


## 1.0 Amp. Surface Mount Schottky Barrier Rectifier

<p><b>DO-214AC / SMA</b></p> 	<p><b>Voltage</b> 20 V to 150V</p>	<p><b>Current</b> 1.0 A</p>
	<p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• Low profile package</li> <li>• Ideal for automated placement</li> <li>• Guardring for overvoltage protection</li> <li>• Low power losses, high efficiency</li> <li>• Low forward voltage drop</li> <li>• High forward surge current capability</li> <li>• Solder dip 260°C, 10s</li> <li>• Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC</li> <li>• Meets MSL level 1, per J-STD-020, LF maximum peak of 260° C</li> <li>• Low leakage current</li> </ul>	
	<p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>• <b>Case:</b> DO-214AC (SMA). Epoxy meets UL 94V-0 flammability rating.</li> <li>• <b>Polarity:</b> Color band denotes cathode end.</li> <li>• <b>Terminals:</b> 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 (AEC Q101 qualified), meets JESD 201 class 2 whisker test.</li> </ul>	
	<p><b>TYPICAL APPLICATIONS</b></p> <p>Used in low voltage high frequency inverters, freewheeling, dc-to-dc converters, and polarity protection applications.</p>	

UTOMOTIVE  
GRADE  
Available



**RoHS**  
COMPLIANT

## Maximun Ratings and Electrical Characteristics at 25°C

		FSS12	FSS13	FSS14	FSS15	FSS16	FSS19	FSS110	FSS115
Marking code		A1	A2	A3	A4	A5	A7	A8	A9
V <sub>RRM</sub>	Maximum Recurrent Peak Reverse Voltage (V)	20	30	40	50	60	90	100	150
V <sub>RMS</sub>	Maximum RMS Voltage (V)	14	21	28	35	42	63	70	105
V <sub>DC</sub>	Maximum DC Blocking Voltage (V)	20	30	40	50	60	90	100	150
I <sub>F(AV)</sub>	Forward Current at Tc (See graphic)	1.0 A							
I <sub>FSM</sub>	8.3 ms.Peak Forward Surge Current (Jedec Method)	30 A							
T <sub>j</sub>	Operating Temperature Range	-65°C to +125°C			-65°C to +150°C				
T <sub>stg</sub>	Storage Temperature Range	-65°C to +150°C							

## Electrical Characteristics at Tamb = 25 °C

V <sub>F</sub>	Maximum Instantaneous Forward Voltage I <sub>F</sub> = 1 A @ 25 °C (Note 1) @ 100 °C	0.5 V 0.4 V	0.75 V 0.65 V	0.80 V 0.70 V	0.95 V 0.85 V
I <sub>R</sub>	Maximum DC Reverse Current T <sub>j</sub> = 25 °C at Rated DC Blocking Voltage T <sub>j</sub> =125°C (Note 3)	0.2 mA		0.1 mA	
		10 mA	5.0 mA	2.0 mA	
C <sub>j</sub>	Typical Junction Capacitance	110 pF	90 pF	70 pF	
R <sub>th (j-c)</sub> R <sub>th (j-a)</sub>	Typical Thermal Resistance (Note 2)	28 °C/W 88 °C/W			

