




## 1.5 Amp. Surface Mount Ultrafast Recovery Avalanche Rectifier

<p><b>DO-214AC (SMA)</b></p> 	<p><b>Voltage</b> 800 to 1000 V</p> <p><b>Current</b> 1.5 A</p> <p style="color: red; font-weight: bold; font-size: 1.2em;">HYPERECTIFIER®</p>
<p><b>FEATURES</b></p> <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>	
  <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> </ul>	
<p><b>TYPICAL APPLICATIONS</b></p> <p>Used in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer, automotive and telecommunication.</p>	

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

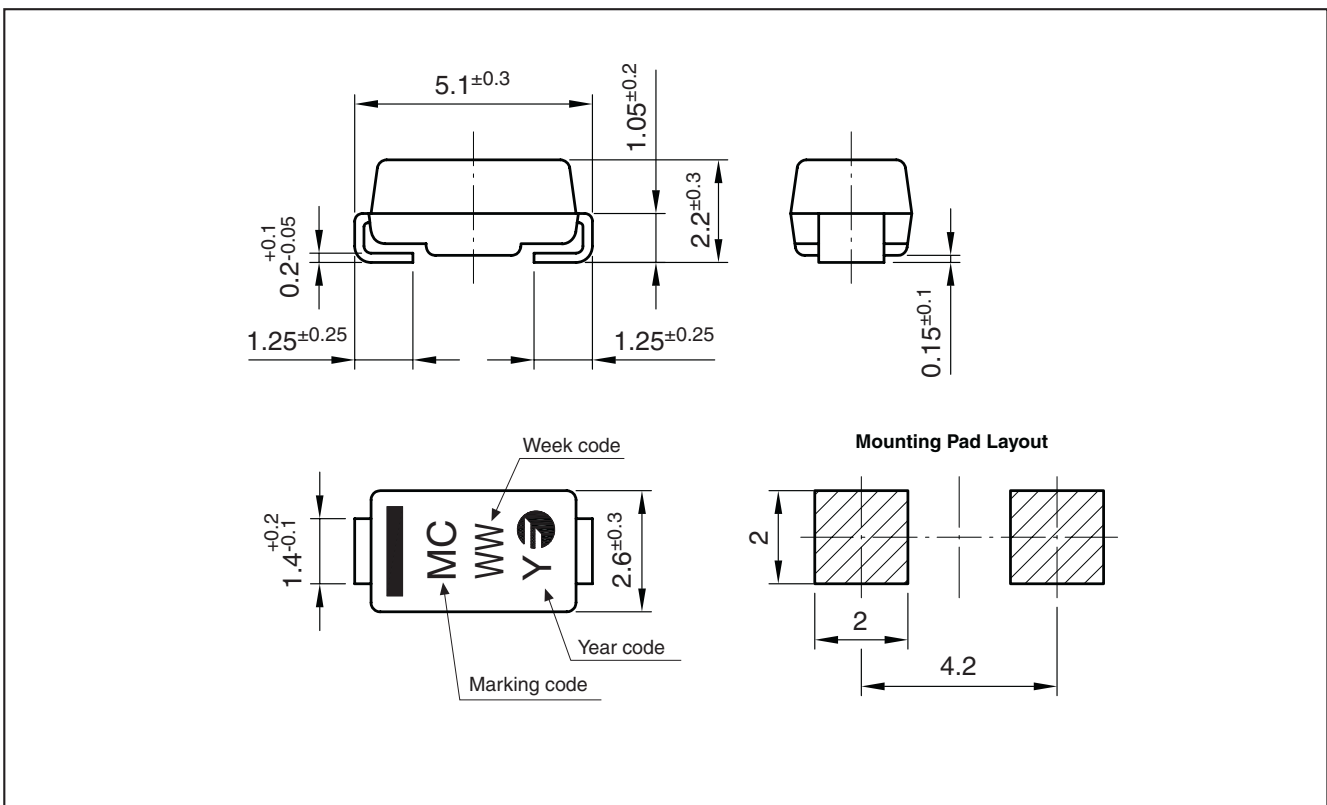
Marking Code		BYG21K	BYG21M
V <sub>RRM</sub>	Maximum Recurrent Peak Reverse Voltage (V)	2Y 800	2Z 1000
V <sub>RMS</sub>	Maximum RMS Voltage (V)	560	700
V <sub>DC</sub>	Maximum DC Blocking Voltage (V)	800	1000
I <sub>F(AV)</sub>	Forward current at T <sub>C</sub> = 110 °C	1.5 A	
I <sub>F(SM)</sub>	8.3 ms. peak forward surge current (Jedec Method)	30 A	
V <sub>F</sub>	Maximum Instantaneous Forward Voltage I <sub>F</sub> = 1.0A I <sub>F</sub> = 1.5A	1.5 V 1.6 V	
I <sub>R</sub>	Maximum DC Reverse Current at Rated DC Blocking Voltage T <sub>j</sub> = 25 °C T <sub>j</sub> = 125 °C	1 µA 50 µA	
T <sub>rr</sub>	Maximum Reverse Recovery Time (0.5/1/0.25A)	120 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>RRM</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**

