

# Vishay General Semiconductor

<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)									
PARAMETER	TEST CONDITIONS		SYMBOL	BYG21K	BYG21M	UNIT			
Maximum instantaneous forward voltage	I <sub>F</sub> = 1 A	T <sub>J</sub> = 25 °C	V <sub>F</sub> <sup>(1)</sup>	1.5		V			
	I <sub>F</sub> = 1.5 A			1.6					
Maximum reverse current	$V_R = V_{RRM}$	T <sub>J</sub> = 25 °C	I <sub>R</sub>	1		μА			
		T <sub>J</sub> = 100 °C		10					
Maximum reverse recovery time	I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1.0 A, I <sub>rr</sub> = 0.25 A		t <sub>rr</sub>	120		ns			

#### 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	BYG21K	BYG21M	UNIT			
Typical thermal resistance, junction to lead, $T_L$ = const.	$R_{ heta JL}$	25		°C/W			
	R <sub>0JA</sub> (1)	150		°C/W			
Typical thermal resistance, junction to ambient	R <sub>0JA</sub> (2)	125					
	R <sub>0JA</sub> (3)	10	00				

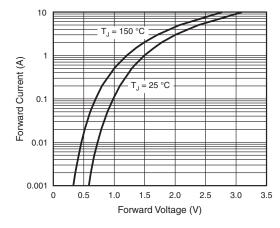
#### **Notes**

- (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				
BYG21K-E3/TR	0.064	TR	1800	7" diameter plastic tape and reel				
BYG21K-E3/TR3	0.064	TR3	7500	13" diameter plastic tape and reel				
BYG21KHE3/TR (1)	0.064	TR	1800	7" diameter plastic tape and reel				
BYG21KHE3/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)





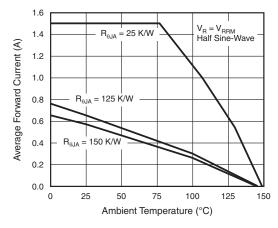


Fig. 2 - Max. Average Forward Current vs. Ambient Temperature

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

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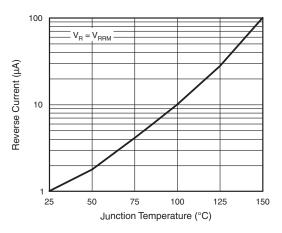


Fig. 3 - Reverse Current vs. Junction Temperature

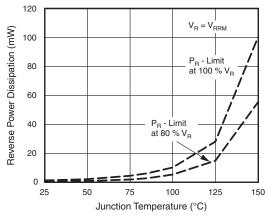


Fig. 4 - Max. Reverse Power Dissipation vs. Junction Temperature

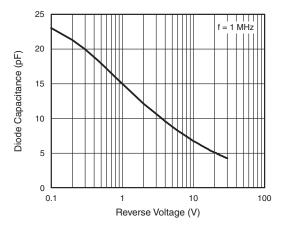


Fig. 5 - Diode Capacitance vs. Reverse Voltage

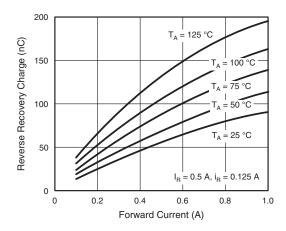


Fig. 6 - Max. Reverse Recovery Charge vs. Forward Current

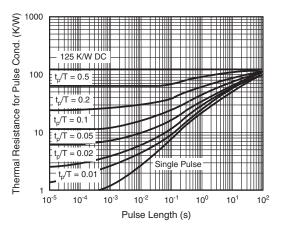


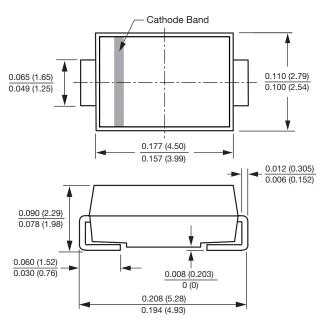
Fig. 7 - Thermal Response



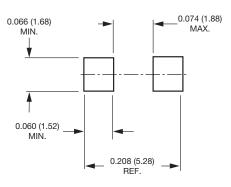
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### **PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)

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



### **Mounting Pad Layout**





Vishay

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