

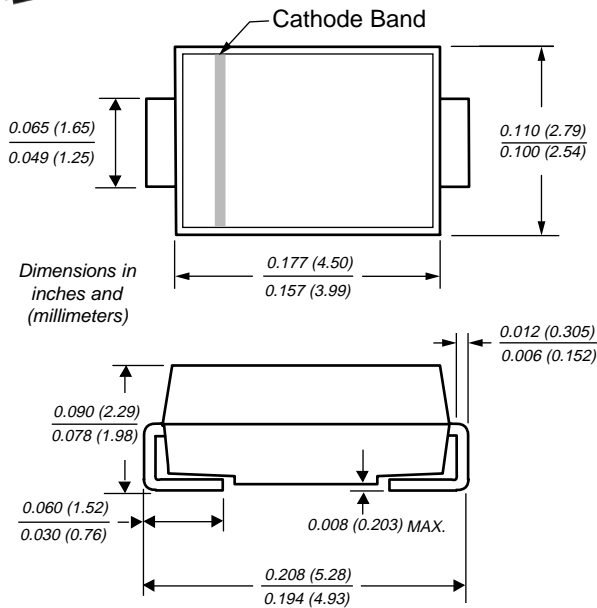
**Surface Mount Ultrafast Rectifiers**

Reverse Voltage 200 to 600V

Forward Current 1.6A

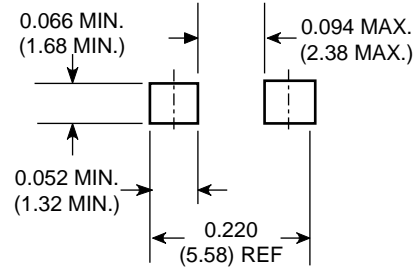


**DO-214AC (SMA)**



*New Product*

**Mounting Pad Layout**



**Mechanical Data**

**Case:** JEDEC DO-214AC molded plastic body over passivated chip

**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Weight:** 0.002oz., 0.064g

**Features**

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- For surface mount applications
- Glass passivated chip junctions
- Low profile package
- Easy pick and place
- Ultrafast recovery times for high efficiency
- For use as freewheeling and snubber diodes
- Built-in strain relief, ideal for automated placement
- High temperature soldering guaranteed: 250°C/10 seconds on terminals

**Maximum Ratings & Thermal Characteristics**

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	BYGR20D	BYGR20G	BYGR20J	Unit
Device Marking Code		BD	BG	BJ	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	200	400	600	V
Maximum RMS voltage	V <sub>RMS</sub>	140	280	420	V
Maximum DC blocking voltage	V <sub>DC</sub>	200	400	600	V
Maximum average forward rectified current (see fig.1)	I <sub>F(AV)</sub>	1.6			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30			A
Maximum thermal resistance	Junction to Ambient <sup>(1)</sup>	R <sub>θJA</sub>	80		°C/W
	Junction to Lead	R <sub>θJL</sub>	20		
Operating and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150			°C

**Electrical Characteristics**

Ratings at 25°C ambient temperature unless otherwise specified.

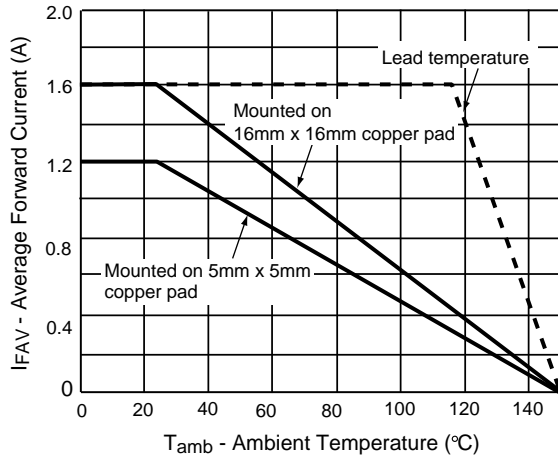
Maximum instantaneous forward voltage	at 1.0A at 1.5A	V <sub>F</sub>	1.3 1.4	V
Maximum DC reverse current at rated DC blocking voltage	T <sub>A</sub> = 25°C T <sub>A</sub> = 100°C	I <sub>R</sub>	1 10	μA
Maximum reverse recovery time at I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1.0A, I <sub>rr</sub> = 0.25A		t <sub>rr</sub>	75	ns

**Note:** (1) P.C.B. mounted on 0.2 x 0.2" (5.0 x 5.0mm) copper pad area

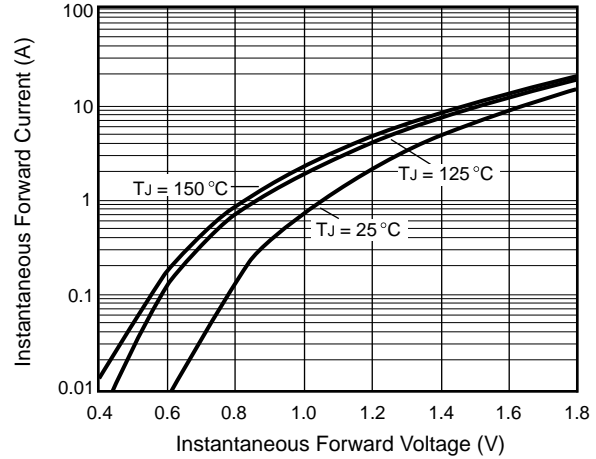
**Surface Mount Ultrafast Rectifiers**

**Ratings and Characteristic Curves** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

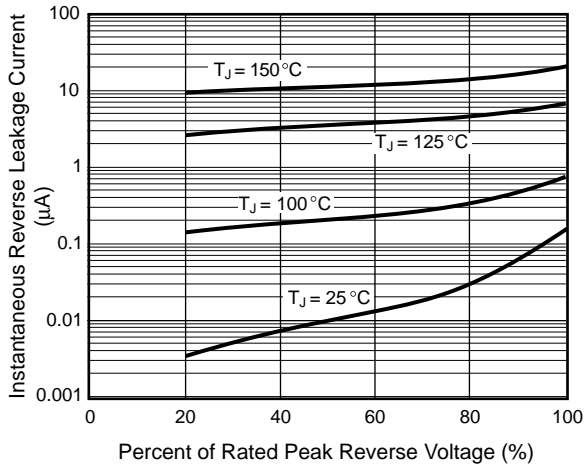
**Fig. 1 - Max. Average Forward Current vs. Ambient Temperature**



**Fig. 2 - Typical Instantaneous Forward Characteristics**



**Fig. 3 - Typical Reverse Leakage Characteristics**



**Fig. 4 - Typical Junction Capacitance**

