
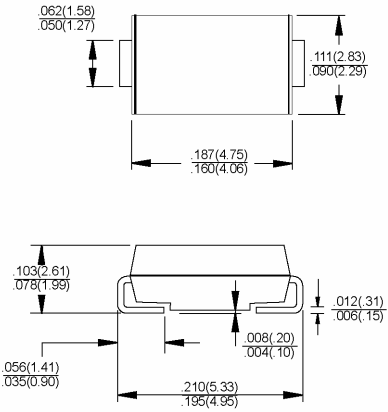
	<h2>1SMA6V8 THRU 1SMA200</h2> <h3>Surface Mount Glass Passivated Zener Diode</h3>		
	Voltage Range 6.2 to 200 Volts 1.3 Watts Peak Power		
<p><b>Features</b></p> <ul style="list-style-type: none"> <li>✦ For surface mounted applications in order to optimize board space</li> <li>✦ Low profile package</li> <li>✦ Glass passivated junction</li> <li>✦ Low inductance</li> <li>✦ High temperature soldering guaranteed: 260°C / 10 seconds at terminals</li> <li>✦ Plastic package has Underwriters Laboratory Flammability Classification 94V-0</li> </ul> <p><b>Mechanical Data</b></p> <ul style="list-style-type: none"> <li>✦ Case: Molded plastic over passivated junction</li> <li>✦ Terminals: Solder plated solderable per MIL-STD-750, Method 2025</li> <li>✦ Polarity: Color Band denotes positive end (cathode)</li> <li>✦ Standard packaging: 4 mm tape (EIA-481)</li> <li>✦ Weight: 0.002 ounces, 0.064 gram</li> </ul>	<p style="text-align: center;"><b>SMA/DO-214AC</b></p>  <p style="text-align: center;"><b>Dimensions in inches and (millimeters)</b></p>		
<h3>Maximum Ratings and Electrical Characteristics</h3>			
Rating at 25°C ambient temperature unless otherwise specified.			
<b>Type Number</b>	<b>Symbol</b>	<b>Value</b>	<b>Units</b>
Peak Power Dissipation at $T_A=25^{\circ}\text{C}$ , $R_{\theta JA}=100^{\circ}\text{C/W}$	$P_{\text{tot}}$	1.3	Watts
Peak Power Dissipation at $T_A=25^{\circ}\text{C}$ , $R_{\theta JA}=25^{\circ}\text{C/W}$	$P_{\text{tot}}$	3.25	Watts
Max. Forward Voltage Drop @ $I_F=0.5\text{A}$	$V_F$	1.0	V
Operating and Storage Temperature Range	$T_J, T_{\text{STG}}$	-55 to + 175	$^{\circ}\text{C}$

## ELECTRICAL CHARACTERISTICS

(TA=25°C unless otherwise noted) VF=1.0V max, IF=0.5A for all types.

Device (Note 1)	Device Marking Code	Zener (1)	Maximum	Typical	Test Current I <sub>ZT</sub>	Max Reverse		Max. Regulator Current @ 45°C I <sub>ZM</sub> (mA)
		Voltage Rabge Vz @ Izt (V)	Zener Impedance Z <sub>ZT</sub> @ I <sub>ZT</sub> Ohms	Temperature Coefficient @ I <sub>ZT</sub> (% / °C)		Leakage Current IR @ VR uA	Volts	
1SMA6V8	EE	6.4-7.2	3	+0.035	100	5.0	4.0	147
1SMA7V5	ED	7.0-7.9	3	+0.035	100	5.0	5.0	133
1SMA8V2	EF	7.7-8.7	4	+0.055	100	5.0	6.0	122
1SMA9V1	EG	8.5-9.6	4	+0.055	50	5.0	7.0	110
1SMA10	EH	9.4-10.6	4	+0.070	50	1.0	7.5	105
1SMA11	EK	10.4-11.6	7	+0.075	50	1.0	8.2	97
1SMA12	EL	11.4-12.7	7	+0.075	50	1.0	9.1	88
1SMA13	EM	12.4-14.1	10	+0.075	50	1.0	10	79
1SMA15	EN	13.8-15.8	10	+0.075	50	1.0	11	71
1SMA16	EP	15.3-17.1	15	+0.085	25	1.0	12	66
1SMA18	EQ	16.8-19.1	15	+0.085	25	1.0	13	62
1SMA20	ER	18.2-21.2	15	+0.085	25	1.0	15	56
1SMA22	ES	20.8-23.3	15	+0.085	25	1.0	16	52
1SMA24	ET	22.8-25.6	15	+0.085	25	1.0	18	47
1SMA27	EU	25.1-28.9	15	+0.085	25	1.0	20	41
1SMA30	EV	28-32	15	+0.085	25	1.0	22	36
1SMA33	EW	31-35	15	+0.085	25	1.0	24	33
1SMA36	EX	34-38	40	+0.085	10	1.0	27	30
1SMA39	EY	37-41	40	+0.085	10	1.0	30	28
1SMA43	EZ	40-46	45	+0.095	10	1.0	33	26
1SMA47	FD	44-50	45	+0.095	10	1.0	36	23
1SMA51	FF	48-54	60	+0.095	10	1.0	39	21
1SMA56	FG	52-60	60	+0.095	10	1.0	43	19
1SMA62	FH	58-66	80	+0.105	10	1.0	47	16
1SMA68	FK	64-72	80	+0.105	10	1.0	51	15
1SMA75	FL	70-80	100	+0.105	10	1.0	56	14
1SMA82	FM	77-87	100	+0.105	10	1.0	62	12
1SMA91	NF	85-96	200	+0.110	5.0	1.0	68	10
1SMA100	FP	94-106	200	+0.110	5.0	1.0	75	9.4
1SMA110	FQ	104-116	250	+0.110	5.0	1.0	82	8.6
1SMA120	FR	114-127	250	+0.110	5.0	1.0	91	7.8
1SMA130	FS	124-141	300	+0.110	5.0	1.0	100	7.0
1SMA150	FT	138-156	300	+0.110	5.0	1.0	110	6.4
1SMA160	FU	153-171	350	+0.110	5.0	1.0	120	5.8
1SMA180	FV	168-191	400	+0.110	5.0	1.0	130	5.2
1SMA200	FW	188-212	500	+0.110	5.0	1.0	150	4.7

