1.0 Amp. Surface Mount Schottky Barrier Rectifier

DO-214AA (SMB)

Voltage	Current
20 V to 150V	1.0 A

FEATURES

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- Low forward voltage drop
- High forward surge current capability
- Solder dip 260ºC, 10s
- AEC-Q101 qualified
- Component in accordance to RoHS 2011/65/EU and WEEE 2002/96/EC
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260º C
- Low leakage current

AUTOMOTIVE GRADE Available

Pb

e3

RoHS COMPLIANT

MECHANICAL DATA

- **Case:** DO-214AA (SMB). Epoxy meets UL 94V-0 flammability rating.
- **Polarity:** Color band denotes cathode end.
- **Terminals:** Matte tin plated leads, solderable per MIL-STD-750 Method 2026, J-STD-002 and JESD22-B102. Consumer grade, meets JESD 201 class 1A whisker test.
- **HE3 suffix** for high reliability grade, meets JESD 201 class 2 whisker test.

TYPICAL APPLICATIONS

Used in low voltage high frequency inverters, freewheeling, dc-to-dc converters, and polarity protection applications.

Maximun Ratings and Electrical Characteristics at 25°C

		FSS12SMB	FSS14SMB	FSS16SMB	FSS19SMB	FSS110SMB	FSS115SMB
Marking code		5B	5C	5A	5D	5E	5F
V_{RRM}	Maximum Recurrent Peak Reverse Voltage (V)	20	40	60	90	100	150
V_{RMS}	Maximum RMS Voltage (V)	14	28	42	63	70	105
V_{DC}	Maximum DC Blocking Voltage (V)	20	40	60	90	100	150
$I_{F(AV)}$	Forward Current at Tc (See graphic)	1.0 A					
I_{FSM}	8.3 ms.Peak Forward Surge Current (Jedec Method)	30 A					
T_j	Operating Temperature Range	-55°C to +125°C		-55°C to +150°C			
T_{stg}	Storage Temperature Range	-55°C to +125°C					

Electrical Characteristics at Tamb = 25 °C

V_F	Maximum Instantaneous Forward Voltage I_F = 1 A @ 25 °C @ 100 °C (Note 1)	0.5 V 0.4 V	0.75 V 0.65 V	0.85 V 0.75 V	0.95 V 0.85 V
	I_F = 50mA @ 25 °C	-	0.40 V	-	
I_R	Maximum DC Reverse Current Rated DC Blocking Voltage Tj = 25 °C at	0.5 mA		0.1 mA	
	Tj =100°C (Note 3)	10 mA	5.0 mA	-	
	Tj =125°C	-		2.4 mA	
I_R	At 24V DC Reverse Current Rated DC Blocking Voltage Tj = 75 °C at	-	0.05 mA	-	
	Ta = 125 °C	-	4 mA	-	
C_j	Typical Junction Capacitance (Note 4)	110 pF			
$R_{th\ (j-c)}$	Typical Thermal Resistance (Note 2)	25 °C/W			

Notes: 1. Pulse Test: 300µ Pulse Width, 1% Duty Cycle
2. Thermal Resistance from Junction to Case per diode
3. Pulse test: Pulse width ≤ 40ms
4. Measured at 1.0MHz and Applies Reverse Voltage of 4.0V. D.C.

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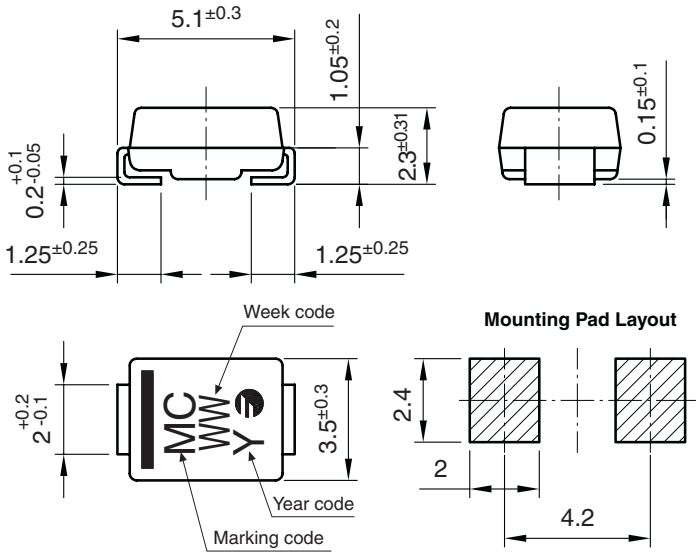
Ordering information

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
FSS14SMB TRTB	TRTB	13" diameter tape and reel	3,000	0.082
FSS14SMB HE3 TRTB	TRTB	13" diameter tape and reel	3,000	0.082

Package Outline Dimensions: (mm) DO-214AA (SMB)



