

## 1.0 W Surface Mounted Glass Passivated Zener Diode

<p><b>Dimensions in mm.</b></p>	<p><b>CASE:</b> SMA/DO-214AC</p>	<p><b>Voltage</b> 6.2 to 200 V</p> <p><b>Power</b> 1.0 W</p>
<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>		

### Maximum Ratings and Electrical Characteristics at 25 °C

$P_{tot}$	Power dissipation at $T_{amb} = 50\text{ °C}$ $R_{thj-a} = 125\text{ °C/W}$	1.0 W
$P_{tot}$	Power dissipation at $T_{amb} = 100\text{ °C}$ $R_{thj-a} = 25\text{ °C/W}$	3.0 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
$R_{thj-c}$		25 °C/W
$R_{thj-a}$	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

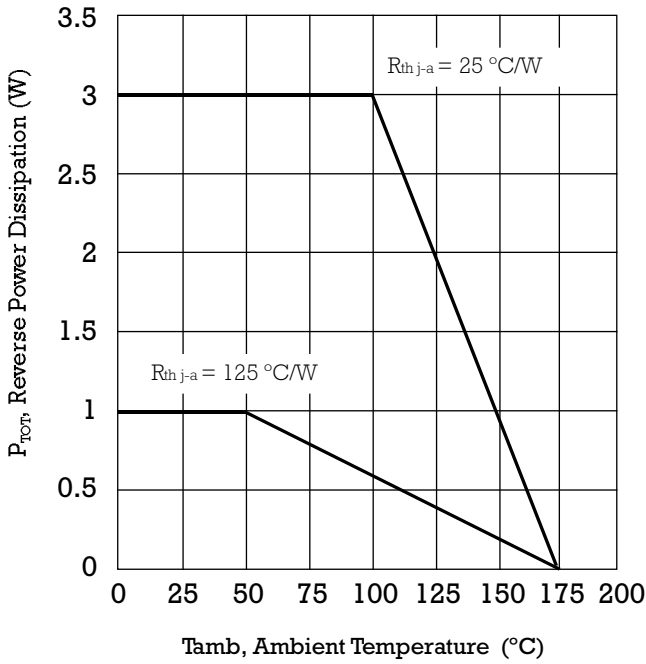
Type	Marking Code	Zener <sup>(1)</sup> Voltage Range $V_Z$ at $I_{ZT}$	Maximum Zener Impedance $Z_{ZT}$ at $I_{ZT}$	Typical Temperature Coefficient at $I_{ZT}$	Test Current $I_{ZT}$	Max Reverse Leakage Current $I_R$ @ $V_R$		Max Regulator Current at 45 °C $I_{ZM}$
		(V)	( )	(% / °C)	(mA)	( $\mu$ A)	(V)	(mA)
Z1SMA6V2	EC	5.8-6.6	2	+0.025	100	5	3	161
Z1SMA6V8	EE	6.4-7.2	2.5	+0.035	100	5	4	147
Z1SMA7V5	ED	7.0-7.9	3	+0.035	100	5	5	133
Z1SMA8V2	EF	7.7-8.7	3.5	+0.055	100	5	6	122
Z1SMA9V1	EG	8.5-9.6	4	+0.055	50	5	7	110
Z1SMA10	EH	9.4-10.6	4	+0.070	50	1	7.5	105
Z1SMA11	EK	10.4-11.6	7	+0.075	50	1	8.2	97
Z1SMA12	EL	11.4-12.7	7	+0.075	50	1	9.1	88
Z1SMA13	EM	12.4-14.1	10	+0.075	50	1	10	79
Z1SMA15	EN	13.8-15.8	10	+0.075	50	1	11	71
Z1SMA16	EP	15.3-17.1	15	+0.085	25	1	12	66
Z1SMA18	EQ	16.8-19.1	15	+0.085	25	1	13	62
Z1SMA20	ER	18.8-21.2	15	+0.085	25	1	15	56
Z1SMA22	ES	20.8-23.3	15	+0.085	25	1	16	52
Z1SMA24	ET	22.8-25.6	15	+0.085	25	1	18	47
Z1SMA27	EU	25.1-28.9	15	+0.085	25	1	20	41
Z1SMA30	EV	28-32	15	+0.085	25	1	22	36
Z1SMA33	EW	31-35	15	+0.085	25	1	24	33
Z1SMA36	EX	34-38	40	+0.085	10	1	27	30
Z1SMA39	EY	37-41	40	+0.085	10	1	30	28
Z1SMA43	EZ	40-46	45	+0.095	10	1	33	26
Z1SMA47	FD	44-50	45	+0.095	10	1	36	23
Z1SMA51	FF	48-54	60	+0.095	10	1	39	21
Z1SMA56	FG	52-60	60	+0.095	10	1	43	19
Z1SMA62	FH	58-66	80	+0.105	10	1	47	16
Z1SMA68	FK	64-72	80	+0.105	10	1	51	15
Z1SMA75	FL	70-80	100	+0.105	10	1	56	14
Z1SMA82	FM	77-87	100	+0.105	10	1	62	12
Z1SMA91	FN	85-96	200	+0.110	5	1	68	10
Z1SMA100	FP	94-106	200	+0.110	5	1	75	9.4
Z1SMA110	FQ	104-116	250	+0.110	5	1	82	8.6
Z1SMA120	FR	114-127	250	+0.110	5	1	91	7.8
Z1SMA130	FS	124-141	300	+0.110	5	1	100	7.0
Z1SMA150	FT	138-156	300	+0.110	5	1	110	6.4
Z1SMA160	FU	153-171	350	+0.110	5	1	120	5.8
Z1SMA180	FV	168-191	400	+0.110	5	1	130	5.2
Z1SMA200	FW	188-212	500	+0.110	5	1	150	4.7

