

## BYG10D, BYG10G, BYG10J, BYG10K, BYG10M, BYG10Y

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# Vishay General Semiconductor

<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS		SYMBOL	BYG10D	BYG10G	BYG10J	BYG10K	BYG10M	BYG10Y	UNIT
Maximum	I <sub>F</sub> = 1 A		V <sub>F</sub>	1.1						V
instantaneous forward voltage <sup>(1)</sup>	I <sub>F</sub> = 1.5 A	T <sub>J</sub> = 25 °C		1.15						
Maximum DC reverse current	1 \/ = \/	T <sub>J</sub> = 25 °C	I <sub>R</sub>	1						μА
		T <sub>J</sub> = 100 °C		10						
Maximum reverse recovery time	se $I_F = 0.5 \text{ A}, I_R = 1.0 \text{ A}, I_{rr} = 0.25 \text{ A}$		t <sub>rr</sub>	4					μs	

#### Note

 $<sup>^{(1)}</sup>$  Pulse test: 300  $\mu s$  pulse width, 1 % duty cycle

THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	BYG10D	BYG10G	BYG10J	BYG10K	BYG10M	BYG10Y	UNIT	
Typical thermal resistance, junction to lead	$R_{\theta JL}$	25				°C/W			
	$R_{\theta JA}^{(1)}$	150						°C/W	
Typical thermal resistance, junction to ambient	R <sub>0JA</sub> (2)	125							
	R <sub>0JA</sub> (3)	100							

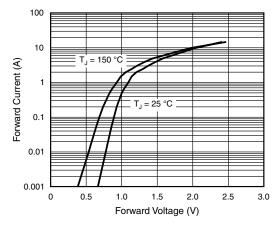
#### **Notes**

- (1) Mounted on epoxy-glass hard tissue
- (2) Mounted on epoxy-glass hard tissue, 50 mm<sup>2</sup> 35 μm Cu
- (3) Mounted on Al-oxide-ceramic (Al<sub>2</sub>O<sub>3</sub>), 50 mm<sup>2</sup> 35 µm Cu

ORDERING INFORMATION (Example)							
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE			
BYG10D-E3/TR	0.064	TR	1800	7" diameter plastic tape and reel			
BYG10D-E3/TR3	0.064	TR3	7500	13" diameter plastic tape and reel			
BYG10DHE3/TR (1)	0.064	TR	1800	7" diameter plastic tape and reel			
BYG10DHE3/TR3 (1)	0.064	TR3	7500	13" diameter plastic tape and reel			

#### Note

### RATINGS AND CHARACTERISTICS CURVES (T<sub>A</sub> = 25 °C unless otherwise noted)





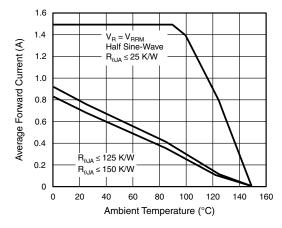


Fig. 2 - Max. Average Forward Current vs. Ambient Temperature

<sup>(1)</sup> AEC-Q101 qualified



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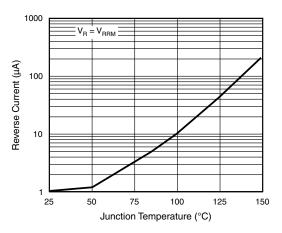


Fig. 3 - Reverse Current vs. Junction Temperature

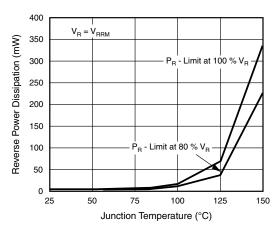


Fig. 4 - Max. Reverse Power Dissipation vs. Junction Temperature

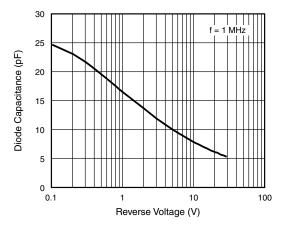


Fig. 5 - Diode Capacitance vs. Reverse Voltage

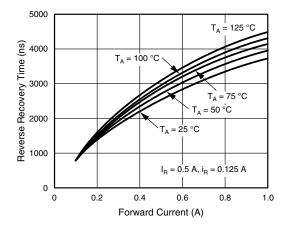


Fig. 6 - Reverse Recovery Time vs. Forward Current

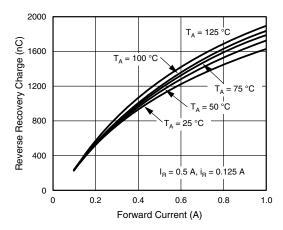


Fig. 7 - Reverse Recovery Charge vs. Forward Current



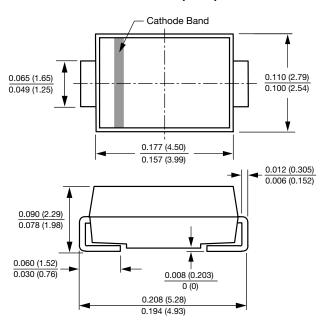
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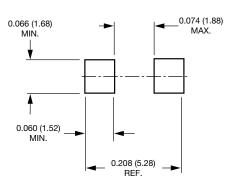
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### **PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)

#### **DO-214AC (SMA)**



### **Mounting Pad Layout**





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Revision: 13-Jun-16 1 Document Number: 91000