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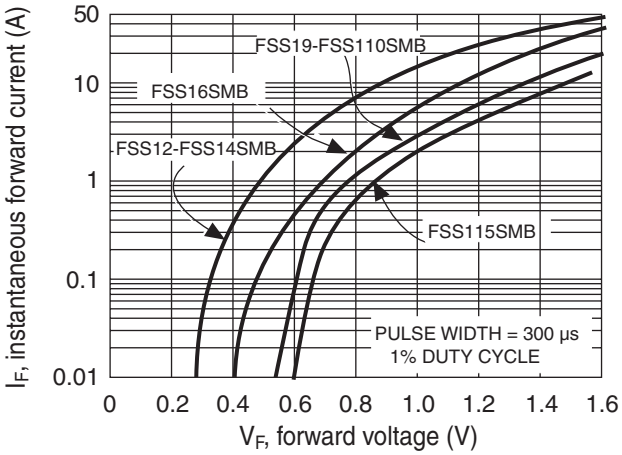
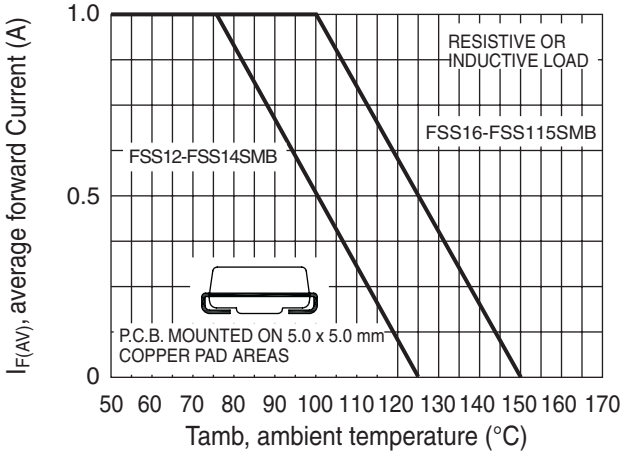
Ratings and Characteristics (Ta 25 ºC unless otherwise noted)

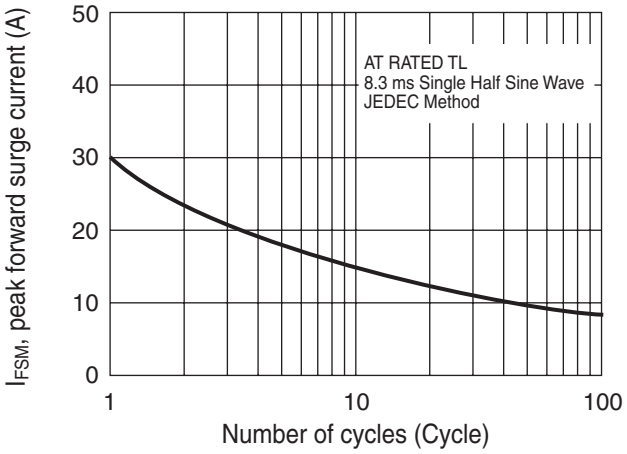
TYPICAL FORWARD CHARACTERISTIC



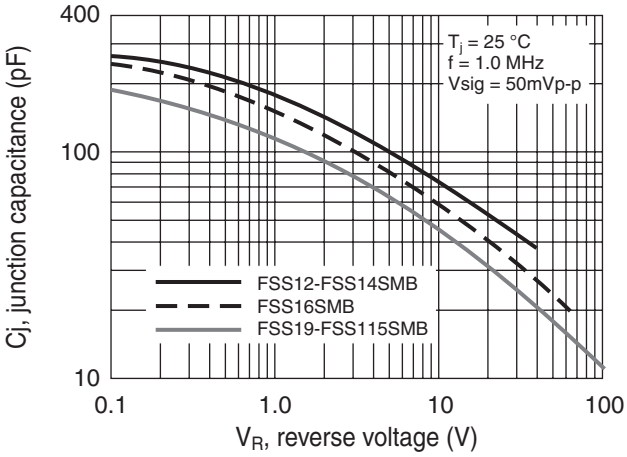
MAXIMUM FORWARD CURRENT DERATING CURVE



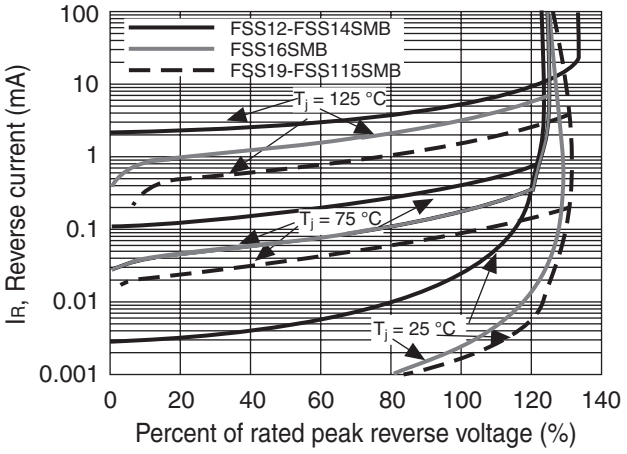
MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



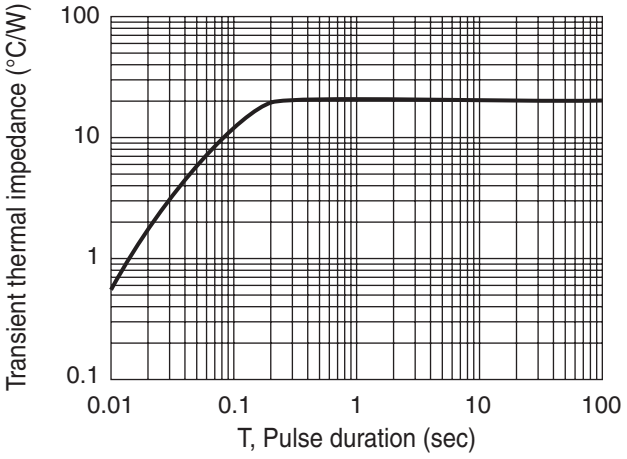
TYPICAL JUNCTION CAPACITANCE



TYPICAL REVERSE CHARACTERISTIC



TYPICAL TRANSIENT THERMAL IMPEDANCE



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