

Zener Diodes

DO-214AC SMA AEC-Q101

1SMA59xxB-A Series

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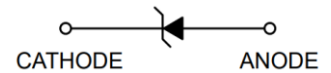
FEATURE

- Zener Voltage Range: 3.6V to 68V
- Power Dissipation: 1.5W
- Glass Passivation Junction
- Built-In Strain Relief, Low Inductance
- High Peak Reverse Power Dissipation
- Flammability Classification Rating UL 94V-0
- AEC-Q101 Qualified



MECHANICAL DATA

- Case: DO-214AC, Molded Plastic
- Solderable Per MIL-STD-750, Method 2026
- Polarity: Color Band Denoted Cathode End



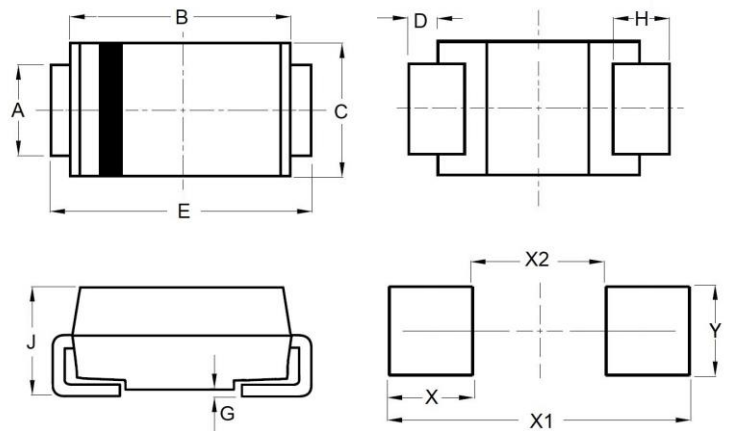
ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at $T_L = 75^\circ\text{C}$	P_D	1.5	W
Typical Thermal Resistance	$R_{\theta JA}$	135	$^\circ\text{C}/\text{W}$
Junction Temperature Range	T_J	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

Note: $T_A = 25^\circ\text{C}$ unless otherwise noted

DIMENSIONS

Item	DO-214AC (SMA)	
	Min (mm)	Max (mm)
A	1.40	1.60
B	4.00	4.60
C	2.50	2.90
D	0.152	0.305
E	4.80	5.28
G	0.051	0.203
H	0.76	1.52
J	2.00	2.44
X	2.07	
X1	5.80	
X2	1.66	
Y	2.06	



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ELECTRICAL CHARACTERISTICS

Part Number	Nominal Zener Voltage			Nominal Zener Impedance				Max Reverse Leakage Current	
	$V_Z @ I_{ZT}$			$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$	
	Nom V	Min V	Max V	Ω	mA	Ω	mA	μA	V
1SMA5914B-A	3.6	3.42	3.78	9	104.2	500	1	75	1.0
1SMA5915B-A	3.9	3.71	4.10	8	96.1	500	1	25	1.0
1SMA5916B-A	4.3	4.09	4.52	6	87.2	500	1	5	1.0
1SMA5917B-A	4.7	4.47	4.94	5	79.8	500	1	5	1.5
1SMA5918B-A	5.1	4.85	5.36	4	73.5	350	1	5	2.0
1SMA5919B-A	5.6	5.32	5.88	2	66.9	250	1	5	3.0
1SMA5920B-A	6.2	5.89	6.51	2	60.5	200	1	5	4.0
1SMA5921B-A	6.8	6.46	7.14	3	55.1	200	1	5	5.2
1SMA5922B-A	7.5	7.13	7.88	3	50.0	400	0.5	5	6.0
1SMA5923B-A	8.2	7.79	8.61	4	45.7	400	0.5	5	6.5
1SMA5924B-A	9.1	8.65	9.56	4	41.2	500	0.5	5	7.0
1SMA5925B-A	10	9.50	10.50	5	37.5	500	0.25	5	80
1SMA5926B-A	11	10.45	11.55	6	34.1	550	0.25	1	8.4
1SMA5927B-A	12	11.40	12.60	7	31.2	550	0.25	1	9.1
1SMA5928B-A	13	12.35	13.65	7	28.8	550	0.25	1	9.9
1SMA5929B-A	15	14.25	15.75	9	25.0	600	0.25	1	11.4
1SMA5930B-A	16	15.20	16.80	10	23.4	600	0.25	1	12.2
1SMA5931B-A	18	17.10	18.90	12	20.8	650	0.25	1	13.7
1SMA5932B-A	20	19.00	21.00	14	18.7	650	0.25	1	15.2
1SMA5933B-A	22	20.90	23.10	18	17.0	650	0.25	1	16.7
1SMA5934B-A	24	22.80	25.20	19	15.6	700	0.25	1	18.2
1SMA5935B-A	27	25.65	28.35	23	13.9	700	0.25	1	20.6
1SMA5936B-A	30	28.50	31.50	26	12.5	750	0.25	1	22.8
1SMA5937B-A	33	31.35	34.65	33	11.4	800	0.25	1	25.1
1SMA5938B-A	36	34.20	37.80	38	10.4	850	0.25	1	27.4
1SMA5939B-A	39	37.05	40.95	45	9.6	900	0.25	1	29.7
1SMA5940B-A	43	40.85	45.15	53	8.7	950	0.25	1	32.7
1SMA5941B-A	47	44.65	49.35	67	8.0	1000	0.25	1	35.8
1SMA5942B-A	51	48.45	53.55	70	7.3	1100	0.25	1	38.8
1SMA5943B-A	56	53.20	58.80	86	6.7	1300	0.25	1	42.6
1SMA5944B-A	62	58.90	65.10	100	6.0	1500	0.25	1	47.1
1SMA5945B-A	68	64.60	71.40	120	5.5	1700	0.25	1	51.7