Note: 1: Tested with Pulses.

Pulse test: tp ≤ 50ms, δ < 2%.



## RATINGS AND CHARACTERISTIC CURVES (1SMA6V8 THRU 1SMA200)

FIG.1- MAXIMUM CONTINUOUS POWER DISSIPATION

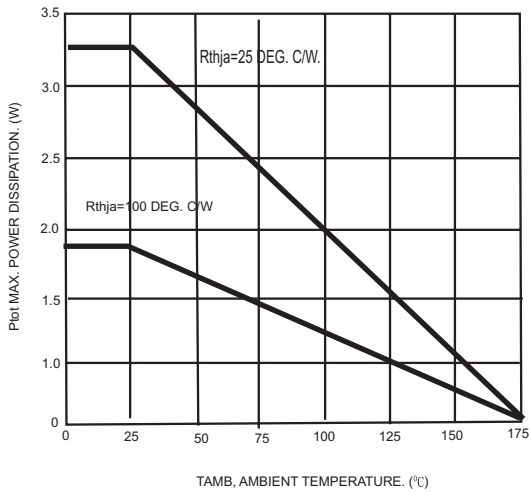


FIG.2- TYPICAL FORWARD CHARACTERISTIC

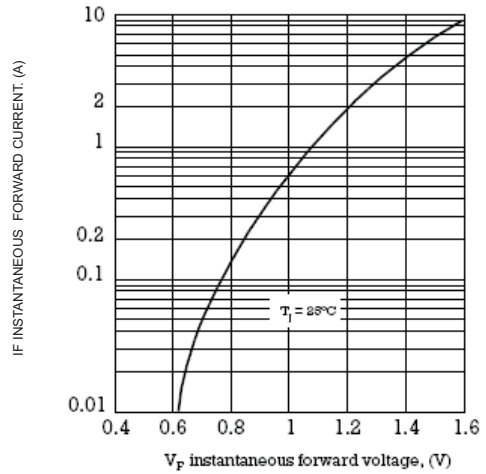


FIG.3- TYPICAL ZENER IMPEDANCE

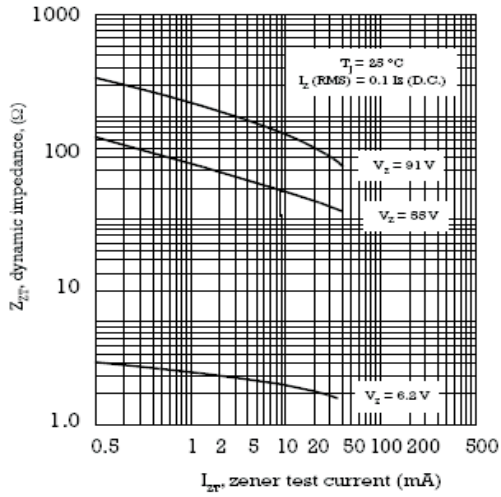


FIG.4- TYPICAL REVERSE CHARACTERISTIC

