THE DATASHEET OF

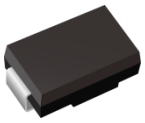
1SMA5918-AU_R1_000A1

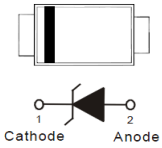
1SMA5914-AU ~ 1SMA5945-AU Series

SILICON ZENER DIODE

Voltage **3.6~68 V** **Power** **1.5 W**

SMA





Features

- Silicon planar Zener diode
- Low profile surface-mount package
- Low leakage current
- Excellent stability
- High temperature soldering: 260 °C/10 seconds at terminals
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- AEC-Q101 qualified

Mechanical Data

- Case: SMA, plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Approx. Weight: 0.0024 ounces, 0.068 grams

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Peak Pulse Power Dissipation on T_L =75 °C Derate above 75°C	P_D (1)	1.5	W
Typical Thermal Resistance	$R_{\theta JA}$ (2)	150	°C/W
Operating Junction and Storage Temperature Range	T_J ,T_{STG}	-55 to +150	°C

1SMA5914-AU ~ 1SMA5945-AU Series

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Part Number	Nominal Zener Voltage				Nominal Zener Impedance				Max. Reverse Leakage Current		Marking Code
	V_Z@I_{ZT}				Z_{ZT}@I_{ZT}		Z_{ZK}@I_{ZK}		I_R@V_R		
	Nom. V	Min. V	Max. V	mA	Ω	mA	Ω	mA	uA	V	
1SMA5914-AU	3.6	3.42	3.78	104.2	9	104.2	500	1	75	1	914A
1SMA5915-AU	3.9	3.71	4.10	96.1	8	96.1	500	1	25	1	915A
1SMA5916-AU	4.3	4.09	4.52	87.2	6	87.2	500	1	5	1	916A
1SMA5917-AU	4.7	4.47	4.94	79.8	5	79.8	500	1	5	1.5	917A
1SMA5918-AU	5.1	4.85	5.36	73.5	4	73.5	350	1	5	2	918A
1SMA5919-AU	5.6	5.32	5.88	66.9	2	66.9	250	1	5	3	919A
1SMA5920-AU	6.2	5.89	6.51	60.5	2	60.5	200	1	5	4	920A
1SMA5921-AU	6.8	6.46	7.14	55.1	3	55.1	200	1	5	5.2	921A
1SMA5922-AU	7.5	7.13	7.88	50	3	50	400	0.5	5	6	922A
1SMA5923-AU	8.2	7.79	8.61	45.7	4	45.7	400	0.5	5	6.5	923A
1SMA5924-AU	9.1	8.65	9.56	41.2	4	41.2	500	0.5	5	7	924A
1SMA5925-AU	10	9.5	10.5	37.5	5	37.5	500	0.25	5	8	925A
1SMA5926-AU	11	10.45	11.55	34.1	6	34.1	550	0.25	1	8.4	926A
1SMA5927-AU	12	11.4	12.6	31.2	7	31.2	550	0.25	1	9.1	927A
1SMA5928-AU	13	12.35	13.65	28.8	7	28.8	550	0.25	1	9.9	928A
1SMA5929-AU	15	14.25	15.75	25	9	25	600	0.25	1	11.4	929A
1SMA5930-AU	16	15.2	16.8	23.4	10	23.4	600	0.25	1	12.2	930A
1SMA5931-AU	18	17.1	18.9	20.8	12	20.8	650	0.25	1	13.7	931A
1SMA5932-AU	20	19	21	18.7	14	18.7	650	0.25	1	15.2	932A
1SMA5933-AU	22	20.9	23.1	17	18	17	650	0.25	1	16.7	933A
1SMA5934-AU	24	22.8	25.2	15.6	19	15.6	700	0.25	1	18.2	934A
1SMA5935-AU	27	25.65	28.35	13.9	23	13.9	700	0.25	1	20.6	935A
1SMA5936-AU	30	28.5	31.5	12.5	26	12.5	750	0.25	1	22.8	936A
1SMA5937-AU	33	31.35	34.65	11.4	33	11.4	800	0.25	1	25.1	937A
1SMA5938-AU	36	34.2	37.8	10.4	38	10.4	850	0.25	1	27.4	938A
1SMA5939-AU	39	37.05	40.95	9.6	45	9.6	900	0.25	1	29.7	939A
1SMA5940-AU	43	40.85	45.15	8.7	53	8.7	950	0.25	1	32.7	940A
1SMA5941-AU	47	44.65	49.35	8	67	8	1000	0.25	1	35.8	941A
1SMA5942-AU	51	48.45	53.55	7.3	70	7.3	1100	0.25	1	38.8	942A
1SMA5943-AU	56	53.2	58.8	6.7	86	6.7	1300	0.25	1	42.6	943A

1SMA5914-AU ~ 1SMA5945-AU Series

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Part Number	Nominal Zener Voltage				Nominal Zener Impedance				Max. Reverse Leakage Current		Marking Code
	$V_Z@I_{ZT}$				$Z_{ZT}@I_{ZT}$		$Z_{ZK}@I_{ZK}$		$I_R@V_R$		
	Nom. V	Min. V	Max. V	mA	Ω	mA	Ω	mA	uA	V	
1SMA5944-AU	62	58.9	65.1	6	100	6	1500	0.25	1	47.1	944A
1SMA5945-AU	68	64.6	71.4	5.5	120	5.5	1700	0.25	1	51.7	945A

NOTES:

1. Mounted on a FR-4 PCB, single-sided copper, with 100cm^2 copper pad area.
2. Mounted on a FR-4 PCB, single-sided copper, mini pad .