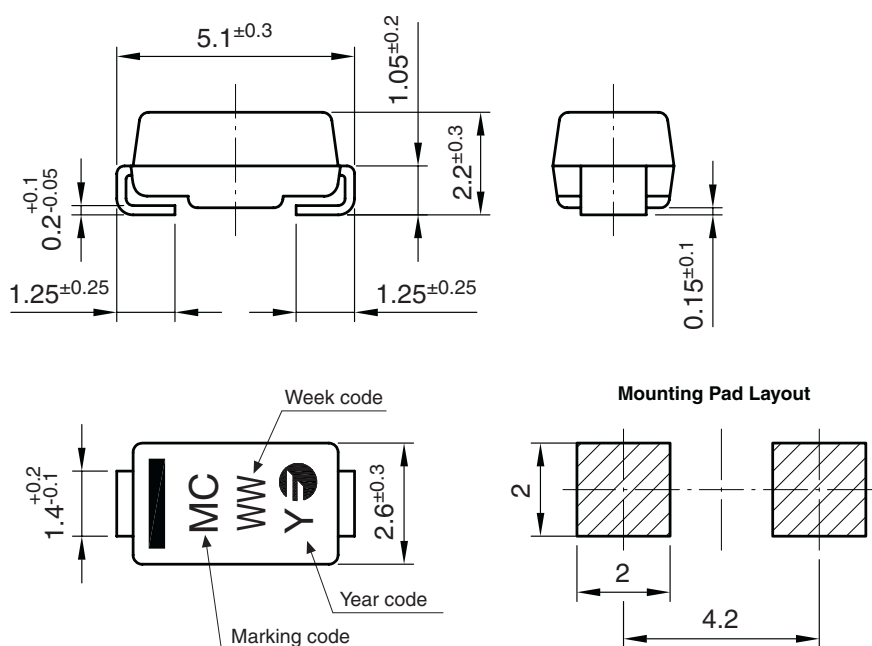
Notes: 1. Pulse Test: 300μ Pulse Width, 1% Duty Cycle  
2. Thermal Resistance from Junction to Case per diode  
3. Pulse test: Pulse width ≤ 40ms

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### Ordering information

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
FSS14 TRTB	TRTB	13" diameter tape and reel	7,500	0.060
FSS14 TRTS	TRTS	7" diameter tape and reel	1,800	0.060
FSS14 HE3 TRTB	TRTB	13" diameter tape and reel	7,500	0.060
FSS14 HE3 TRTS	TRTS	7" diameter tape and reel	1,800	0.060

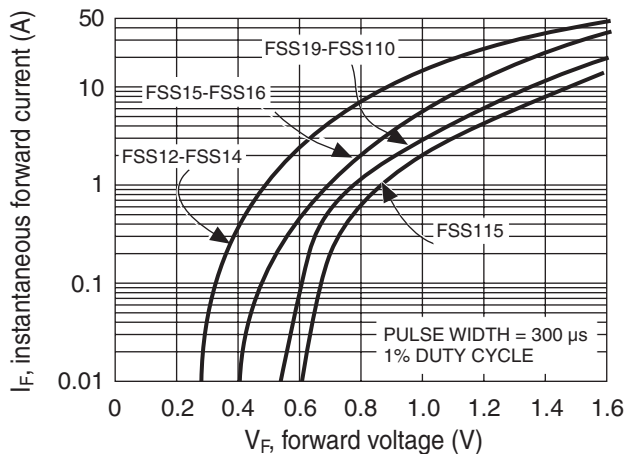
### Package Outline Dimensions: (mm) DO-214AC / SMA



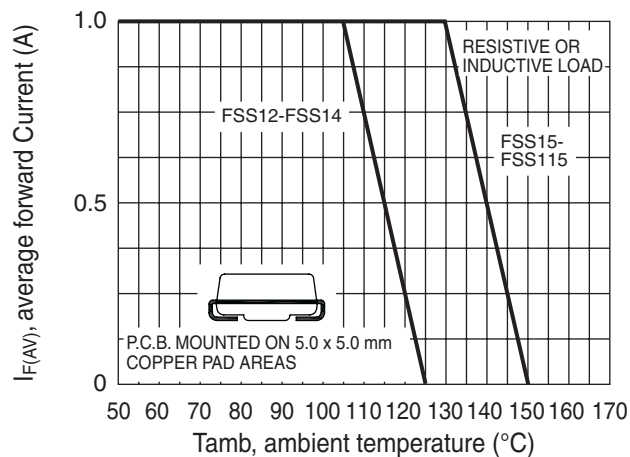
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**Ratings and Characteristics** ( $T_a$  25 °C unless otherwise noted)

