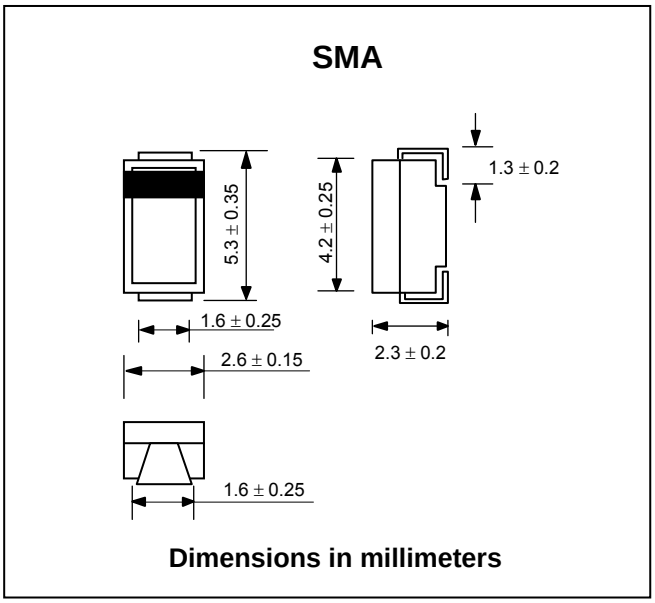
BYG20D - BYG20J

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 (1)	at I_F = 1 A, Tj = 25 °C	V_F	1.3			V
	at I_F = 1.5 A, Tj = 25 °C		1.4			
Maximum DC Reverse Current	at V_R = V_{RRM}, Tj = 25 °C	I_R	1.0			µA
	at V_R = V_{RRM}, Tj = 100 °C	$I_{R(H)}$	10			
Maximum Reverse Recovery Time (I_F = 0.5 A, I_R = 1.0 A, Irr = 0.25 A)		Trr	75			ns
Typical Thermal Resistance, Junction to Lead		$R_{\Theta JL}$	25			°C/W
Typical Thermal Resistance, Junction to Ambient (2)		$R_{\Theta JA}$	150			°C/W
Pulse energy in avalanche mode, non repetitive (inductive load switch off) $I_{(BR)R}$ = 1A, Tj = 25 °C		E_R	20			mJ
Operating Junction and Storage Temperature Range		T_J, T_{STG}	- 55 to + 150			°C

Notes :

(1) Pulse test: 300 µs 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

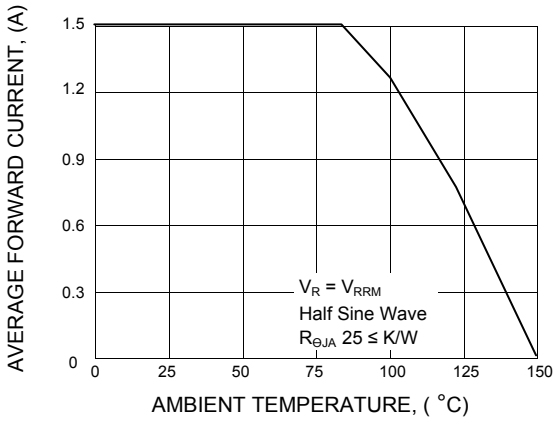


FIG.2 - DIODE CAPACITANCE VS. REVERSE VOLTAGE

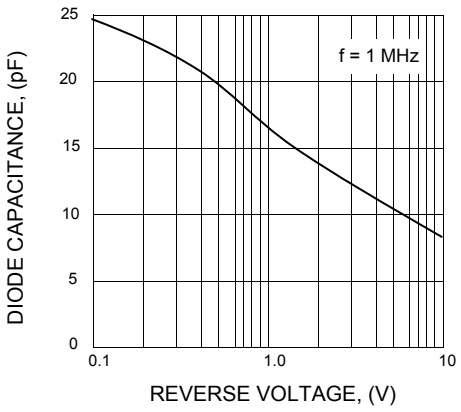


FIG.3 - FORWARD CURRENT VS. FORWARD VOLTAGE

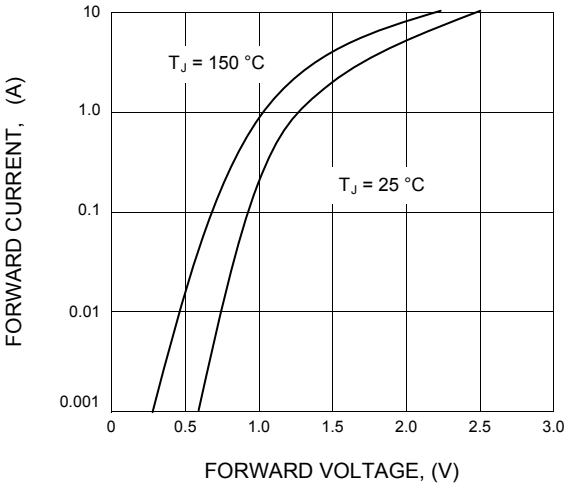


FIG.4 - REVERSE CURRENT VS. JUNCTION TEMPERATURE