

# BYG24D - BYG24J

# FAST AVALANCHE RECTIFIERS

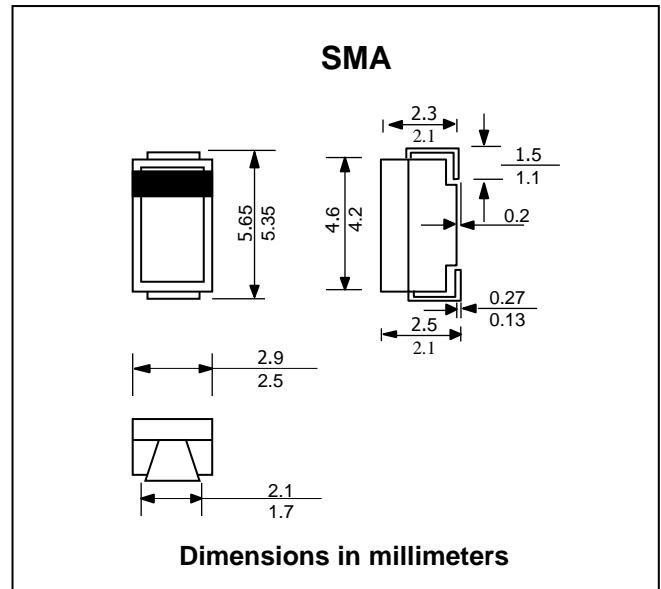
**PRV : 200 - 600 Volts**  
**Io : 1.5 Amperes**

### 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	$V_{RRM}$	200	400	600	V
Minimum Breakdown Voltage at $I_R = 100 \mu A$	$V_{(BR)}$	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>	$V_F$	1.15			V
at $I_F = 1 A, T_j = 25 \text{ }^\circ C$		1.25			
Maximum DC Reverse Current	$I_R$	1.0			$\mu A$
	at $V_R = V_{RRM}, T_j = 100 \text{ }^\circ C$	$I_{R(H)}$ 10			
Maximum Reverse Recovery Time( $I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A$ )	$T_{rr}$	140			ns
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	25			$^\circ C/W$
Maximum Thermal Resistance, Junction to Ambient <sup>(2)</sup>	$R_{\theta JA}$	150			$^\circ C/W$
Pulse energy in avalanche mode, non repetitive (inductive load switch off) $I_{(BR)R} = 1A, T_j = 25 \text{ }^\circ C$	$E_R$	20			mJ
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	- 55 to + 150			$^\circ C$

**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

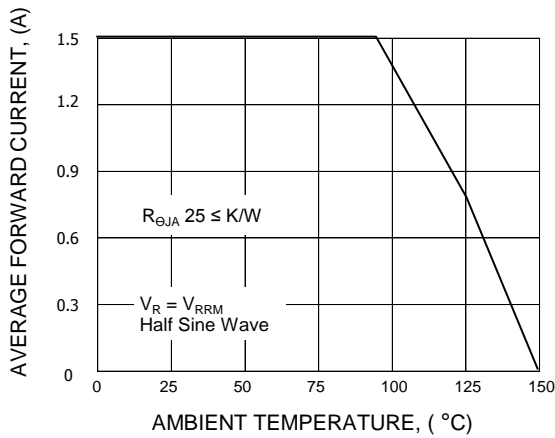


FIG.2 - DIODE CAPACITANCE VS. REVERSE VOLTAGE

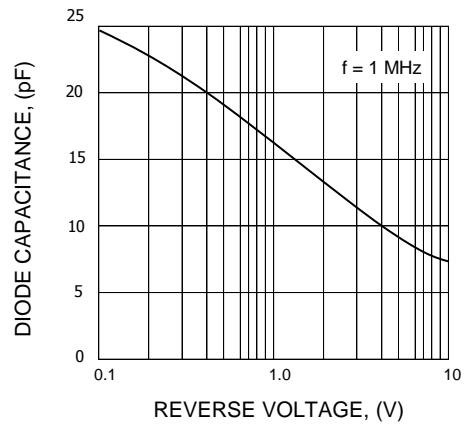


FIG.3 - FORWARD CURRENT VS. FORWARD VOLTAGE

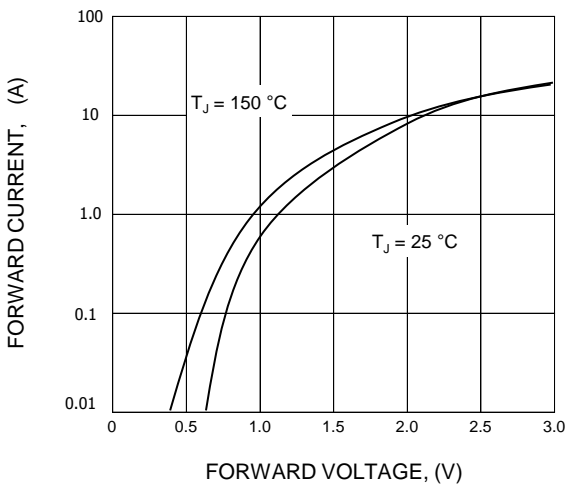


FIG.4 - REVERSE CURRENT VS. JUNCTION TEMPERATURE