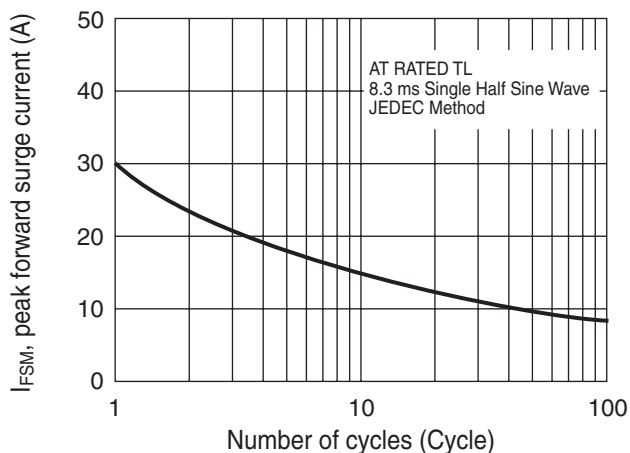
**TYPICAL FORWARD CHARACTERISTIC**



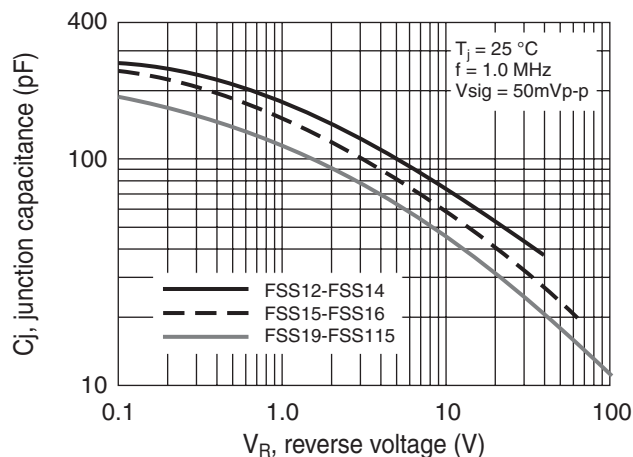
**MAXIMUM FORWARD CURRENT DERATING CURVE**



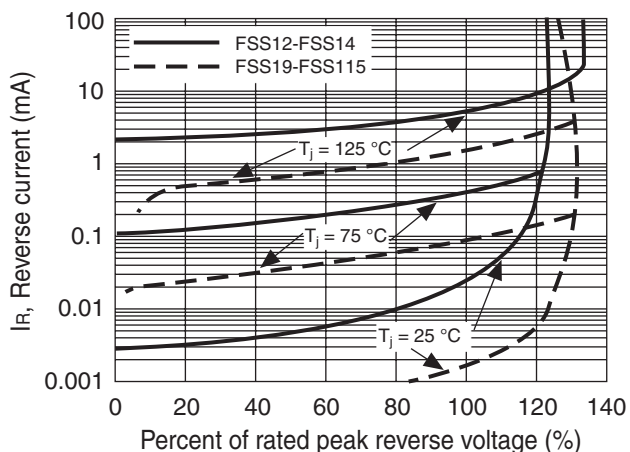
**MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



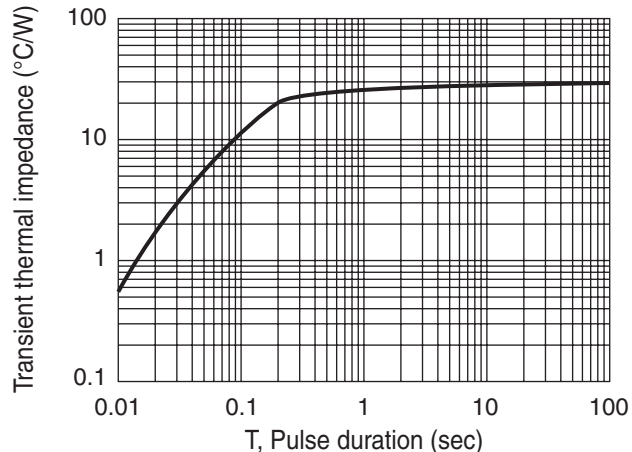
**TYPICAL JUNCTION CAPACITANCE**



**TYPICAL REVERSE CHARACTERISTIC**



**TYPICAL TRANSIENT THERMAL IMPEDANCE**



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## Disclaimer

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