



## SS2020FL-AU ~ SS2040FL-AU Series

### Surface Mount Schottky Barrier Rectifier

<b>Voltage</b>	<b>20~40 V</b>	<b>Current</b>	<b>2 A</b>
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#### 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

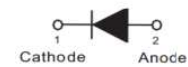
#### Applications

- 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<sub>A</sub> = 25°C unless otherwise noted)

PARAMETER	SYMBOL	SS2020FL-AU	SS2030FL-AU	SS2040FL-AU	UNIT
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	V
Maximum Rms Voltage	V <sub>RMS</sub>	14	21	28	V
Maximum DC Blocking Voltage	V <sub>R</sub>	20	30	40	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	2			A
Peak Forward Surge Current : 8.3ms Single Half Sine-Wave Superimposed On Rated Load	I <sub>FSM</sub>	50			A
Typical Junction Capacitance Measured at 1 MHZ And Applied V <sub>R</sub> = 4 V	C <sub>J</sub>	100			pF
Typical Thermal Resistance (Note 1) (Note 2)	R <sub>θJA</sub>	200			°C/W
	R <sub>θJC</sub>	32			
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150			°C
Storage Temperature Range	T <sub>STG</sub>	-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 <sub>F</sub>	I <sub>F</sub> = 1A	T <sub>J</sub> = 25 °C	0.41	-	0.41	-	0.41	-	V
		I <sub>F</sub> = 2A		-	0.5	-	0.5	-	0.5	
		I <sub>F</sub> = 1A	T <sub>J</sub> = 125 °C	0.32	-	0.32	-	0.32	-	
		I <sub>F</sub> = 2A		0.41	-	0.41	-	0.41	-	
Reverse Current <sup>(Note 3)</sup>	I <sub>R</sub>	V <sub>R</sub> = 10V	T <sub>J</sub> = 25 °C	2	-	2	-	2	-	uA
		V <sub>R</sub> = 20V		-	100	3	-	3	-	
		V <sub>R</sub> = 30V		-	-	-	100	7	-	
		V <sub>R</sub> = 40V		-	-	-	-	-	100	
		V <sub>R</sub> = 20V	T <sub>J</sub> = 125 °C	3	-	3	-	3	-	mA
		V <sub>R</sub> = 30V		-	-	5	-	5	-	
		V <sub>R</sub> = 40V		-	-	-	-	6.5	-	
		V <sub>R</sub> = 40V		-	-	-	-	-	-	

- Note : 1. Mounted on a FR4 PCB, single-sided copper, mini pad.  
 2. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area.  
 3. Short duration pulse test used to minimize self-heating effect.



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## Rating and Characteristic Curves