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TYPICAL CHARACTERISTIC CURVES

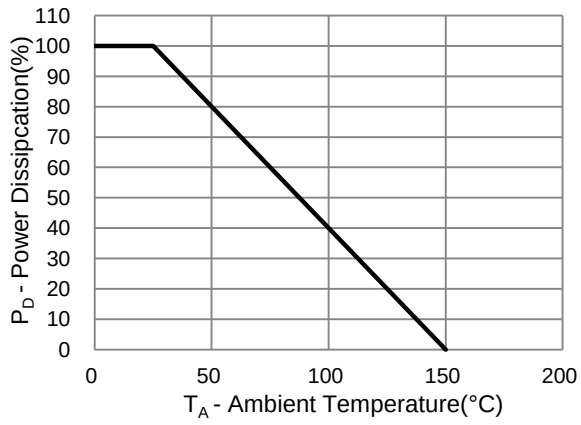

Fig.1 Power Derating Curve

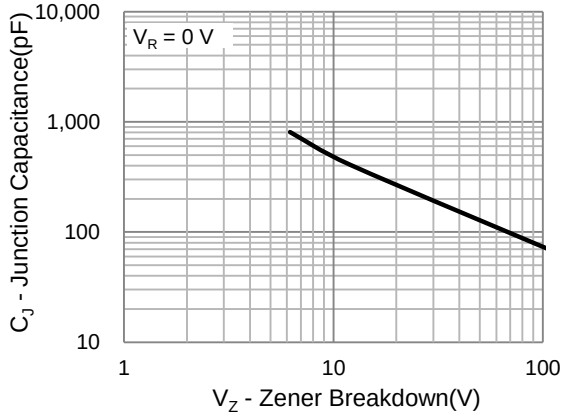

Fig.2 Typical Junction Capacitance

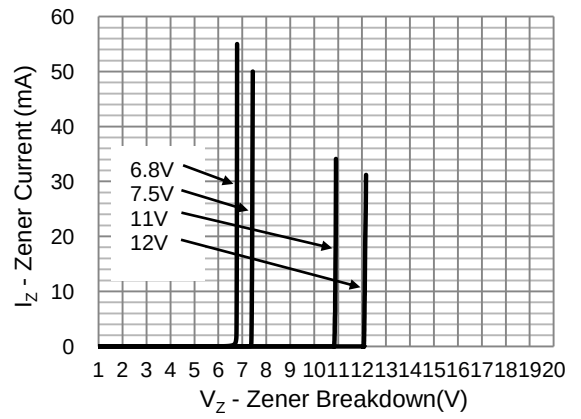

Fig.3 Typical Zener Breakdown

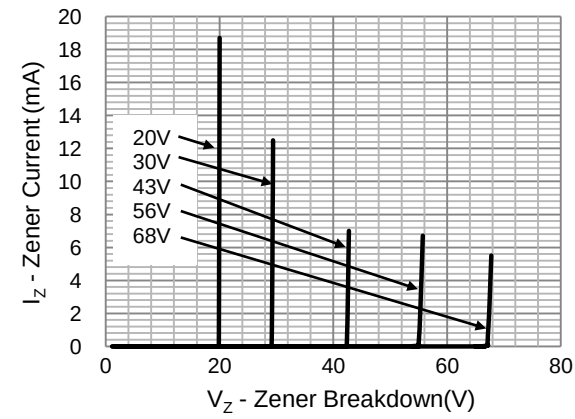

Fig.4 Typical Zener Breakdown

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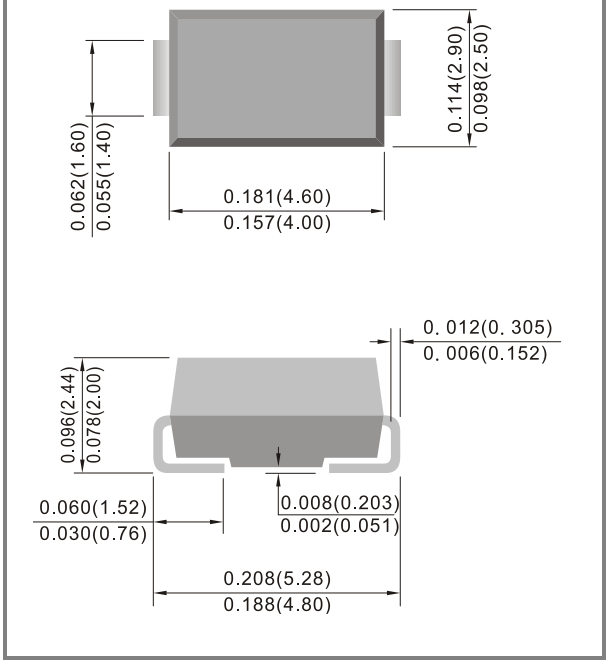
Part No Packing Code Version

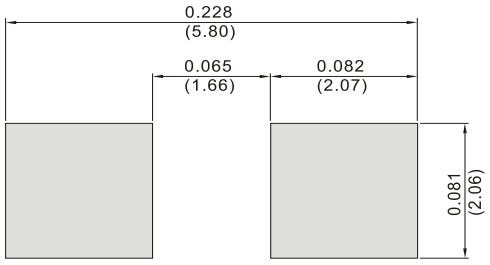
Part No Packing Code	Package Type	Packing Type	Marking	Version
1SMA59xx-AU_R2_000A1	SMA	7.5K pcs / 13” reel	See Table	Halogen free

Packaging Information & Mounting Pad Layout

SMA Dimension — Unit: inch(mm)



SMA Pad Layout — Unit: inch(mm)



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