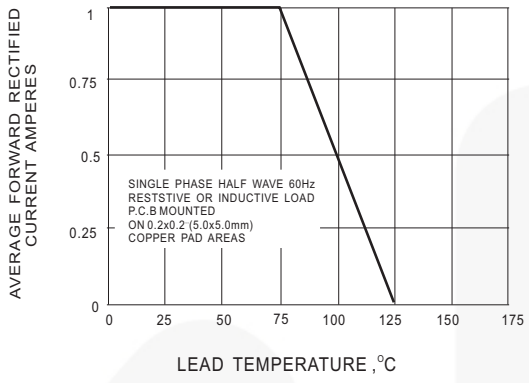

Figure 1. Forward Current Derating Curve

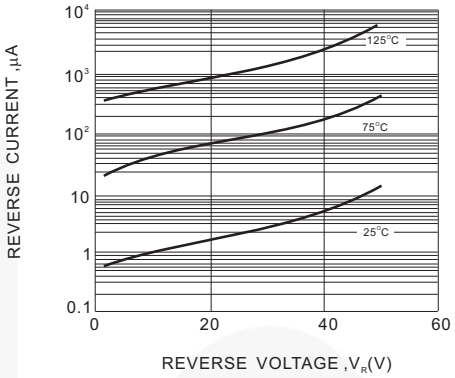

Figure 2. Typical Reverse Characteristic

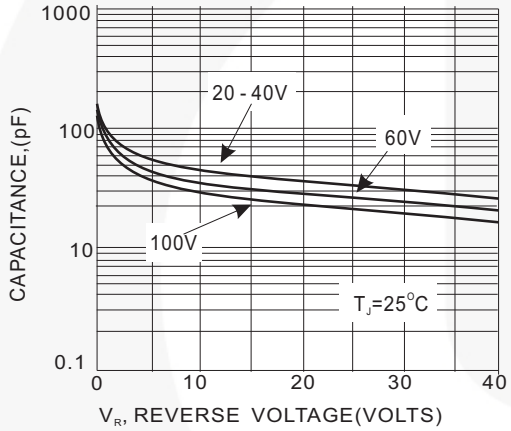

Figure 3. Typical Junction Characteristic

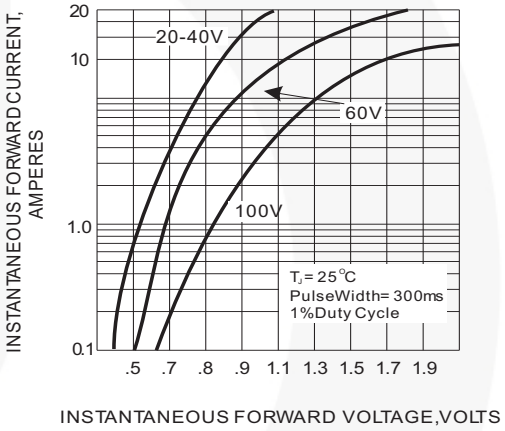

Figure 4. Typical Instantaneous Forward Characteristics

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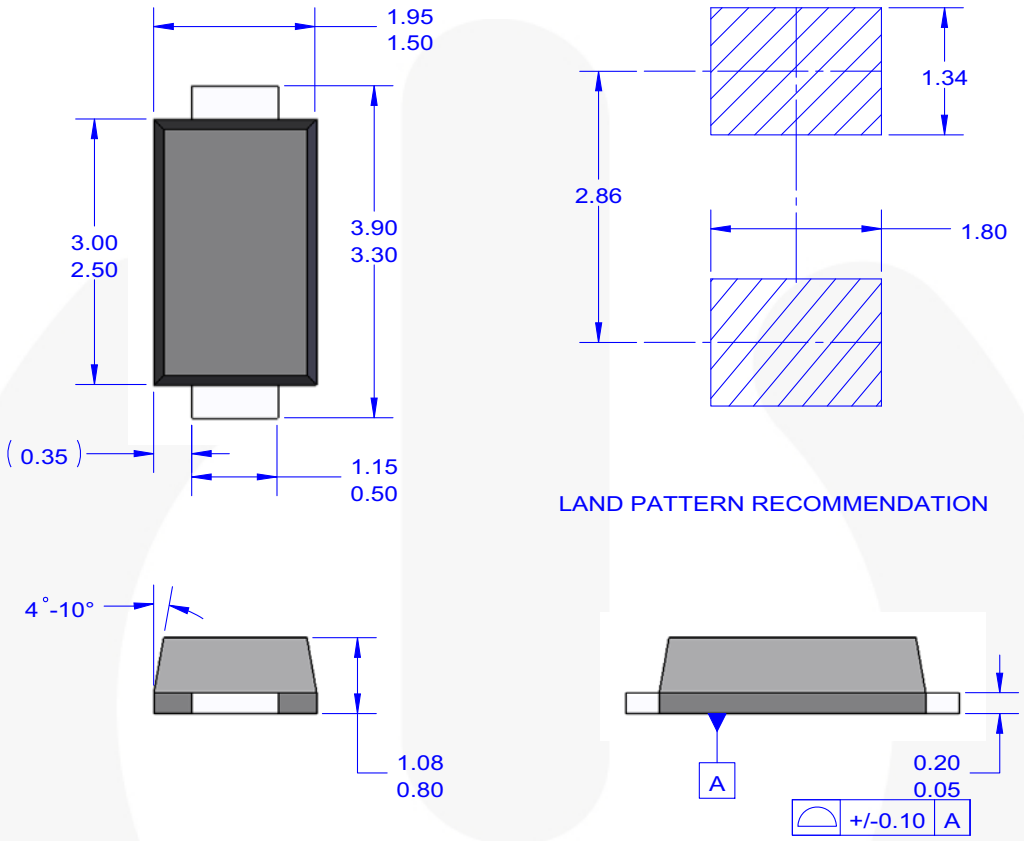
Physical Dimensions



NOTES:

A. THIS PACKAGE DOES NOT CONFORM TO ANY STANDARDS.
B. ALL DIMENSIONS ARE IN MILLIMETERS.
C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.
D. DRAWING FILE NAME: MA02BREV5

Figure 5. 2-LEAD, SOD123F, NON-JEDEC, FLAT TERMINAL

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No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
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