

**1.3 W Surface Mounted Glass Passivated Zener Diode**

<p><b>Dimensions in mm.</b></p> <p><b>CASE: SMA/DO-214AC</b></p> <p>Week code Year code Type No. Class</p>	<table border="1"> <tr> <td><b>Voltage</b> 6.2 to 240 V</td> <td><b>Power</b> 1.3 W</td> </tr> <tr> <td colspan="2" style="text-align: center;"> </td> </tr> <tr> <td colspan="2"> <ul style="list-style-type: none"> <li>• Glass passivated junction</li> <li>• The plastic material carries U/L 94 V-0</li> <li>• Low profile package</li> <li>• Easy pick and place</li> <li>• High temperature soldering 260 °C 10 sec</li> </ul> </td> </tr> <tr> <td colspan="2"> <p><b>MECHANICAL DATA</b></p> <p>Terminals: Solder plated, solderable per IEC 68-2-20. Standard Packaging: 4 mm. tape (EIA-RS-481). Weight: 0.064 g.</p> </td> </tr> </table>	<b>Voltage</b> 6.2 to 240 V	<b>Power</b> 1.3 W			<ul style="list-style-type: none"> <li>• Glass passivated junction</li> <li>• The plastic material carries U/L 94 V-0</li> <li>• Low profile package</li> <li>• Easy pick and place</li> <li>• High temperature soldering 260 °C 10 sec</li> </ul>		<p><b>MECHANICAL DATA</b></p> <p>Terminals: Solder plated, solderable per IEC 68-2-20. Standard Packaging: 4 mm. tape (EIA-RS-481). Weight: 0.064 g.</p>	
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**Maximum Ratings and Electrical Characteristics at 25 °C**

$P_{tot}$	Power dissipation at Tamb = 25 °C $R_{th\ j-a} = 100\text{ °C/W}$	1.3 W
$P_{tot}$	Power dissipation at Tamb = 25 °C $R_{th\ j-a} = 25\text{ °C/W}$	3.25 W
$T_j$	Operating temperature range	- 65 to + 175 °C
$T_{stg}$	Storage temperature range	- 65 to + 175 °C
$V_F$	Max. forward voltage drop at $I_F = 0.5\text{ A}$	1.0 V
$R_{th\ j-c}$		25 °C/W
$R_{th\ j-a}$	PCB epoxy-glass path 1.5 mm	150 °C/W
	PCB epoxy-glass path 5 x 10 mm	125 °C/W
	Ceramic Plate $Al_2O_3$ ) path 5 x 10 mm	100 °C/W

