






**1.0 Amp. Surface Mount Glass Passivated Ultrafast Recovery Rectifier**

|   |  |                         |  |
|---|--|-------------------------|--|
| <b>DO-214AC (SMA)</b><br><br>  | <b>Voltage</b><br>50 to 600 V  | <b>Current</b><br>1.0 A |  |
|   |    |                         |  |
|   | <b>FEATURES</b> <ul style="list-style-type: none"> <li>• Low profile package</li> <li>• Ideal for automated placement</li> <li>• Ultrafast recovery time for high efficiency</li> <li>• Low power losses</li> <li>• Low forward voltage drop</li> <li>• High forward surge current capability</li> <li>• Solder dip 260°C, 10s</li> <li>• AEC-Q101 qualified</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> |                         | <br><br><br><b>RoHS COMPLIANT</b> |
|   | <b>MECHANICAL DATA</b> <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>                                |                         |  |
| <b>TYPICAL APPLICATIONS</b><br>Used in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer, automotive and telecommunication. |  |                         |  |

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

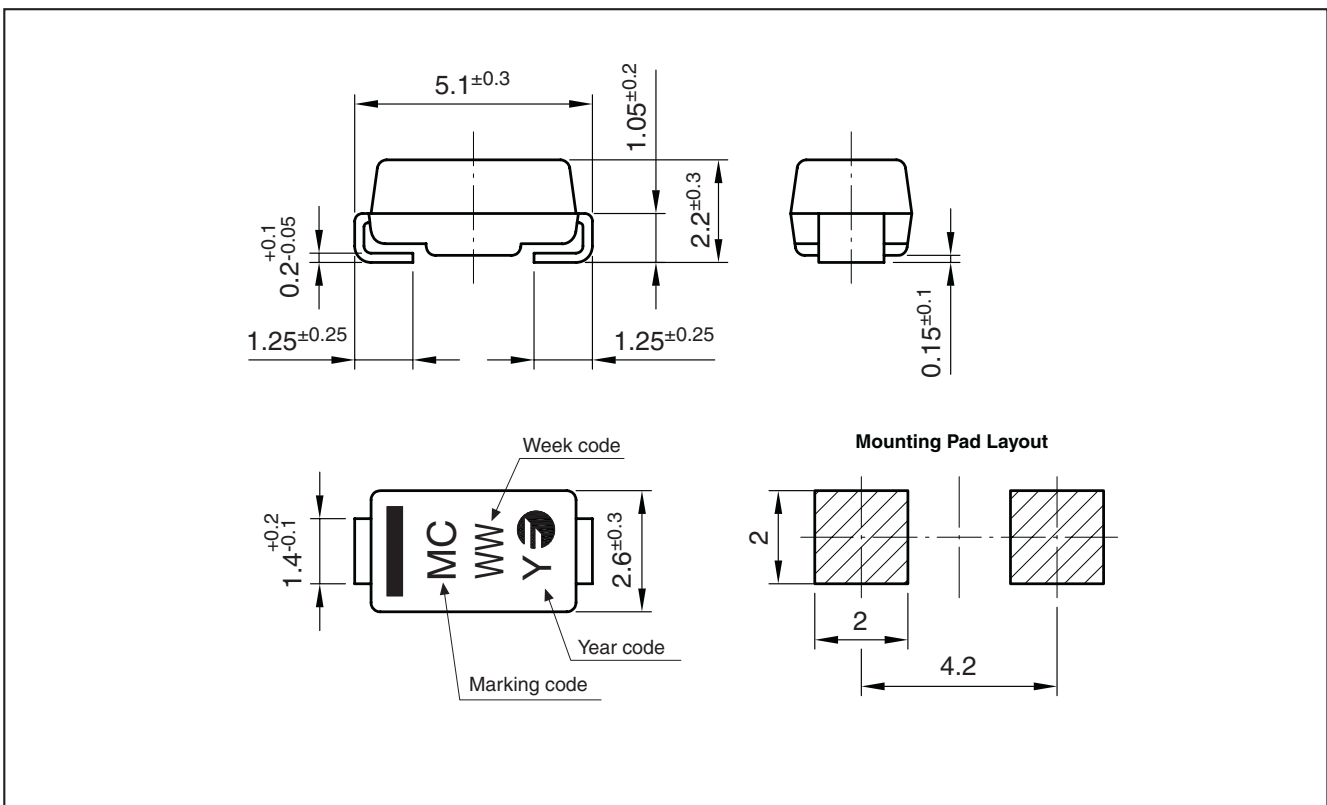
|                                   |   | FES1A           | FES1B | FES1D | FES1F  | FES1G | FES1J |
|-----------------------------------|---|-----------------|-------|-------|--------|-------|-------|
| Marking Code                      |   | U1              | U2    | U3    | U4     | U5    | U6    |
| V <sub>RRM</sub>                  | Maximum Recurrent Peak Reverse Voltage (V)  | 50              | 100   | 200   | 300    | 400   | 600   |
| V <sub>RMS</sub>                  | Maximum RMS Voltage (V)   | 35              | 70    | 140   | 210    | 280   | 420   |
