

SS2020FL-AU ~ SS2040FL-AU Series

Surface Mount Schottky Barrier Rectifier

Voltage

20~40 V

Current

2 A

Features

- Low power loss, high efficiency
- High surge current capability
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

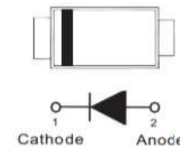
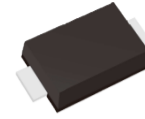
Applications

- Low voltage rectification
- Reverse polarity protection
- Low power consumption applications

Mechanical Data

- Case : SOD-123FL Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0006 ounces, 0.017 grams

SOD-123FL



Maximum Ratings (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	SS2020FL-AU	SS2030FL-AU	SS2040FL-AU	UNIT
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	20	30	40	V
Maximum Rms Voltage	V _{RMS}	14	21	28	V
Maximum DC Blocking Voltage	V _R	20	30	40	V
Maximum Average Forward Rectified Current	I _{F(AV)}	2			A
Peak Forward Surge Current : 8.3ms Single Half Sine-Wave Superimposed On Rated Load	I _{FSM}	50			A
Typical Junction Capacitance Measured at 1 MHZ And Applied V _R = 4 V	C _J	100			pF
Typical Thermal Resistance <div>(Note 1)</div> <div>(Note 2)</div>	R _{θJA}	200			°C/W
	R _{θJC}	32			
Operating Junction Temperature Range	T _J	-55 to +150			°C
Storage Temperature Range	T _{STG}	-55 to +150			°C

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Electrical Characteristics

PARAMETER	SYMBOL	TEST CONDITION		SS2020FL-AU		SS2030FL-AU		SS2040FL-AU		UNIT
				TYP.	MAX.	TYP.	MAX.	TYP.	MAX.	
Forward Voltage	V_F	$I_F = 1A$	$T_J = 25^\circ C$	0.41	-	0.41	-	0.41	-	V
		$I_F = 2A$		-	0.5	-	0.5	-	0.5	
		$I_F = 1A$	$T_J = 125^\circ C$	0.32	-	0.32	-	0.32	-	
		$I_F = 2A$		0.41	-	0.41	-	0.41	-	
Reverse Current ^(Note 3)	I_R	$V_R = 10V$	$T_J = 25^\circ C$	2	-	2	-	2	-	μA
		$V_R = 20V$		-	100	3	-	3	-	
		$V_R = 30V$		-	-	-	100	7	-	
		$V_R = 40V$		-	-	-	-	-	100	
		$V_R = 20V$	$T_J = 125^\circ C$	3	-	3	-	3	-	mA
		$V_R = 30V$		-	-	5	-	5	-	
		$V_R = 40V$		-	-	-	-	6.5	-	

Note : 1. Mounted on a FR4 PCB, single-sided copper, mini pad.

2. Mounted on a FR4 PCB, single-sided copper, with 100cm² copper pad area.

3. Short duration pulse test used to minimize self-heating effect.

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Rating and Characteristic Curves