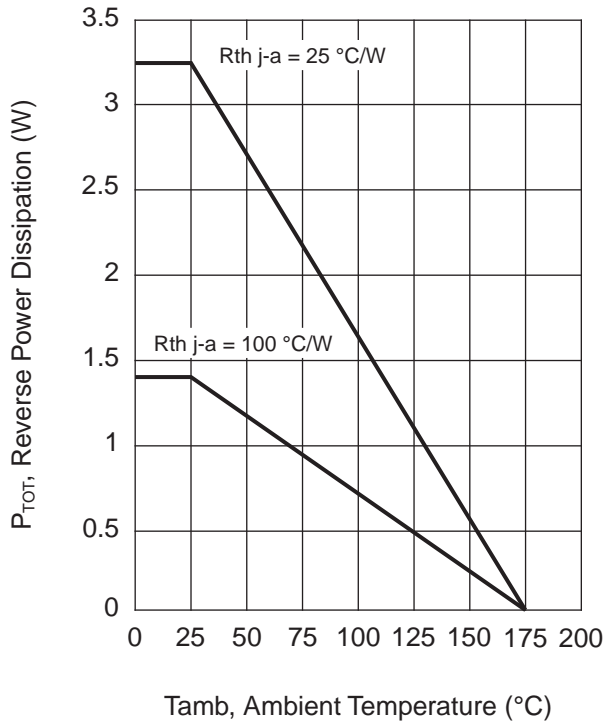
Other voltages upon request

Type	Marking Code	Zener (1) Voltage Range $V_Z$ at $I_{ZT}$	Maximum Zener Impedance $Z_{ZT}$ at $I_{ZT}$	Typical Temperature Coefficient at $I_{ZT}$	Test Current $I_{ZT}$	Max Reverse Leakage Current		Max Regulator Current at 45 °C $I_{ZM}$
		(V)	( $\Omega$ )	(% / °C)	(mA)	$I_R$ ( $\mu$ A)	@ $V_R$ (V)	(mA)
<b>Z1SMA6V2</b>	EC	5.8-6.6	2	+0.025	100	10	3	161
<b>Z1SMA6V8</b>	EE	6.4-7.2	2.5	+0.035	100	10	4	147
<b>Z1SMA7V5</b>	ED	7.0-7.9	3	+0.035	100	10	5	133
<b>Z1SMA8V2</b>	EF	7.7-8.7	3.5	+0.055	100	10	6	122
<b>Z1SMA9V1</b>	EG	8.5-9.6	4	+0.055	50	10	7	110
<b>Z1SMA10</b>	EH	9.4-10.6	4	+0.070	50	1	7.5	105
<b>Z1SMA11</b>	EK	10.4-11.6	7	+0.075	50	1	8.2	97
<b>Z1SMA12</b>	EL	11.4-12.7	7	+0.075	50	1	9.1	88
<b>Z1SMA13</b>	EM	12.4-14.1	10	+0.075	50	1	10	79
<b>Z1SMA15</b>	EN	13.8-15.6	10	+0.075	50	1	11	71
<b>Z1SMA16</b>	EP	15.3-17.1	15	+0.085	25	1	12	66
<b>Z1SMA18</b>	EQ	16.8-19.1	15	+0.085	25	1	13	62
<b>Z1SMA20</b>	ER	18.8-21.2	15	+0.085	25	1	15	56
<b>Z1SMA22</b>	ES	20.8-23.3	15	+0.085	25	1	16	52
<b>Z1SMA24</b>	ET	22.8-25.6	15	+0.085	25	1	18	47
<b>Z1SMA27</b>	EU	25.1-28.9	15	+0.085	25	1	20	41
<b>Z1SMA30</b>	EV	28-32	15	+0.085	25	1	22	36
<b>Z1SMA33</b>	EW	31-35	15	+0.085	25	1	24	33
<b>Z1SMA36</b>	EX	34-38	40	+0.085	10	1	27	30
<b>Z1SMA39</b>	EY	37-41	40	+0.085	10	1	30	28
<b>Z1SMA43</b>	EZ	40-46	45	+0.095	10	1	33	26
<b>Z1SMA47</b>	FD	44-50	45	+0.095	10	1	36	23
<b>Z1SMA51</b>	FF	48-54	60	+0.095	10	1	39	21
<b>Z1SMA56</b>	FG	52-60	60	+0.095	10	1	43	19
<b>Z1SMA62</b>	FH	58-66	80	+0.105	10	1	47	16
<b>Z1SMA68</b>	FK	64-72	80	+0.105	10	1	51	15
<b>Z1SMA75</b>	FL	70-80	100	+0.105	10	1	56	14
<b>Z1SMA82</b>	FM	77-87	100	+0.105	10	1	62	12
<b>Z1SMA91</b>	FN	85-96	200	+0.110	5	1	68	10
<b>Z1SMA100</b>	FP	94-106	200	+0.110	5	1	75	9.4
<b>Z1SMA110</b>	FQ	104-116	250	+0.110	5	1	82	8.6
<b>Z1SMA120</b>	FR	114-127	250	+0.110	5	1	91	7.8
<b>Z1SMA130</b>	FS	124-141	300	+0.110	5	1	100	7.0
<b>Z1SMA150</b>	FT	138-156	300	+0.110	5	1	110	6.4
<b>Z1SMA160</b>	FU	158-171	350	+0.110	5	1	120	5.8
<b>Z1SMA180</b>	FV	168-191	500	+0.110	5	1	130	5.2
<b>Z1SMA200</b>	FW	188-212	500	+0.110	5	1	150	4.7
<b>Z1SMA220</b>	FE	208-233	2500	+0.110	1	1	160	4.5
<b>Z1SMA240</b>	FZ	228-256	2550	+0.110	1	1	180	4.2