| V <sub>DC</sub>                   | Maximum DC Blocking Voltage (V)   | 50              | 100   | 200   | 300    | 400   | 600   |
| I <sub>F(AV)</sub>                | Forward current at T <sub>C</sub> = 110 °C  | 1.0 A           |       |       |        |       |       |
| I <sub>FSM</sub>                  | 8.3 ms. peak forward surge current (Jedec Method)   | 30 A            |       |       |        |       |       |
| V <sub>F</sub>                    | Maximum Instantaneous Forward Voltage at 1.0A   | 0.95 V          |       |       | 1.25 V |       |       |
| I <sub>R</sub>                    | Maximum DC Reverse Current<br>T <sub>j</sub> = 25 °C<br>at Rated DC Blocking Voltage<br>T <sub>j</sub> = 100 °C | 5 µA<br>100 µA  |       |       |        |       |       |
| T <sub>rr</sub>                   | Maximum Reverse Recovery Time (0.5/1/0.25A)   | 50 ns           |       |       |        |       |       |
| C <sub>j</sub>                    | Typical Junction Capacitance (1MHz; -4V)  | 8 pF            |       |       |        |       |       |
| R <sub>th(j-c)</sub>              | Maximum Thermal Resistance  | 27 °C/W         |       |       |        |       |       |
| R <sub>th(j-a)</sub>              | (5x5 mm <sup>2</sup> x 130 µ Copper Area)   | 75 °C/W         |       |       |        |       |       |
| T <sub>j</sub> - T <sub>stg</sub> | Operating Junction and Storage Temperature Range  | -55 to + 150 °C |       |       |        |       |       |
| E <sub>RSM</sub>                  | Maximum non repetitive peak reverse Avalanche Energy T <sub>j</sub> = 25°C, I <sub>(BR)R</sub> = 1A             | 20 mJ           |       |       |        |       |       |

