

# BYG20D - BYG20J

# ULTRAFAST AVALANCHE RECTIFIERS

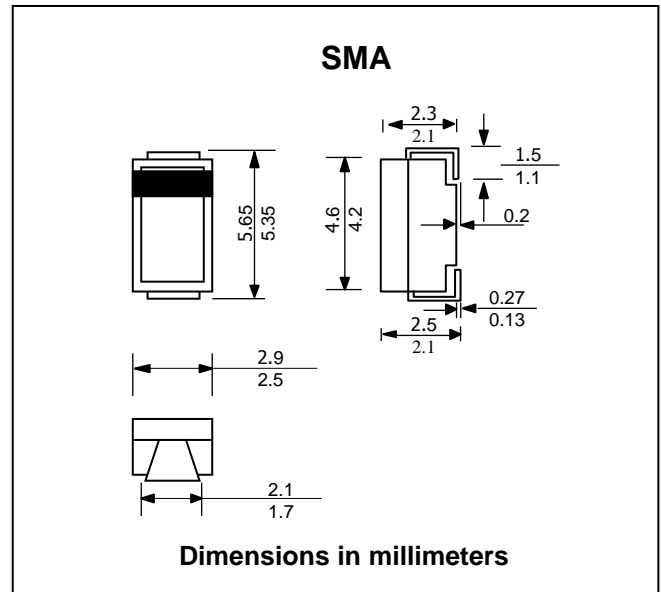
**PRV : 200 - 600 Volts**  
**Io : 1.5 Amperes**

**FEATURES :**

- \* Glass passivated junction
- \* Low profile package
- \* Ideal for automated placement
- \* Low reverse current
- \* Soft recovery characteristics
- \* Ultrafast 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	BYG20D	BYG20G	BYG20J	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	200	400	600	V
Maximum Average Forward Current	$I_{F(AV)}$	1.5			A
Peak Forward Surge Current 10 ms single half sine wave superimposed on rated load	$I_{FSM}$	30			A
Maximum Instantaneous Forward Voltage <sup>(1)</sup>	$V_F$	1.3			V
at $I_F = 1.5\text{ A}$ , $T_j = 25\text{ °C}$		1.4			
Maximum DC Reverse Current	$I_R$	1.0			$\mu\text{A}$
at $V_R = V_{RRM}$ , $T_j = 25\text{ °C}$ at $V_R = V_{RRM}$ , $T_j = 100\text{ °C}$	$I_{R(H)}$	10			
Maximum Reverse Recovery Time ( $I_F = 0.5\text{ A}$ , $I_R = 1.0\text{ A}$ , $I_{rr} = 0.25\text{ A}$ )	$T_{rr}$	75			ns
Typical Thermal Resistance, Junction to Lead	$R_{\theta JL}$	25			$^{\circ}\text{C/W}$
Typical Thermal Resistance, Junction to Ambient <sup>(2)</sup>	$R_{\theta JA}$	150			$^{\circ}\text{C/W}$
Pulse energy in avalanche mode, non repetitive (inductive load switch off) $I_{(BR)R} = 1\text{ A}$ , $T_j = 25\text{ °C}$	$E_R$	20			mJ
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	- 55 to + 150			$^{\circ}\text{C}$

**Notes :**

- (1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle
- (2) Mounted on epoxy-glass hard tissue

RATING AND CHARACTERISTIC CURVES ( BYG20D - BYG20J )

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

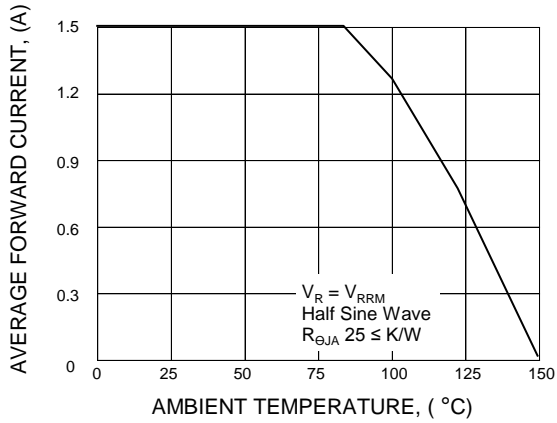


FIG.2 - DIODE CAPACITANCE VS. REVERSE VOLTAGE

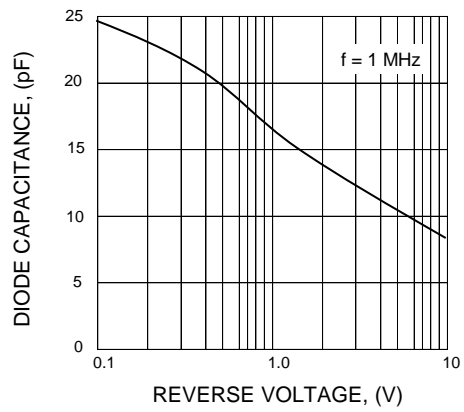


FIG.3 - FORWARD CURRENT VS. FORWARD VOLTAGE

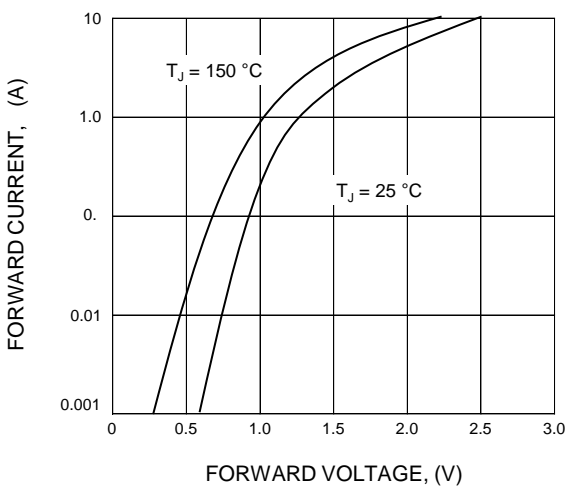


FIG.4 - REVERSE CURRENT VS. JUNCTION TEMPERATURE