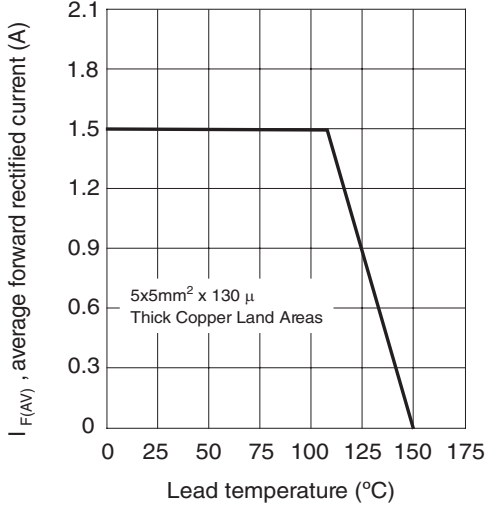
PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
BYG21M TRTB	TRTB	13" diameter tape and reel	7,500	0.060

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

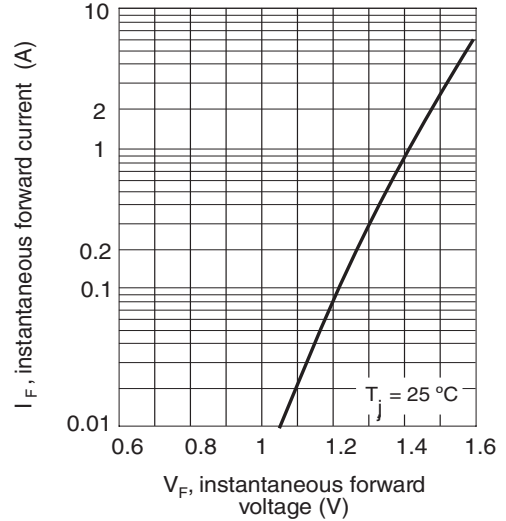


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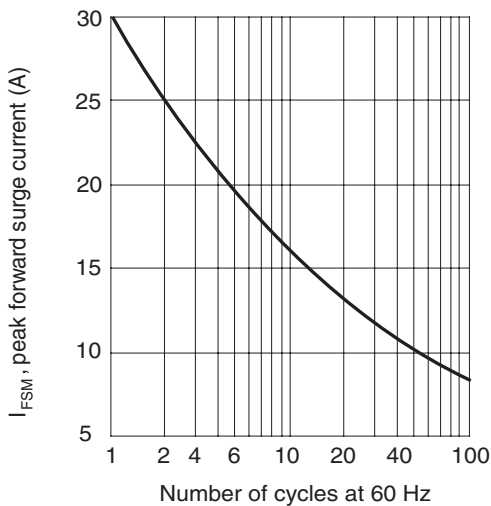
FORWARD CURRENT DERATING CURVE



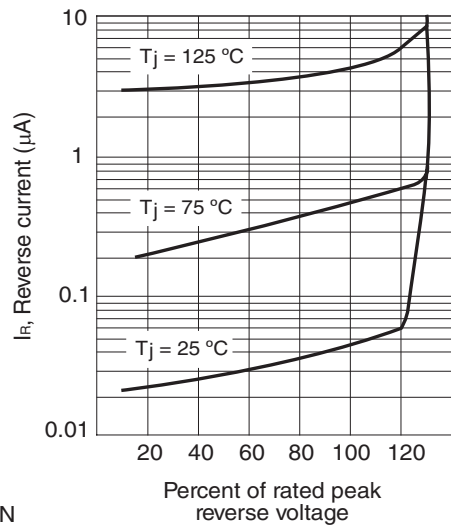
TYPICAL FORWARD CHARACTERISTIC



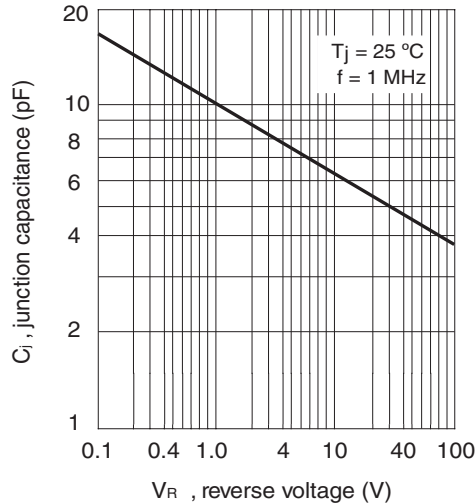
MAXIMUM NON REPETITIVE PEAK FORWARD SURGE CURRENT



TYPICAL REVERSE CHARACTERISTIC



TYPICAL JUNCTION CAPACITANCE



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