





**1.0 Amp. Surface Mounted Glass Passivated Fast Recovery Rectifier**

<p><b>DO-214AC (SMA)</b></p> 	<p><b>Voltage</b> 50 V to 1000 V</p> <p><b>Current</b> 1.0 A</p> <p><b>HYPERECTIFIER</b>®</p>
<p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• Low profile package</li> <li>• Ideal for automated placement</li> <li>• Low power losses, high efficiency</li> <li>• High surge current capability</li> <li>• Cavity-free glass-passivated junction</li> <li>• Low forward voltage drop</li> <li>• Solder dip 260°C, 10s</li> <li>• AEC-Q101 qualified</li> <li>• Fast switching for high efficiency</li> <li>• Component in accordance to RoHS 2011/65/EU and WEEE 2002/96/EC</li> <li>• Meets MSL level 1, per J-STD-020, LF maximum peak of 260° C</li> </ul>	
   <p><b>RoHS COMPLIANT</b></p>	
<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</li> <li>• <b>HE3 suffix</b> for high reliability grade, meets JESD 201 class 2 whisker test.</li> </ul>	
<p><b>TYPICAL APPLICATIONS</b></p> <p>For use in fast switching rectification of power supply, inverters, converters, and freewheeling diodes for consumer, and telecommunication.</p>	

