



### Vishay General Semiconductor

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_A = 25 \text{ °C}$ unless otherwise noted)										
DEVICE TYPE	DEVICE MARKING CODE	BREAKDOWN VOLTAGE V <sub>BR</sub> AT I <sub>T</sub> <sup>(1)</sup> (V)			STAND-OFF VOLTAGE V <sub>WM</sub>	MAXIMUM REVERSE LEAKAGE AT V <sub>WM</sub>	MAXIMUM PEAK PULSE SURGE CURRENT	MAXIMUM CLAMPING VOLTAGE AT I <sub>PPM</sub>	MAXIMUM TEMPERATURE OF V <sub>BR</sub>	
		MIN.	MAX.	(MA)	(V)	I <sub>D</sub> (μΑ) <sup>(1)</sup>	I <sub>PPM</sub> (A) <sup>(2)</sup>	V <sub>c</sub> (V)	(%/C)	
P2SMA130A	2VK	124	137	1.0	111	1.0	1.11	179	0.140	
P2SMA140A	2VL	133	147	1.0	119	1.0	1.04	192	0.140	
P2SMA150A	2VM	143	158	1.0	128	1.0	0.97	207	0.140	
P2SMA170A	2VN	162	179	1.0	145	1.0	0.85	234	0.150	
P2SMA180A	2VP	171	189	1.0	154	1.0	0.81	246	0.150	
P2SMA200A	2VQ	190	210	1.0	171	1.0	0.73	274	0.150	
P2SMA220A	2VR	209	231	1.0	185	1.0	0.61	328	0.150	

#### Notes

<sup>(1)</sup> Pulse test:  $t_p \le 50 \text{ ms}$ 

<sup>(2)</sup> Surge current waveform per fig. 3 and derate per fig. 2

<b>THERMAL CHARACTERISTICS</b> ( $T_A = 25 \text{ °C}$ unless otherwise noted)						
PARAMETER	SYMBOL	VALUE	UNIT			
Thermal resistance, junction to ambient air	R <sub>0JA</sub> <sup>(1)</sup>	250	°C/W			
Thermal resistance, junction to mount	R <sub>0JM</sub> <sup>(1)</sup>	50	°C/W			

#### Note

<sup>(1)</sup> Mounted on minimum recommended pad layout

ORDERING INFORMATION (Example)								
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE				
P2SMA130A-M3/61T	0.064	61T	1800	7" diameter plastic tape and reel				
P2SMA130A-M3/5AT	0.064	5AT	7500	13" diameter plastic tape and reel				

#### **RATINGS AND CHARACTERISTICS CURVES**

(T<sub>A</sub> = 25 °C unless otherwise noted)



Fig. 1 - Peak Pulse Power Rating Curve



Fig. 2 - Pulse Derating Curve

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### P2SMA130A thru P2SMA220A

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Fig. 3 - Pulse Waveform



Fig. 4 - Typical Junction Capacitance



Fig. 5 - Typical Transient Thermal Impedance



Fig. 6 - Power Derating Curve

## P2SMA130A thru P2SMA220A

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

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