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**Ordering information**

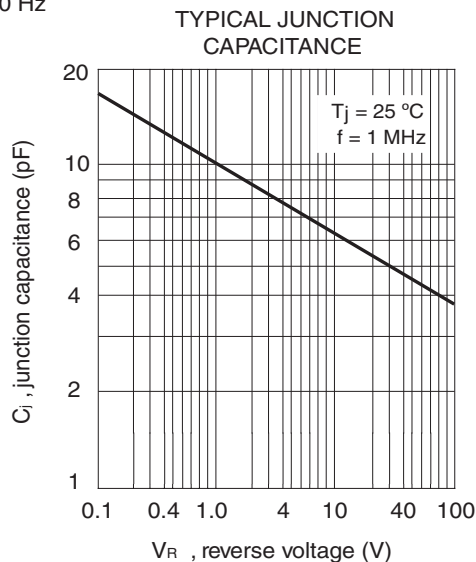
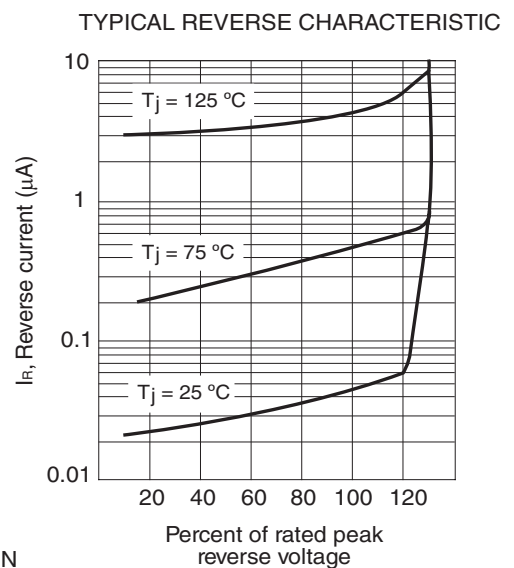
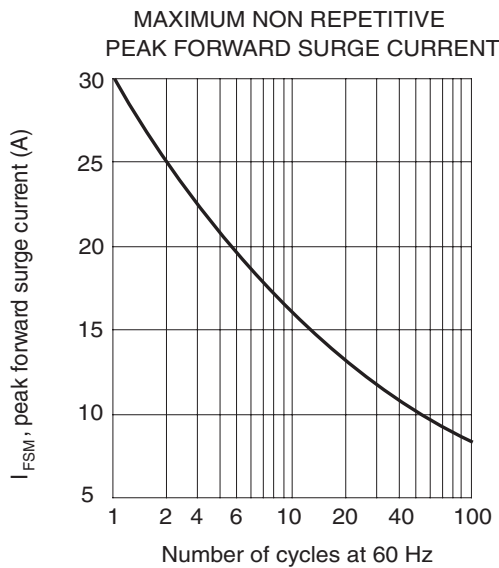
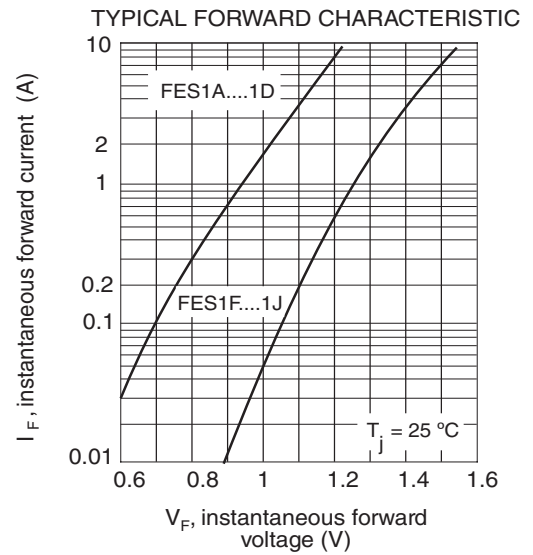
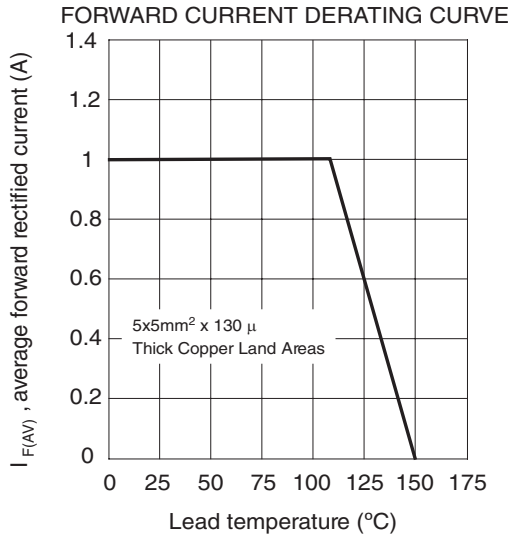
| PREFERRED P/N  | PACKAGE CODE | DELIVERY MODE              | BASE QUANTITY | UNIT WEIGHT (g) |
|----------------|--------------|----------------------------|---------------|-----------------|
| FES1J TRTB     | TRTB         | 13" diameter tape and reel | 7,500         | 0.060           |
| FES1J HE3 TRTB | TRTB         | 13" diameter tape and reel | 7,500         | 0.060           |
| FES1J TRTS     | TRTS         | 7" diameter tape and reel  | 1,500         | 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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### Disclaimer

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