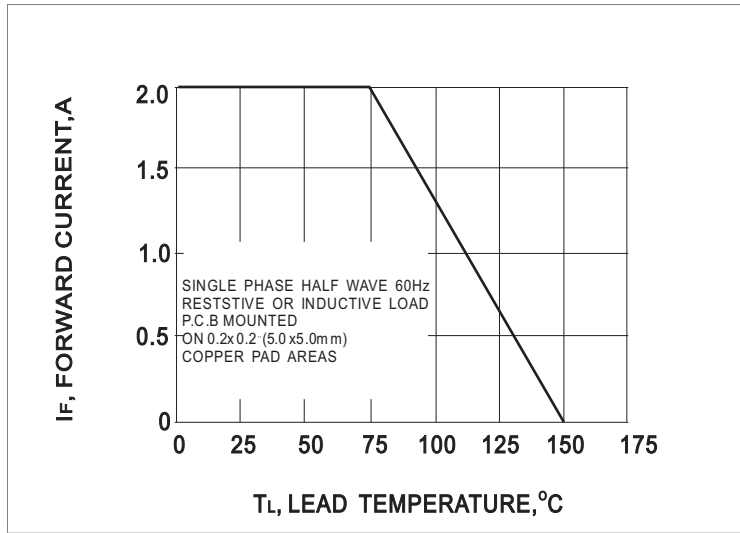


FIG. 1-FORWARD CURRENT DERATING CURVE

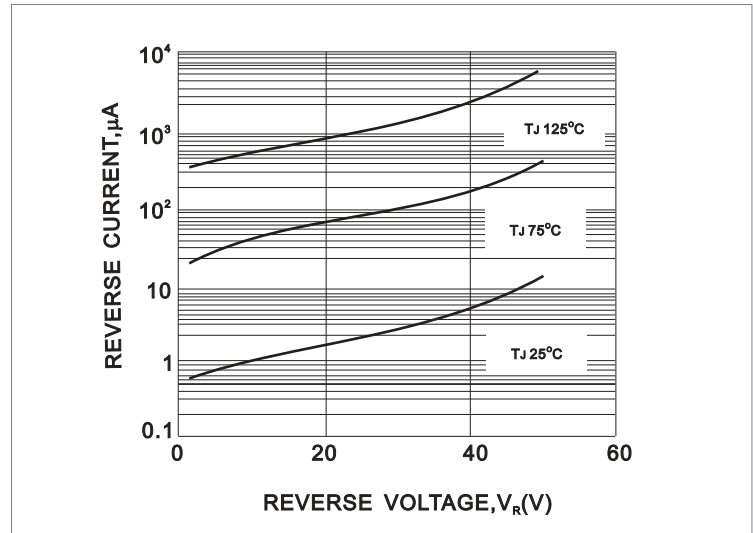


FIG. 2-TYPICAL REVERSE CHARACTERISTIC

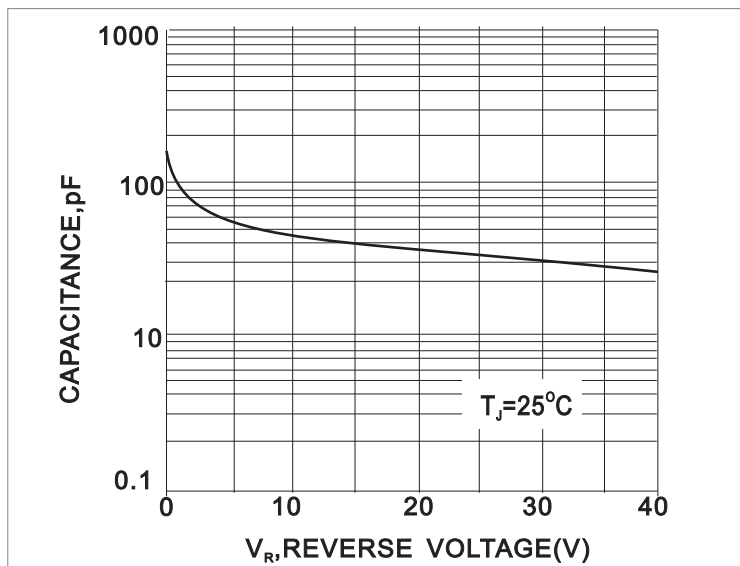


FIG. 3-TYPICAL JUNCTION CHARACTERISTIC

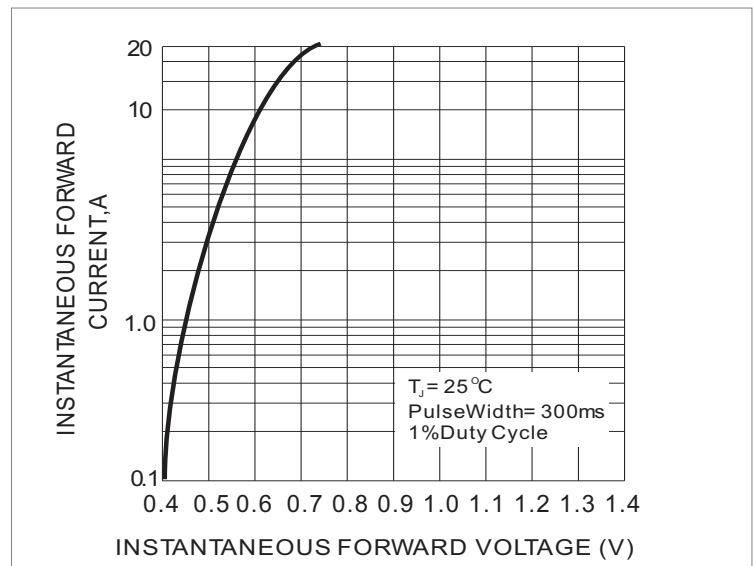


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