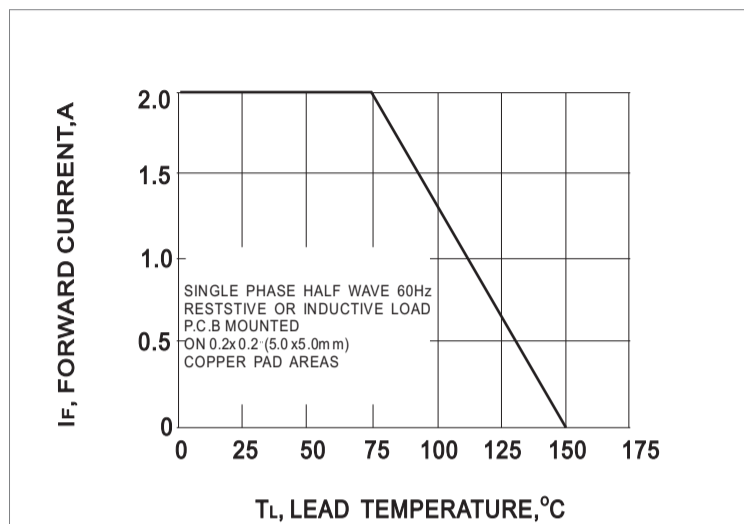


FIG. 1-FORWARD CURRENT DERATING CURVE

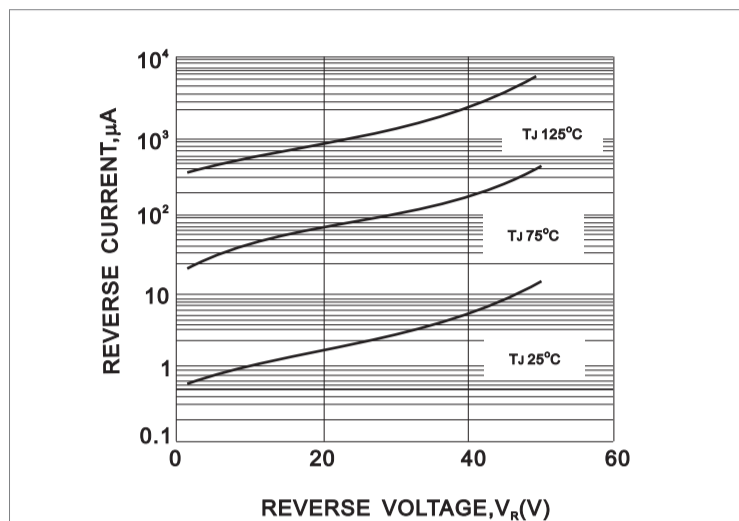


FIG. 2-TYPICAL REVERSE CHARACTERISTIC

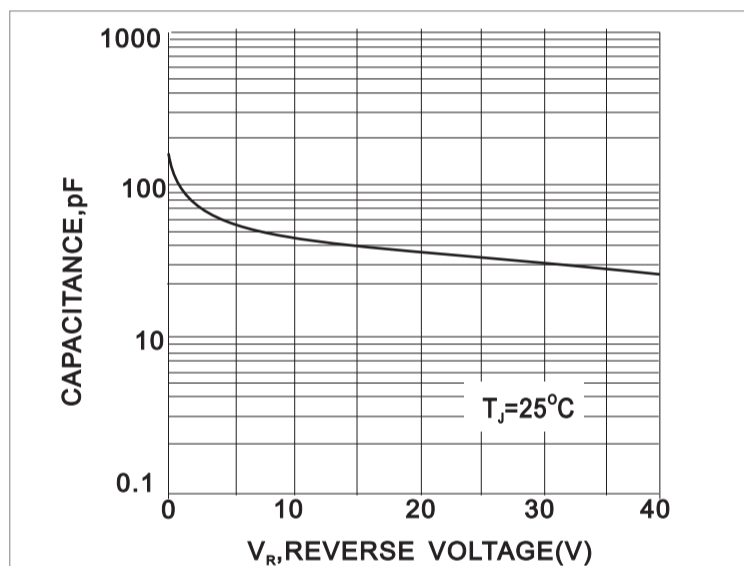


FIG. 3-TYPICAL JUNCTION CHARACTERISTIC

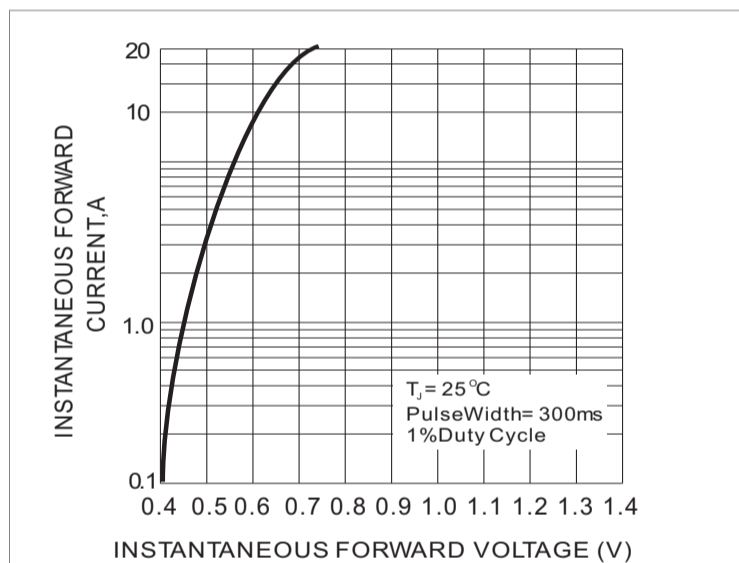


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

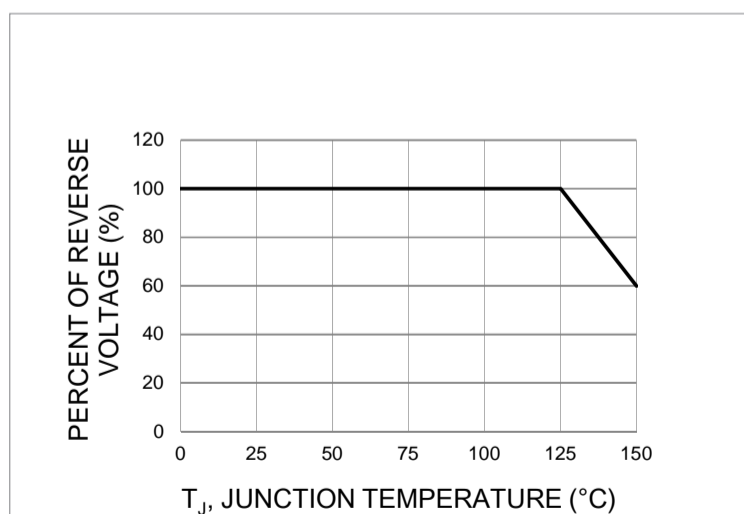


FIG. 5-OPERATING TEMPERATURE DERATING CURVE

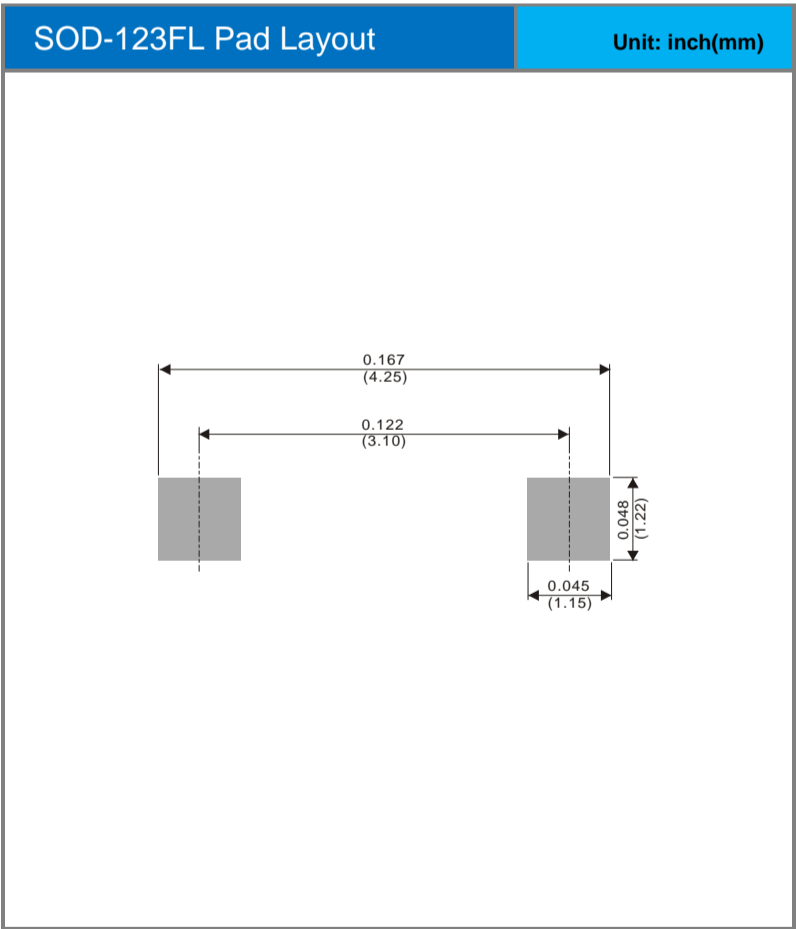
