

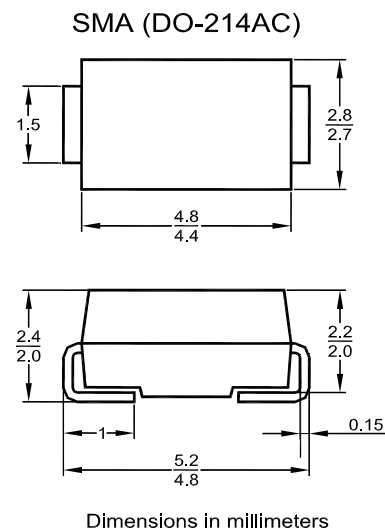
Z1SMA Series

SURFACE MOUNT SILICON ZENER DIODES

Features and mechanical data

- Maximum power dissipation: 1 W
- Plastic case: SMA (DO-214AC)
- Plastic material has UL classification 94V-0

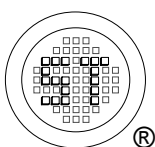
Standard Zener voltage tolerance is graded to the international E 24 (~5%) standard. Other voltage tolerances and higher Zener voltages upon request.



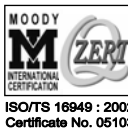
Absolute Maximum Ratings and Characteristics ($T_a = 25\text{ }^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Power Dissipation ($T_A = 50\text{ }^{\circ}\text{C}$)	P_{tot}	1 ¹⁾	W
Operating Junction Temperature Range	T_j	- 50 to + 150	$^{\circ}\text{C}$
Storage Temperature Range	T_s	- 50 to + 175	$^{\circ}\text{C}$
Thermal Resistance Junction – Ambient Air	R_{thA}	70 ¹⁾	K/W
Thermal Resistance Junction – Terminal	R_{thT}	30	K/W

¹⁾ Mounted on P.C. board with 25 mm² copper pads at each terminal.



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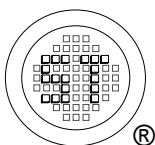
Z1SMA Series

Type	Zener Voltage Range ²⁾		Dynamic Resistance			Reverse Voltage	Z-Current ¹⁾ T _A = 50 °C	Temp. Coefficient of Zener Voltage
	V _{ZT} V	I _{ZT} mA	r _{ZJT} Max.(Ω)	r _{ZJK} at Max.(Ω)	I _{ZK} mA	V _R at I _R = 1 μA Min. (V)	I _{Zmax} mA	α _{VZ} (10 ⁻⁴ /°C)
Z1SMA1 ³⁾	0.71...0.82	5	8	-	-	-	500	-26...-23
Z1SMA5V6	5.2...6	5	40	500	1	0.5 at 3 μA	167	-7...-3
Z1SMA6V2	5.8...6.6	5	11	300	1	1.5	152	-6...-1
Z1SMA6V8	6.4...7.2	5	10	300	1	2	139	-5...+2
Z1SMA7V5	7...7.9	5	8	100	1	2	127	-3...+4
Z1SMA8V2	7.7...8.7	5	10	50	1	3.5	115	-2...+6
Z1SMA9V1	8.5...9.6	5	11	50	1	3.5	104	-1...+7
Z1SMA10	9.4...10.6	5	15	70	1	5	94	+2...+7
Z1SMA11	10.4...11.6	5	20	70	1	5	86	+3...+7
Z1SMA12	11.4...12.7	5	20	90	1	7	79	+4...+7
Z1SMA13	12.4...14.1	5	25	110	1	7	71	+5...+8
Z1SMA15	13.8...15.6	5	30	110	1	10	64	+5...+8
Z1SMA16	15.3...17.1	5	40	170	1	10	58	+5...+9
Z1SMA18	16.8...19.1	5	50	170	1	10	52	+6...+9
Z1SMA20	18.8...21.2	5	50	220	1	15	47	+7...+9
Z1SMA22	20.8...23.3	5	55	220	1	17	43	+7...+9
Z1SMA24	22.8...25.6	5	80	220	1	18	39	+7...+9.5
Z1SMA27	25.1...28.9	5	80	250	1	20	35	+8...+9.5
Z1SMA30	28...32	5	80	250	1	22.5	31	+8...+9.5
Z1SMA33	31...35	5	80	250	1	25	29	+8...+10
Z1SMA36	34...38	5	90	300	1	27	26	+8...+10
Z1SMA39	37...41	5	90	500	1	29	24	+8...+10
Z1SMA43	40...46	5	100	700	1	32	46	+8...+10
Z1SMA47	44...50	5	100	750	1	35	20	+8...+10
Z1SMA51	48...54	5	100	750	1	38	19	+8...+10
Z1SMA56	52...60	5	100	750	1	42	17	+9...+11
Z1SMA62	58...66	5	110	750	1	47	15	+9...+11
Z1SMA68	64...72	5	140	750	1	51	14	+9...+12
Z1SMA75	70...79	5	150	750	1	56	13	+9...+12
Z1SMA82	77...88	5	170	750	1	62	11	+9...+12
Z1SMA91	85...96	5	200	800	1	68	10	+10...+12
Z1SMA100	94...106	5	300	800	1	75	9	+10...+12

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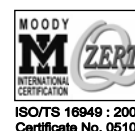
²⁾ Tested with pulses.

³⁾ The Z1SMA1 is a diode operated in forward mode. Hence, the index of all parameter should be "F" instead of "Z". The cathode, indicated by a white band has to be connected to the negative pole.



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