

Silicon Planar Zener Diodes

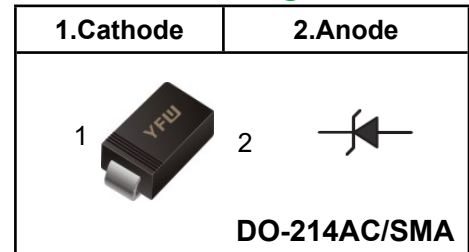
**FEATURES**

- ◆ Total power dissipation: Max. 1.5 W.
- ◆ Wide zener reverse voltage range 3.3V to 240V.
- ◆ Small plastic package suitable for surface mounted design.
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

**MECHANICAL DATA**

- ◆ Case: DO-214AC/SMA
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 0.07g / 0.002oz

**Pinning**

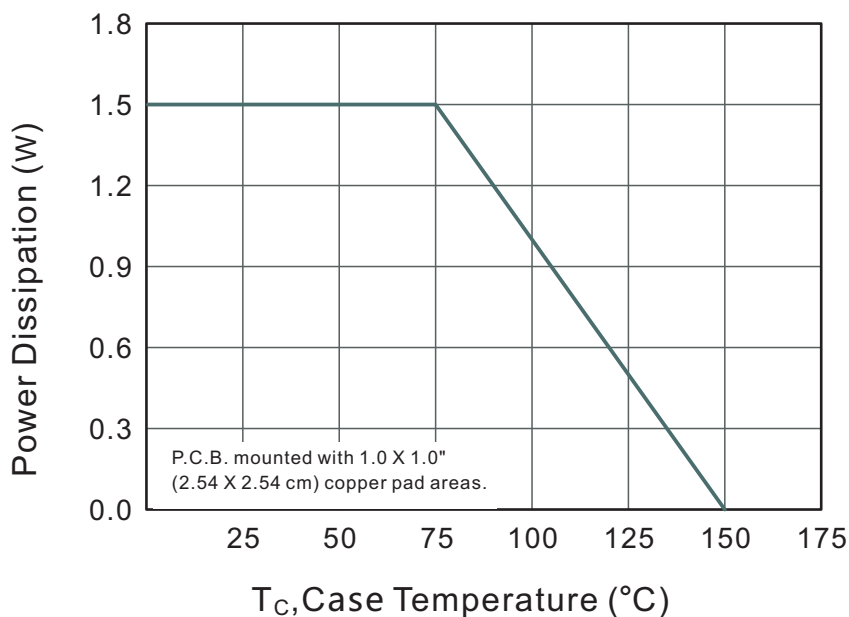


**Absolute Maximum Ratings And Characteristics (Ta = 25 °C)**

Parameter	Symbol	Value	Unit
Power Dissipation at TL=75°C	<b>P<sub>D</sub></b>	1.5	<b>W</b>
Forward Voltage at IF = 200 mA	<b>V<sub>F</sub></b>	1.5	<b>V</b>
Junction Temperature Range	<b>T<sub>J</sub></b>	55 ~ +150	<b>°C</b>
Storage Temperature Range	<b>T<sub>s</sub></b>	-55 ~ +150	<b>°C</b>

(1) Thermal resistance from junction to ambient at P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper areas pads.