Note:

1. $T_A = 25^\circ C$ unless otherwise noted
2. Mounted on a FR-4 PCB, single-sided copper, with 100mm² land areas.
3. Mounted on a FR-4 PCB, single-sided copper, with mini pad.

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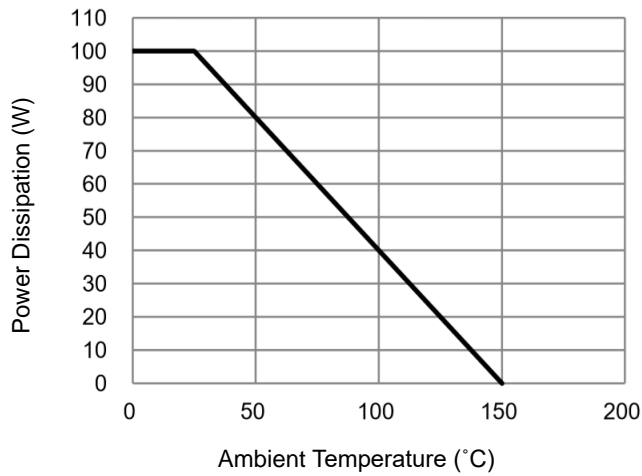
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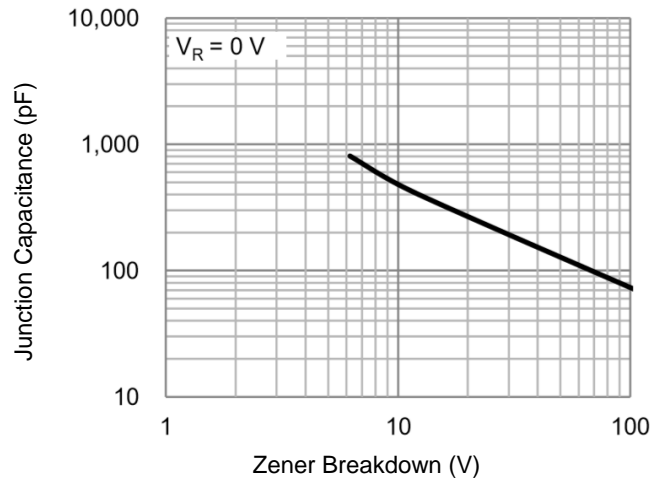
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CHARACTERISTIC CURVES

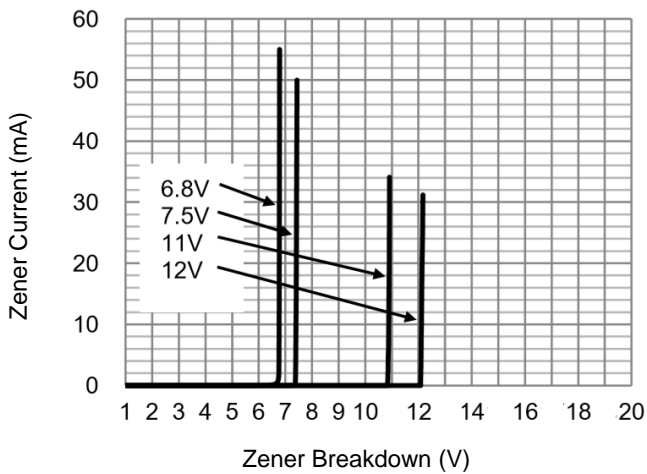
Steady-State Power Derating



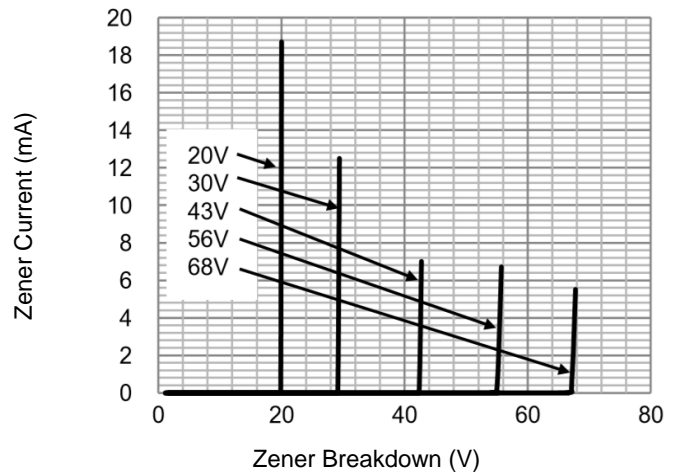
Typical Junction Capacitance



Typical Zener Breakdown



Typical Zener Breakdown



*Specifications subject to change without notice