(1) Tested with pulses.

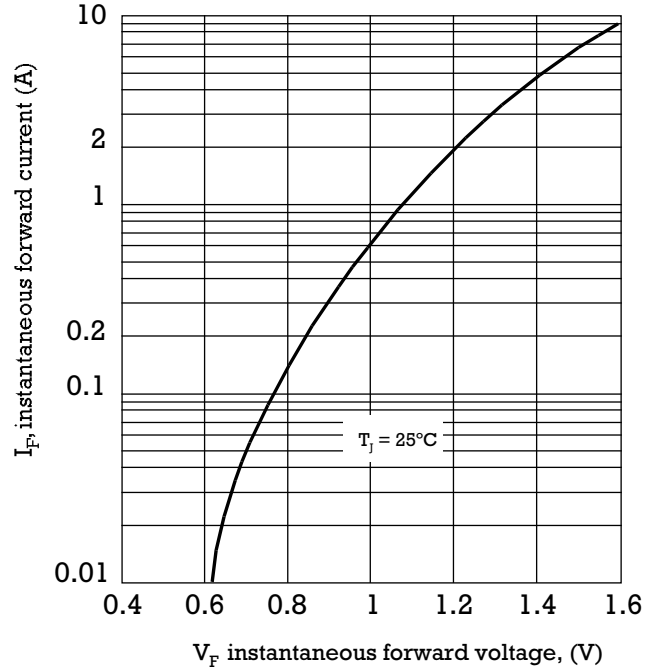
Pulse test:  $t_p$  50 ms; < 2%

### Rating And Characteristic Curves

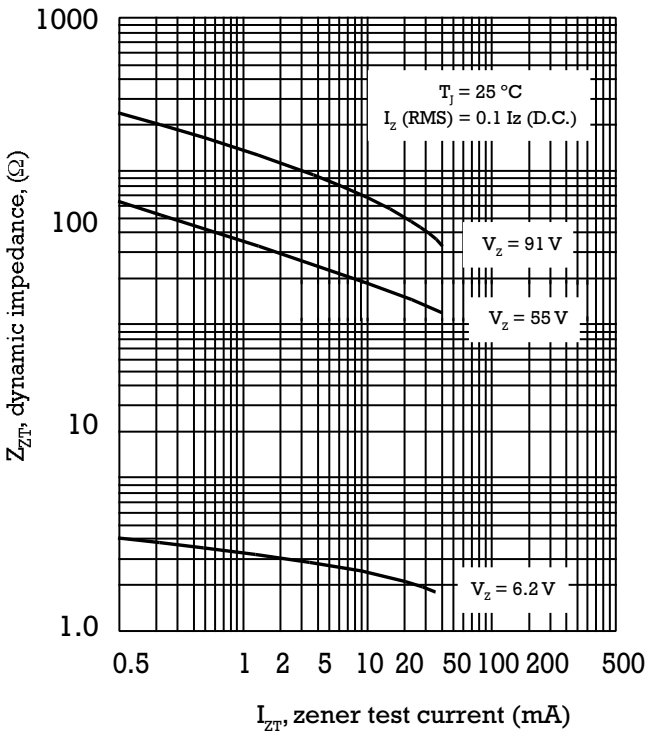
MAXIMUM CONTINUOUS POWER DISSIPATION



TYPICAL FORWARD CHARACTERISTIC



TYPICAL ZENER IMPEDANCE



TYPICAL REVERSE CHARACTERISTIC