**Fig.1 Maximum Continuous Power Derating**



Characteristics at  $T_a = 25^\circ\text{C}$

Type (note1)	Marking (note1)	Zener Voltage Range (note2)				Dynamic Impedance	Reverse Current		Admissible Zener Current
		$V_{ZT}$ (at $I_{ZT}$ )			at $I_{ZT}$	$Z_{ZT}$ (at $I_{ZT}$ )	$I_R$	at $V_R$	
		Min (V)	Nom (V)	Max (V)	(mA)	Max ( $\Omega$ )	Max ( $\mu\text{A}$ )	(V)	$I_{ZM}$ (mA)
1SMA5913B	913B	3.13	3.3	3.47	113.6	10	100	1	454
1SMA5914B	914B	3.42	3.6	3.78	104.2	9.0	75	1	416
1SMA5915B	915B	3.70	3.9	4.10	96.1	7.5	25	1	384
1SMA5916B	916B	4.08	4.3	4.52	87.2	6.0	5	1	348
1SMA5917B	917B	4.46	4.7	4.94	79.8	5.0	5	1.5	319
1SMA5918B	918B	4.84	5.1	5.36	73.5	4.0	5	2	294
1SMA5919B	919B	5.32	5.6	5.88	66.9	2.0	5	3	267
1SMA5920B	920B	5.89	6.2	6.51	60.5	2.0	5	4	241
1SMA5921B	921B	6.46	6.8	7.14	55	2.5	5	5.2	220
1SMA5922B	922B	7.12	7.5	7.88	50	3.0	5	6	200
1SMA5923B	923B	7.79	8.2	8.61	45.7	3.5	5	6.5	182
1SMA5924B	924B	8.60	9.1	9.56	41.2	4.0	5	7	164
1SMA5925B	925B	9.50	10	10.5	37.5	4.5	5	8	150
1SMA5926B	926B	10.4	11	11.6	34	5.5	1	8.4	136
1SMA5927B	927B	11.4	12	12.6	31.2	6.5	1	9	125
1SMA5928B	928B	12.35	13	14.1	28.8	7.0	1	9.9	115
1SMA5929B	929B	13.8	15	15.8	25	9.0	1	11.4	100
1SMA5930B	930B	15.2	16	16.8	23.4	10	1	12.2	93
1SMA5931B	931B	16.8	18	19.2	21	12	1	13.7	83
1SMA5932B	932B	19.0	20	21.2	19	14	1	15.2	75
1SMA5933B	933B	20.8	22	23.3	17	18	1	16.7	68
1SMA5934B	934B	22.8	24	25.2	16	19	1	18.2	62
1SMA5935B	935B	25.3	27	28.9	14	23	1	20.6	55
1SMA5936B	936B	28.2	30	32.0	12.5	26	1	23	50
1SMA5937B	937B	31.3	33	34.9	11.4	33	1	25	45
1SMA5938B	938B	34.2	36	37.9	10.4	38	1	27	41
1SMA5939B	939B	37.2	39	41.5	9.6	45	1	30	38
1SMA5940B	940B	40.9	43	45.6	8.7	53	1	33	34
1SMA5941B	941B	44.9	47	49.8	8.0	67	1	36	31
1SMA5942B	942B	48.6	51	54.0	7.3	70	1	39	29
1SMA5943B	943B	53.6	56	58.8	6.7	86	1	42	26
1SMA5944B	944B	58.9	62	65.6	6.0	100	1	47	24
1SMA5945B	945B	64.6	68	71.7	5.5	120	1	52	22
1SMA5946B	946B	71.2	75	78.8	5.0	140	1	57	20
1SMA5947B	947B	77.9	82	87.0	4.6	160	1	62	18
1SMA5948B	948B	86.0	91	96.0	4.1	200	1	69	16
1SMA5949B	949B	95.0	100	105	3.7	250	1	76	15
1SMA5950B	950B	104	110	116	3.4	300	1	84	13
1SMA5951B	951B	114	120	127	3.1	380	1	91	12
1SMA5952B	952B	125	130	142	2.9	450	1	100	11
1SMA5953B	953B	140	150	157	2.5	600	1	114	10
1SMA5954B	954B	152	160	168	2.3	700	1	121.6	9.0
1SMA5955B	955B	168	180	189	2.1	900	1	136.8	8.0
1SMA5956B	956B	189	200	211	1.9	1200	1	152	7.0
1SMA5957B	957B	228	240	252	1.5	1600	1	182.4	6.0

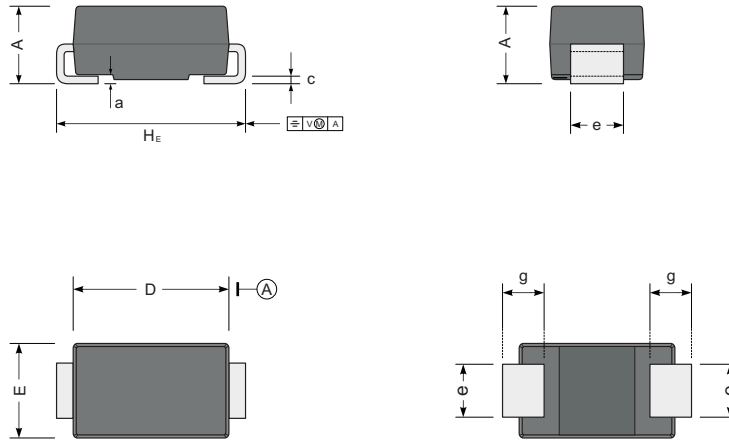
(1) Suffix "A" indicates  $\pm 10\%$  tolerance, Suffix "B" indicates  $\pm 5\%$  tolerance

(2)  $V_{ZT}$  is tested with pulses (20 ms)

**Package Outline**

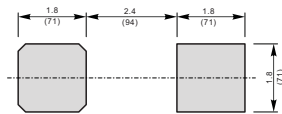
**DO-214AC SMA**

Plastic surface mounted package; 2 leads



UNIT		A	D	E	H <sub>E</sub>	c	e	g	a
mm	max	2.42	4.5	2.80	5.2	0.31	1.6	1.5	0.3
	min	1.98	4.0	2.54	4.7	0.15	1.3	0.9	
mil	max	96	181	110	205	12	63	59	12
	min	78	157	100	185	6	51	35	

**The recommended mounting pad size**



Unit :  $\frac{\text{mm}}{\text{(mil)}}$

**Summary of Packing Options**

Package	Packing Description	Packing Quantity	Industry Standard
DO-214AC SMA	Tape/Reel, 11" reel	5000	EIA-481-1
	Tape/Reel, 7" reel	2000	EIA-481-1