

1SMA5914-AU ~ 1SMA5945-AU Series

SILICON ZENER DIODE

Voltage

3.6~68 V

Power

1.5 W

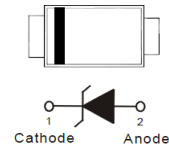
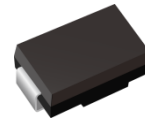
Features

- 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

SMA



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 _{θJA} ⁽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 ($T_A = 25^\circ\text{C}$ 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 100cm² copper pad area.
2. Mounted on a FR-4 PCB, single-sided copper, mini pad .

1SMA5914-AU ~ 1SMA5945-AU Series

TYPICAL CHARACTERISTIC CURVES

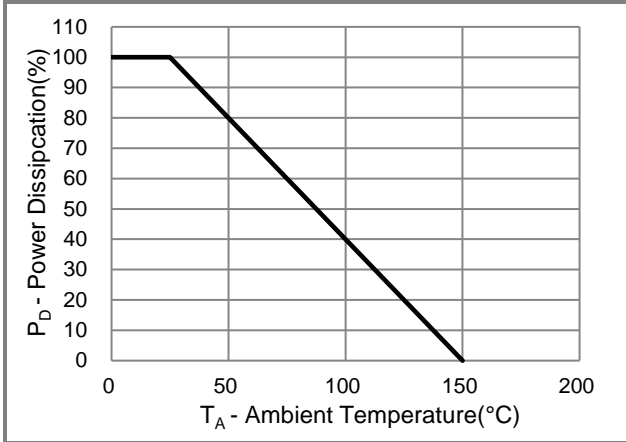


