

# BYG24D - BYG24J

## FAST AVALANCHE RECTIFIERS

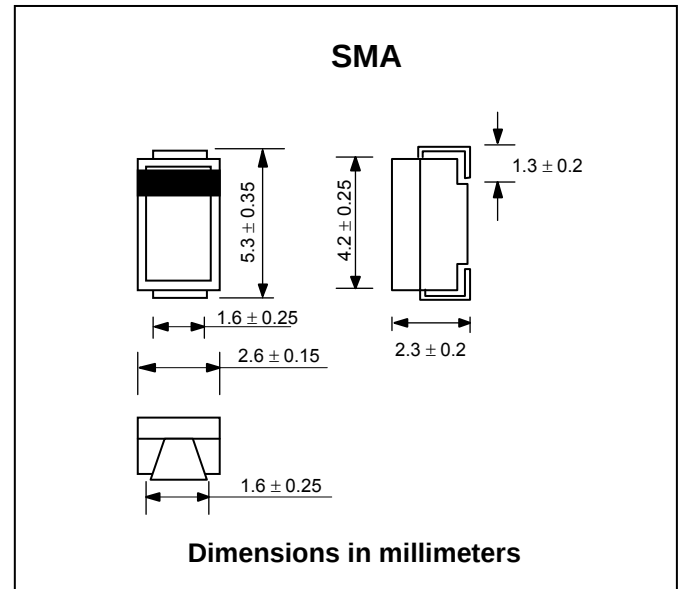
**PRV : 200 - 600 Volts**  
**Io : 1.5 Amperes**

### FEATURES :

- \* Glass passivated junction
- \* Low profile package
- \* Ideal for automated placement
- \* Low reverse current
- \* Soft recovery characteristics
- \* Fast reverse recovery time
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case : SMA Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.060 gram (Approximately)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise noted

| RATING                                                                                                                     | SYMBOL                            | BYG24D        | BYG24G | BYG24J | UNIT |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|--------|--------|------|
| Maximum Repetitive Peak Reverse Voltage                                                                                    | V <sub>RRM</sub>                  | 200           | 400    | 600    | V    |
| Minimum Breakdown Voltage at I <sub>R</sub> = 100 μA                                                                       | V <sub>(BR)</sub>                 | 200           | 400    | 600    | V    |
| Maximum Average Forward Current                                                                                            | I <sub>F(AV)</sub>                | 1.5           |        |        | A    |
| Peak Forward Surge Current 10 ms single half sine wave superimposed on rated load                                          | I <sub>FSM</sub>                  | 30            |        |        | A    |
| Maximum Instantaneous Forward Voltage <sup>(1)</sup> at I <sub>F</sub> = 1 A, T <sub>j</sub> = 25 °C                       | V <sub>F</sub>                    | 1.15          |        |        | V    |
| Forward Voltage <sup>(1)</sup> at I <sub>F</sub> = 1.5 A, T <sub>j</sub> = 25 °C                                           |                                   | 1.25          |        |        |      |
| Maximum DC Reverse Current at V <sub>R</sub> = V <sub>RRM</sub> , T <sub>j</sub> = 25 °C                                   | I <sub>R</sub>                    | 1.0           |        |        | μA   |
| at V <sub>R</sub> = V <sub>RRM</sub> , T <sub>j</sub> = 100 °C                                                             | I <sub>R(H)</sub>                 | 10            |        |        |      |
| Maximum Reverse Recovery Time( I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1.0A, I <sub>rr</sub> = 0.25A)                      | T <sub>rr</sub>                   | 140           |        |        | ns   |
| Typical Thermal Resistance, Junction to Case                                                                               | R <sub>ΘJC</sub>                  | 25            |        |        | °C/W |
| Maximum Thermal Resistance, Junction to Ambient <sup>(2)</sup>                                                             | R <sub>ΘJA</sub>                  | 150           |        |        | °C/W |
| Pulse energy in avalanche mode, non repetitive (inductive load switch off) I <sub>(BR)R</sub> = 1A, T <sub>j</sub> = 25 °C | E <sub>R</sub>                    | 20            |        |        | mJ   |
| Operating Junction and Storage Temperature Range                                                                           | T <sub>J</sub> , T <sub>STG</sub> | - 55 to + 150 |        |        | °C   |

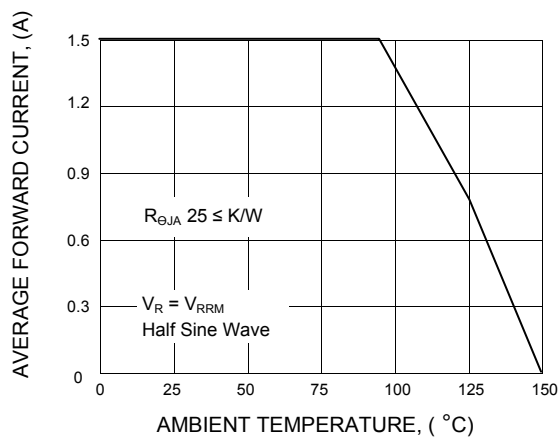
#### Notes :

(1) Pulse test 300  $\mu s$  pulse width, 1 % duty cycle

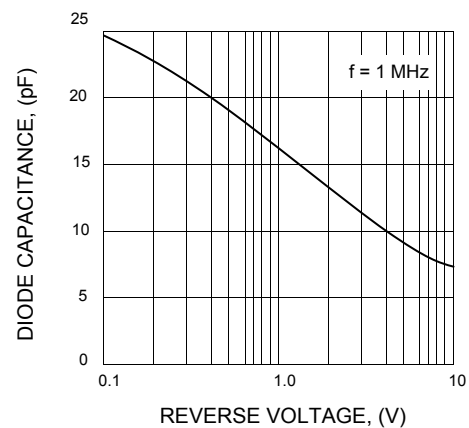
(2) Mounted on epoxy-glass hard tissue 35  $\mu m$  \* 17 mm<sup>2</sup> cooper area per electrode.

## RATING AND CHARACTERISTIC CURVES ( BYG24D - BYG24J )

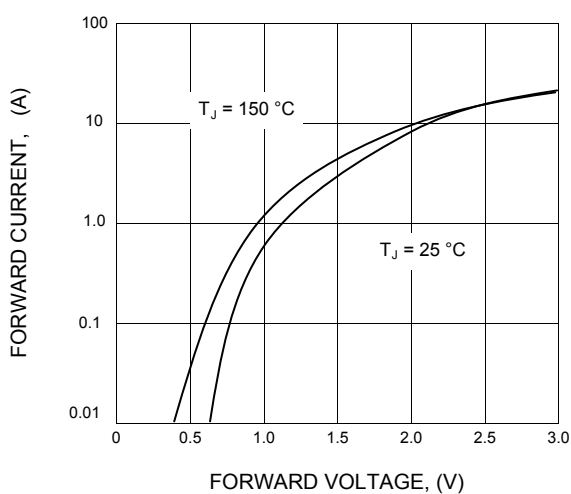
**FIG.1 - AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE**



**FIG.2 - DIODE CAPACITANCE VS. REVERSE VOLTAGE**



**FIG.3 - FORWARD CURRENT VS. FORWARD VOLTAGE**



**FIG.4 - REVERSE CURRENT VS. JUNCTION TEMPERATURE**