**Maximum Ratings and Electrical Characteristics at 25 °C**

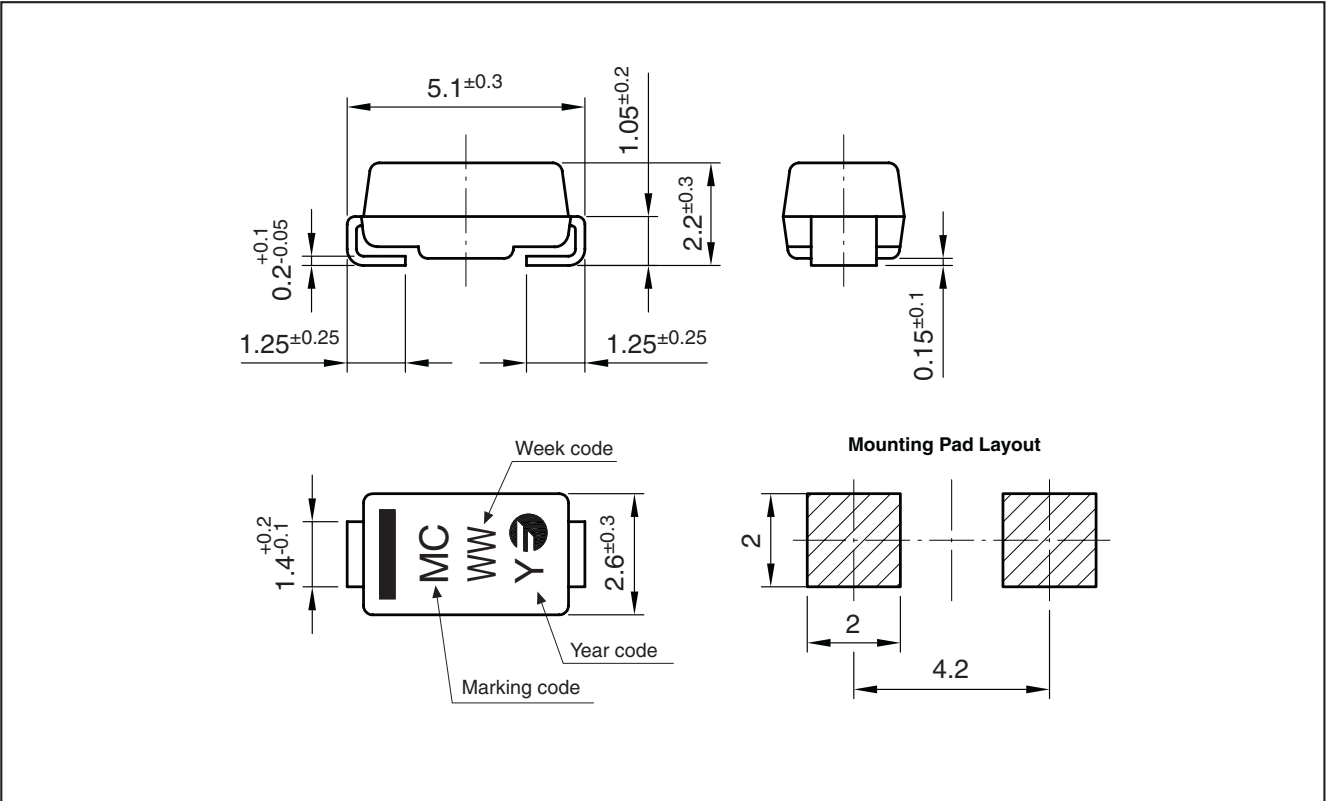
		FRS1A	FRS1B	FRS1D	FRS1G	FRS1J	FRS1K	FRS1M
Marking Code		F1	F2	F3	F4	F5	F6	F7
$V_{RRM}$	Maximum Recurrent Peak Reverse Voltage (V)	50	100	200	400	600	800	1000
$V_{RMS}$	Maximum RMS Voltage (V)	35	70	140	280	420	560	700
$V_{DC}$	Maximum DC Blocking Voltage (V)	50	100	200	400	600	800	1000
$I_{F(AV)}$	Forward current at $T_L = 110\text{ °C}$	1.0 A						
$I_{FSM}$	8.3 ms. peak forward surge current (Jedec Method)	30 A						
$V_F$	Maximum Instantaneous Forward Voltage at 1.0 A	1.3 V						
$I_R$	Maximum DC Reverse Current $T_j = 25\text{ °C}$ at Rated DC Blocking Voltage $T_j = 125\text{ °C}$	5 $\mu$ A 50 $\mu$ A						
$T_{rr}$	Maximum Reverse Recovery Time (0.5/1/0.25A)	150 ns				250 ns	500 ns	
$C_j$	Typical Junction Capacitance (1MHz; -4V)	8 pF						
$R_{th(j-l)}$ $R_{th(j-a)}$	Typical thermal resistance (5x5 mm <sup>2</sup> x 130 $\mu$ m Copper Area)	27 °C/W 75 °C/W						
$T_j - T_{stg}$	Operating Junction and Storage Temperature Range	-55 to + 150 °C						