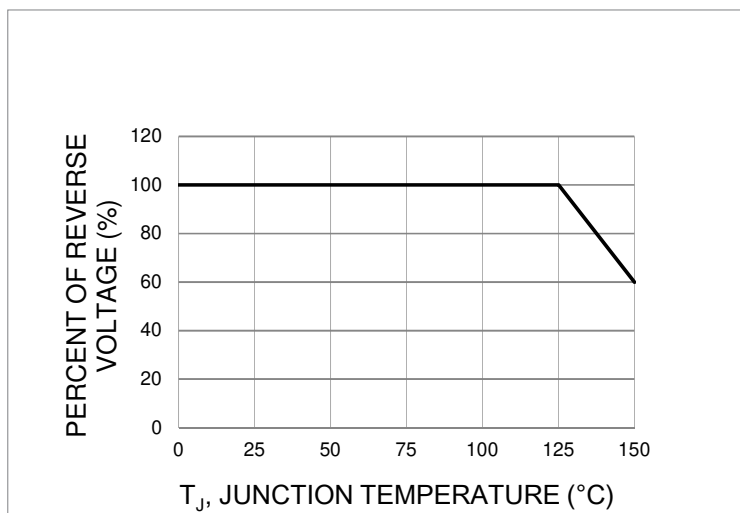


FIG. 5-OPERATING TEMPERATURE DERATING CURVE

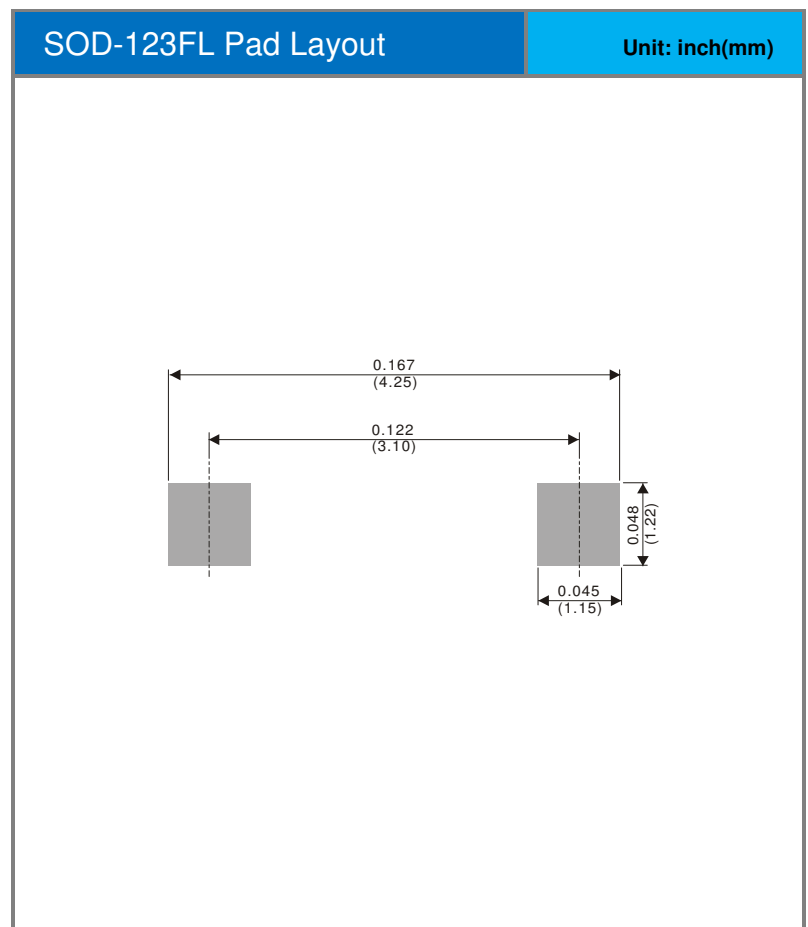
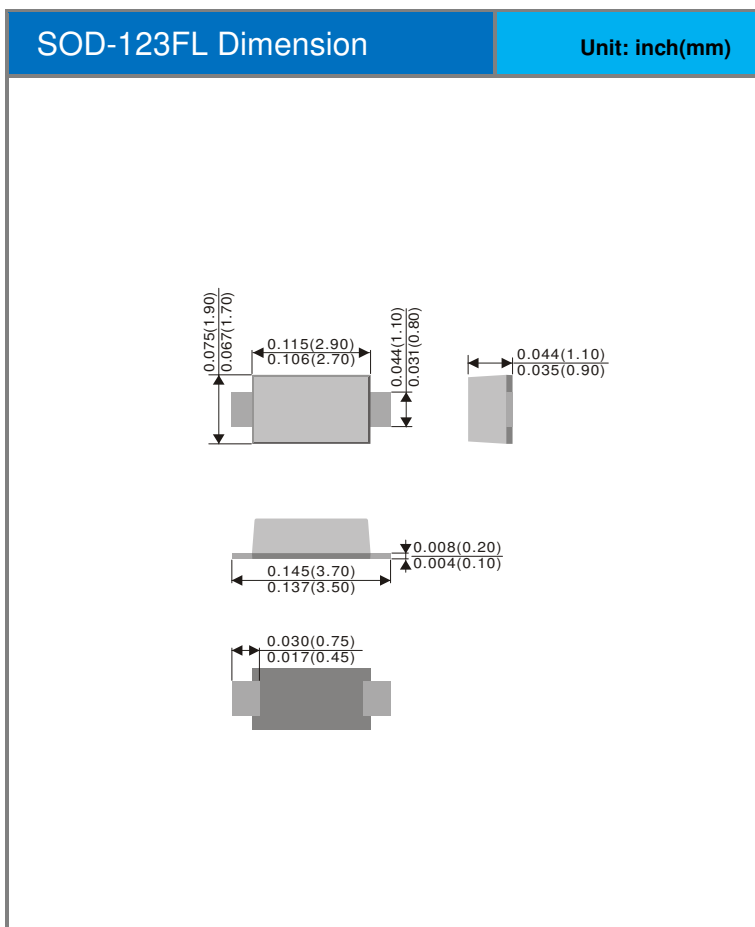


## SS2020FL-AU ~ SS2040FL-AU Series

### 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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