



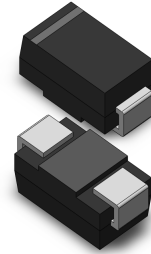
# Z1SMA3.3 - Z1SMA400

## SURFACE MOUNT SILICON ZENER DIODES

**VOLTAGE RANGE: 3.3V - 400V**  
**POWER: 1.0Watts**

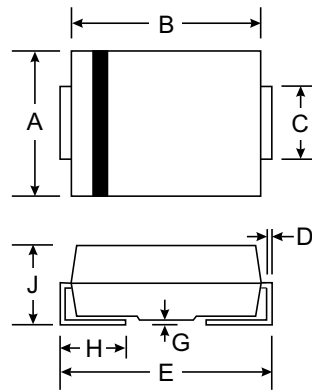
### Features

- High peak reverse power dissipation
- High reliability
- Low leakage current
- Standard zener voltage tolerance is  $\pm 5\%$ .



### Mechanical Data

- Case: SMA/DO-214AC, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.064 grams (approx.)



SMA(DO-214AC)		
Dim	Min	Max
A	2.29	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.80	5.59
G	0.10	0.20
H	0.76	1.52
J	2.01	2.62
All Dimensions in mm		

### Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise specified

Rating	Symbol	Value	Unit
DC Power Dissipation at $T_L = 50^\circ\text{C}$ (Note1)	$P_D$	1.0	Watt
Maximum Forward Voltage at $I_F = 200\text{ mA}$	$V_F$	1.2	Volts
Maximum Thermal Resistance Junction to Ambient Air (Note2)	$R_{\theta JA}$	170	K/W
Junction Temperature Range	$T_J$	- 55 to + 175	$^\circ\text{C}$
Storage Temperature Range	$T_s$	- 55 to + 175	$^\circ\text{C}$

**Note :**

- (1)  $T_L$  = Lead temperature at 3/8 " (9.5mm) from body
- (2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.



## ELECTRICAL CHARACTERISTICS Rating at = 25 °C ambient temperature unless otherwise specified

TYPE	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
	Vz @ IzT	IzT	ZzT @ IzT	Zzk @ IzK	IzK	I <sub>R</sub> @ V <sub>R</sub>		Iz <sub>M</sub>
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
Z1SMA3.3	3.3	76.0	10	400	1.0	100	1.0	276
Z1SMA3.6	3.6	69.0	10	400	1.0	100	1.0	252
Z1SMA3.9	3.9	64.0	9.0	400	1.0	50	1.0	234
Z1SMA4.3	4.3	58.0	9.0	400	1.0	10	1.0	217
Z1SMA4.7	4.7	53.0	8.0	500	1.0	10	1.0	193
Z1SMA5.1	5.1	49.0	7.0	550	1.0	10	1.0	178
Z1SMA5.6	5.6	45.0	5.0	600	1.0	10	2.0	162
Z1SMA6.2	6.2	41.0	2.0	700	1.0	10	3.0	146
Z1SMA6.8	6.8	37.0	3.5	700	1.0	50	4.0	133
Z1SMA7.5	7.5	34.0	4.0	700	0.5	50	5.0	121
Z1SMA8.2	8.2	31.0	4.5	700	0.5	50	6.0	110
Z1SMA9.1	9.1	28.0	5.0	700	0.5	50	7.0	100
Z1SMA10	10	25.0	7.0	700	0.25	50	7.6	91
Z1SMA11	11	23.0	8.0	700	0.25	50	8.4	83
Z1SMA12	12	21.0	9.0	700	0.25	5.0	9.1	76
Z1SMA13	13	19.0	10	700	0.25	5.0	9.9	69
Z1SMA15	15	17.0	14	700	0.25	5.0	11.4	61
Z1SMA16	16	15.5	16	700	0.25	5.0	12.2	57
Z1SMA18	18	14.0	20	750	0.25	5.0	13.7	50
Z1SMA20	20	12.5	22	750	0.25	5.0	15.2	45
Z1SMA22	22	11.5	23	750	0.25	5.0	16.7	41
Z1SMA24	24	10.5	25	750	0.25	5.0	18.2	38
Z1SMA27	27	9.5	35	750	0.25	5.0	20.6	34
Z1SMA30	30	8.5	40	1000	0.25	5.0	22.8	30
Z1SMA33	33	7.5	45	1000	0.25	5.0	25.1	27
Z1SMA36	36	7.0	50	1000	0.25	5.0	27.4	25
Z1SMA39	39	6.5	60	1000	0.25	5.0	29.7	23
Z1SMA43	43	6.0	70	1500	0.25	5.0	32.7	22
Z1SMA47	47	5.5	80	1500	0.25	5.0	35.8	19
Z1SMA51	51	5.0	95	1500	0.25	5.0	38.8	18
Z1SMA56	56	4.5	110	2000	0.25	5.0	42.6	16
Z1SMA62	62	4.0	125	2000	0.25	5.0	47.1	14
Z1SMA68	68	3.7	150	2000	0.25	5.0	51.7	13
Z1SMA75	75	3.3	175	2000	0.25	5.0	56.0	12
Z1SMA82	82	3.0	200	3000	0.25	5.0	62.2	11
Z1SMA91	91	2.8	250	3000	0.25	5.0	69.2	10
Z1SMA100	100	2.5	350	3000	0.25	5.0	76.0	9.0
Z1SMA110	110	2.3	450	4000	0.25	5.0	83.6	8.6
Z1SMA120	120	2.0	550	4500	0.25	5.0	91.2	7.8
Z1SMA130	130	1.9	700	5000	0.25	5.0	98.8	7.0
Z1SMA150	150	1.7	1000	6000	0.25	5.0	114.0	6.4
Z1SMA160	160	1.6	1100	6500	0.25	5.0	121.6	5.8
Z1SMA180	180	1.4	1200	7000	0.25	5.0	136.8	5.2
Z1SMA200	200	1.2	1500	8000	0.25	5.0	152.0	4.7



## ELECTRICAL CHARACTERISTICS Rating at 25 °C ambient temperature unless otherwise specified

TYPE	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
	V <sub>Z</sub> @ I <sub>ZT</sub>	I <sub>ZT</sub>	Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub> @ V <sub>R</sub>		I <sub>ZM</sub>
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
<b>Z1SMA240</b>	240	0.93	1800	8500	0.25	5.0	182.4	3.8
<b>Z1SMA250</b>	250	0.90	2000	9000	0.25	5.0	190	3.6
<b>Z1SMA270</b>	270	0.82	2100	9000	0.25	5.0	205	3.3
<b>Z1SMA300</b>	300	0.75	2300	9500	0.25	5.0	228	3.0
<b>Z1SMA330</b>	330	0.70	2500	9500	0.25	5.0	250	2.8
<b>Z1SMA380</b>	380	0.60	2700	9500	0.25	5.0	288	2.4
<b>Z1SMA400</b>	400	0.55	2800	9500	0.25	5.0	304	2.3