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**Ordering information**

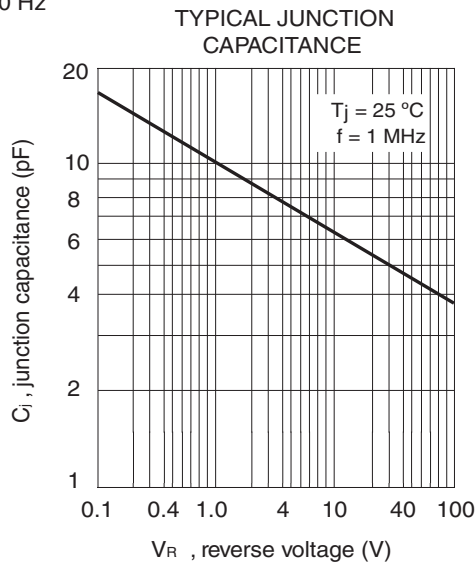
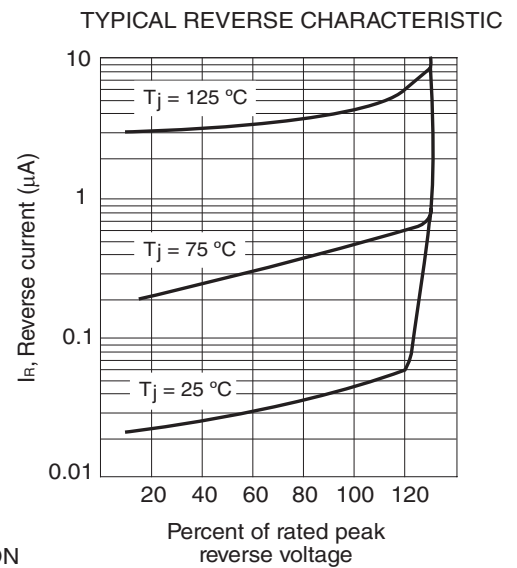
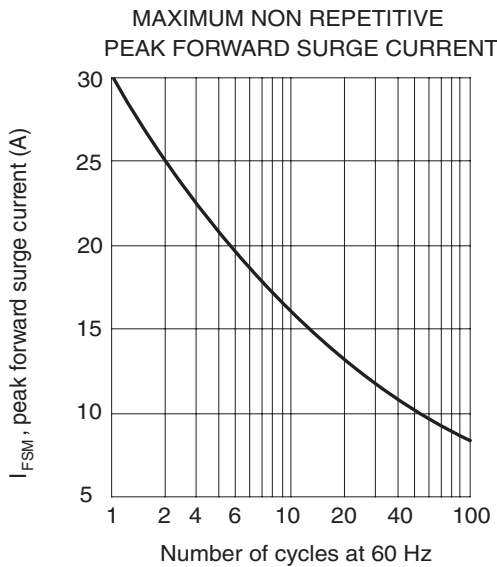
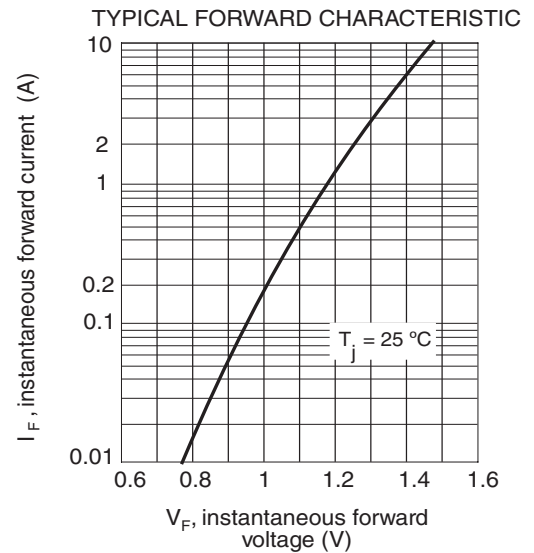
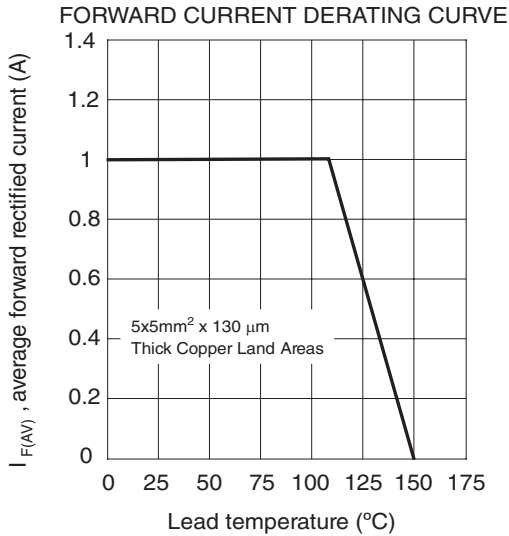
PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
FRS1J TRTB	TRTB	13" diameter tape and reel	7,500	0.060
FRS1J HE3 TRTB	TRTB	13" diameter tape and reel	7,500	0.060

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



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



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## Revision History

Date	Revision	Description of Changes
15-Feb-2013	0	Original Data Sheet
2-May-2016	1	Included HE3

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