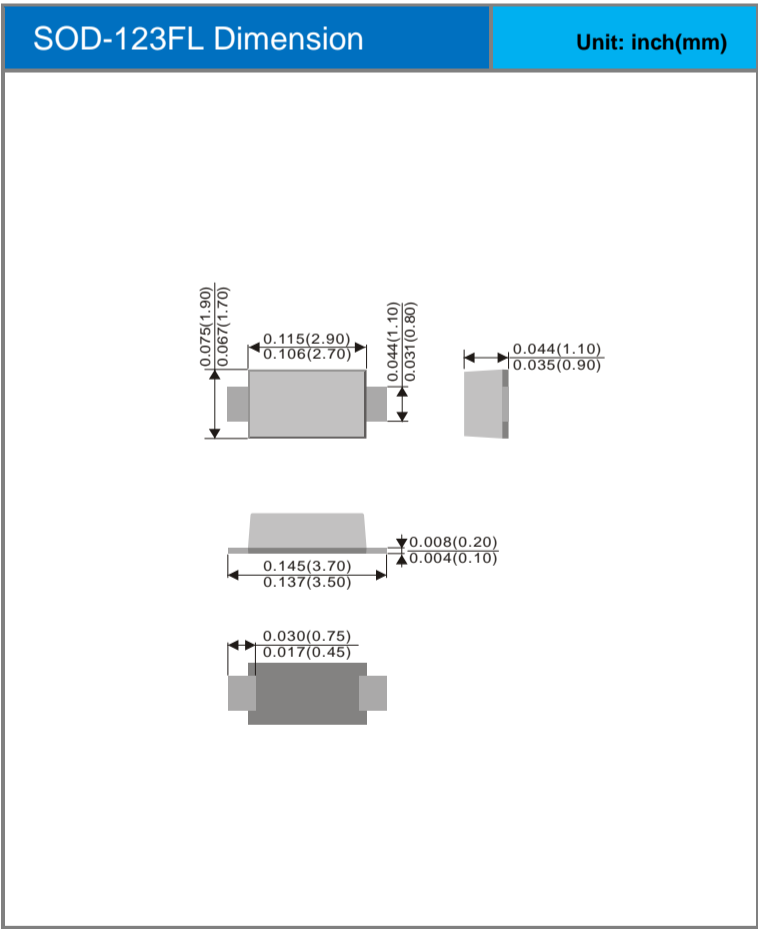


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Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
SS2020FL-AU_R1_000A1	SOD-123FL	3K pcs / 7" reel	GM	Halogen free
SS2030FL-AU_R1_000A1	SOD-123FL	3K pcs / 7" reel	GN	Halogen free
SS2040FL-AU_R1_000A1	SOD-123FL	3K pcs / 7" reel	GP	Halogen free

Packaging Information & Mounting Pad Layout





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