

1.0 W Surface Mounted Glass Passivated Zener Diode

Dimensions in mm. CASE: SMA/DO-214AC	Voltage 6.2 to 200 V Power 1.0 W HYPERECTIFIER® • Glass passivated junction • The plastic material carries U/L 94 V-0 • Low profile package • Easy pick and place • High temperature soldering 260 °C 10 sec MECHANICAL DATA Terminals: Solder plated, solderable per IEC 68-2-20. Standard Packaging: 4 mm. tape (EIA-RS-481). Weight: 0.064 g.
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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

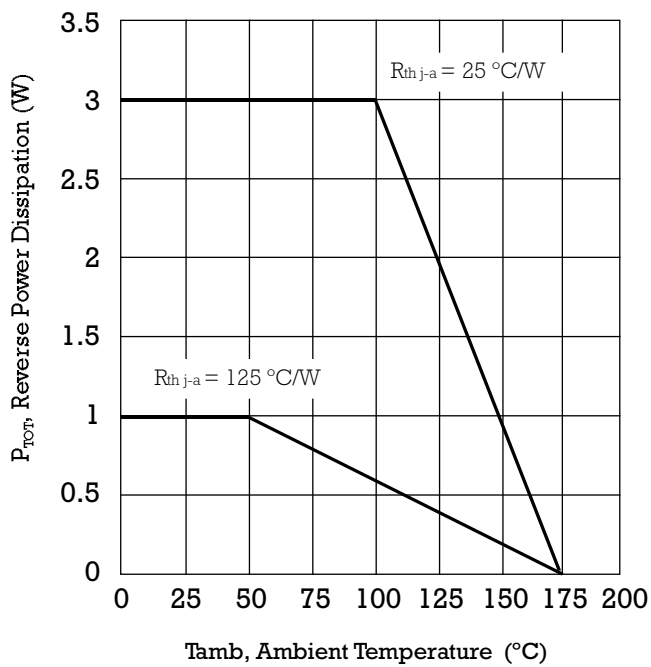
Type	Marking Code	Zener ⁽¹⁾ Voltage Range V_Z at I_{ZT}	Maximum Zener Impedance Z_{ZT} at I_{ZT}	Typical Temperature Coefficient at I_{ZT}	Test Current I_{ZT}	Max Reverse Leakage Current I_R @ V_R		Max Regulator Current at 45 °C I_{ZM}
		(V)	(W)	(% / °C)	(mA)	(μ A)	(V)	(mA)
Z1SMA6V2	EC	5.8-6.6	2	+0.025	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.

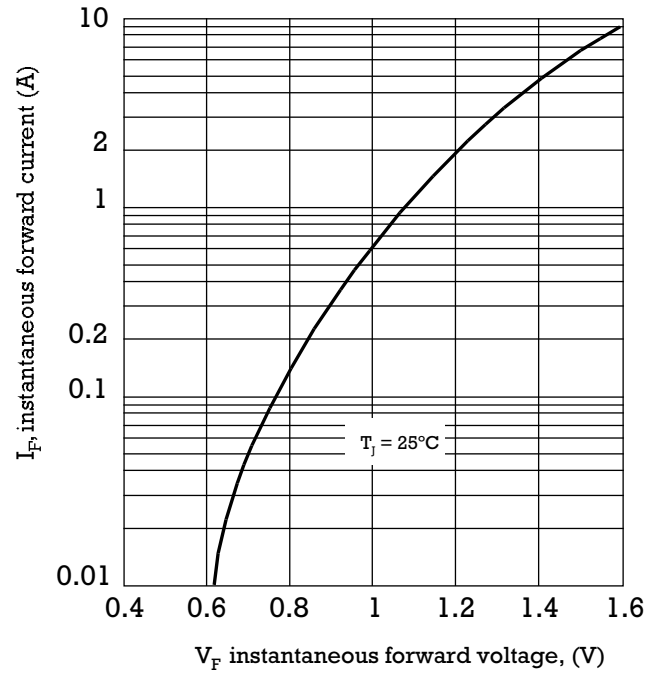
Pulse test: $t_p \leq 50$ ms; $d < 2\%$

Rating And Characteristic Curves

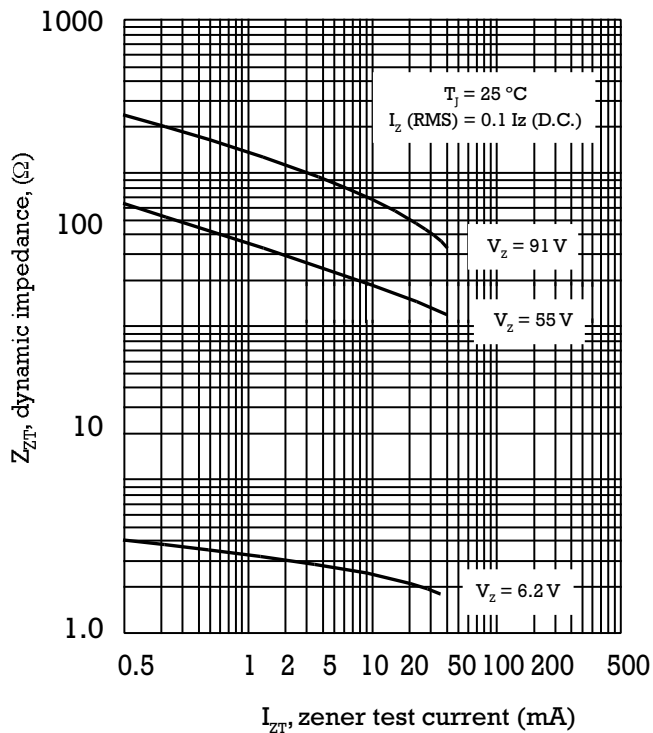
MAXIMUM CONTINUOUS POWER DISSIPATION



TYPICAL FORWARD CHARACTERISTIC



TYPICAL ZENER IMPEDANCE



TYPICAL REVERSE CHARACTERISTIC