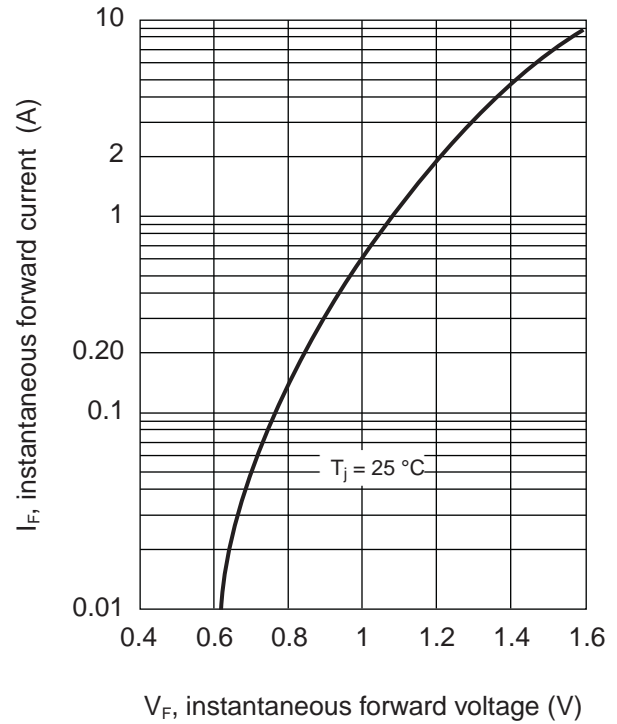
(1) Tested with pulses.  
Pulse test:  $t_p \leq 50$  ms;  $\delta < 2\%$

**Rating And Characteristic Curves**

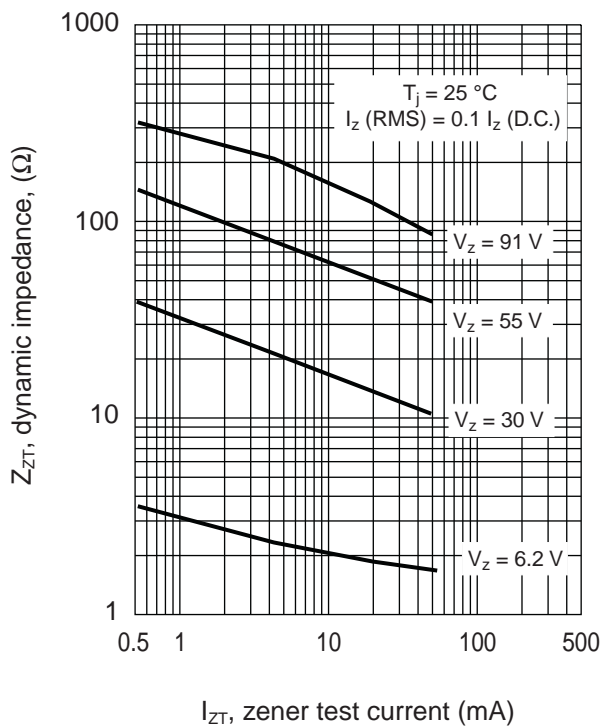
MAXIMUM CONTINUOUS POWER DISSIPATION



TYPICAL FORWARD CHARACTERISTIC



TYPICAL ZENER IMPEDANCE



TYPICAL REVERSE CHARACTERISTIC