Fig.1 Power Derating Curve

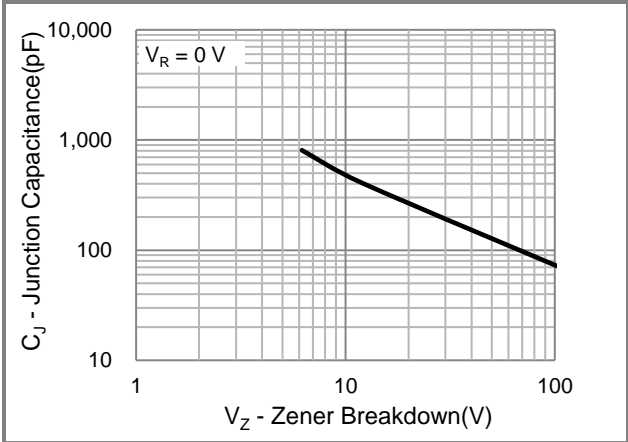


Fig.2 Typical Junction Capacitance

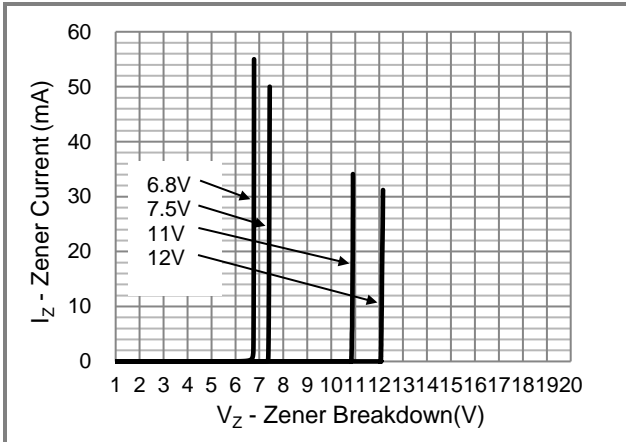


Fig.3 Typical Zener Breakdown

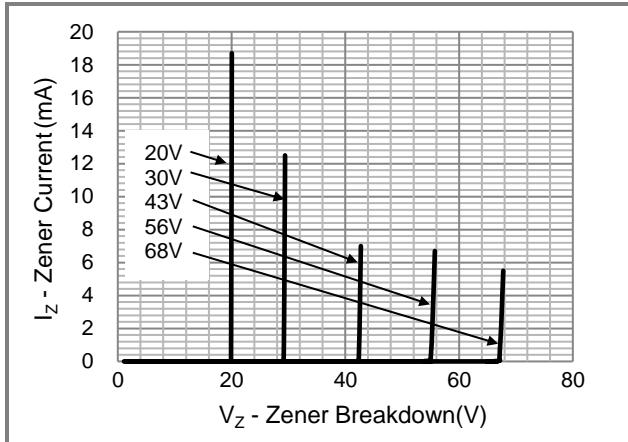


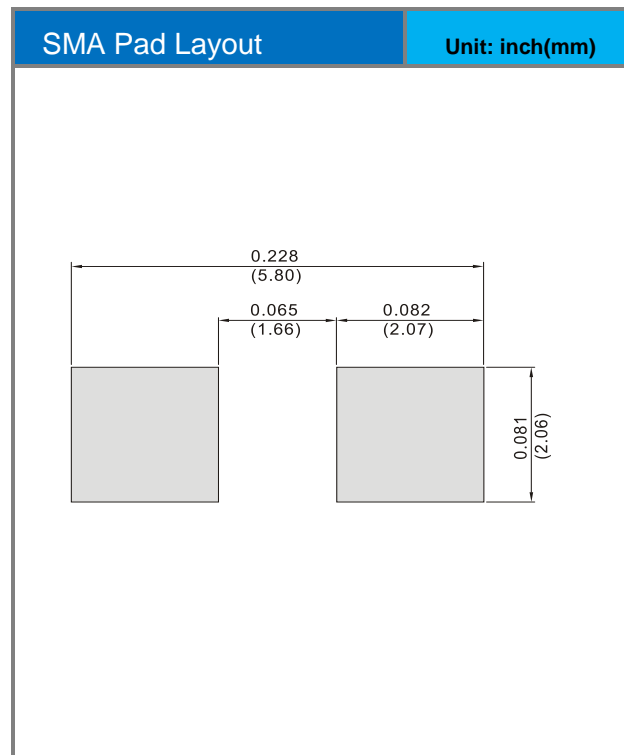
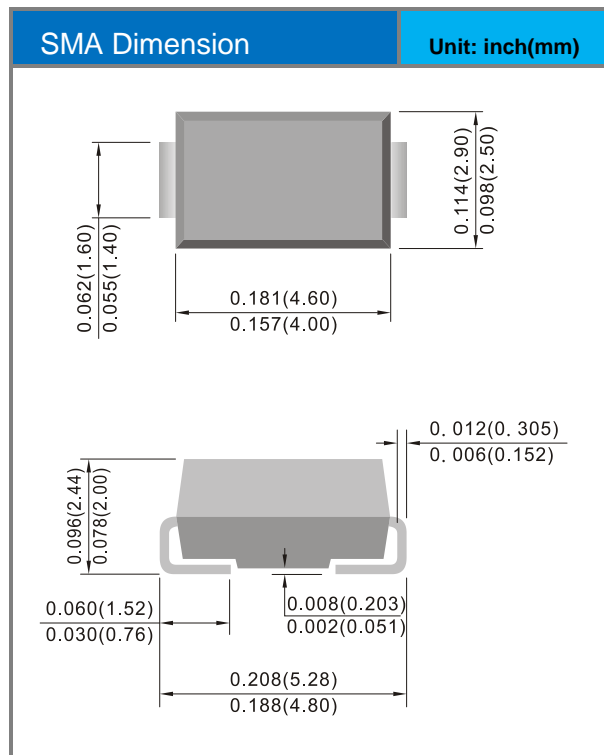
Fig.4 Typical Zener Breakdown

1SMA5914-AU ~ 1SMA5945-AU Series

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
1SMA59xx-AU	SMA	7.5K pcs / 13" reel	See Table

Packaging Information & Mounting Pad Layout



1SMA5914-AU ~ 1SMA5945-AU Series

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.