



# 1SMC5338-AU ~ 1SMC5369-AU Series

## SILICON ZENER DIODE

**Voltage**

**5.1~51 V**

**Power**

**5 W**

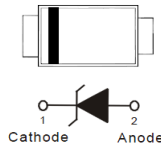
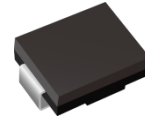
### Features

- 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: SMC, plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Approx. Weight: 0.0082 ounces, 0.2325 grams

SMC



### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Peak Pulse Power Dissipation on T <sub>L</sub> = 75 °C Derate above 75 °C	P <sub>D</sub> <sup>(1)</sup>	5	W
Typical Thermal Resistance	R <sub>θJA</sub> <sup>(2)</sup>	125	°C/W
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C



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## 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	$\Omega$	mA	$\Omega$	mA	$\mu\text{A}$	V	
1SMC5338-AU	5.1	4.85	5.36	240	2	240	400	1	10	1	338B
1SMC5339-AU	5.6	5.32	5.88	220	1	220	400	1	10	2	339B
1SMC5340-AU	6.0	5.7	6.3	200	1	200	300	1	10	3	340B
1SMC5341-AU	6.2	5.89	6.51	200	1	200	200	1	10	3	341B
1SMC5342-AU	6.8	6.46	7.14	175	1	175	200	1	10	5.2	342B
1SMC5343-AU	7.5	7.13	7.88	175	2	175	200	1	10	5.7	343B
1SMC5344-AU	8.2	7.79	8.61	150	2	150	200	1	10	6.2	344B
1SMC5345-AU	8.7	8.27	9.14	150	2	150	200	1	10	6.6	345B
1SMC5346-AU	9.1	8.65	9.56	150	2	150	150	1	7.5	6.9	346B
1SMC5347-AU	10	9.5	10.5	125	2	125	125	1	5	7.6	347B
1SMC5348-AU	11	10.45	11.55	125	3	125	125	1	5	8.4	348B
1SMC5349-AU	12	11.4	12.6	100	3	100	125	1	2	9.1	349B
1SMC5350-AU	13	12.35	13.65	100	3	100	100	1	1	9.9	350B
1SMC5351-AU	14	13.3	14.7	100	3	100	75	1	1	10.6	351B
1SMC5352-AU	15	14.25	15.75	75	3	75	75	1	1	11.5	352B
1SMC5353-AU	16	15.2	16.8	75	3	75	75	1	1	12.2	353B
1SMC5354-AU	17	16.15	17.85	70	3	70	75	1	0.5	12.9	354B
1SMC5355-AU	18	17.1	18.9	65	3	65	75	1	0.5	13.7	355B
1SMC5356-AU	19	18.05	19.95	65	3	65	75	1	0.5	14.4	356B
1SMC5357-AU	20	19	21	65	3	65	75	1	0.5	15.2	357B
1SMC5358-AU	22	20.9	23.1	50	4	50	75	1	0.5	16.7	358B
1SMC5359-AU	24	22.8	25.2	50	4	50	100	1	0.5	18.2	359B
1SMC5360-AU	25	23.75	26.25	50	4	50	110	1	0.5	19	360B
1SMC5361-AU	27	25.65	28.35	50	5	50	120	1	0.5	20.6	361B
1SMC5362-AU	28	26.6	29.4	50	6	50	130	1	0.5	21.2	362B
1SMC5363-AU	30	28.5	31.5	40	8	40	140	1	0.5	22.8	363B
1SMC5364-AU	33	31.35	34.65	40	10	40	150	1	0.5	25.1	364B
1SMC5365-AU	36	34.2	37.8	30	11	30	160	1	0.5	27.4	365B
1SMC5366-AU	39	37.05	40.95	30	14	30	170	1	0.5	29.7	366B
1SMC5367-AU	43	40.85	45.15	30	20	30	190	1	0.5	32.7	367B



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	$V_Z@I_{ZT}$				$Z_{ZT}@I_{ZT}$		$Z_{ZK}@I_{ZK}$		$I_R@V_R$		
	Nom. V	Min. V	Max. V	mA	$\Omega$	mA	$\Omega$	mA	uA	V	
1SMC5368-AU	47	44.65	49.35	25	25	25	210	1	0.5	35.8	368B
1SMC5369-AU	51	48.45	53.55	25	27	25	230	1	0.5	38.8	369B

**NOTES:**

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



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## TYPICAL CHARACTERISTIC CURVES

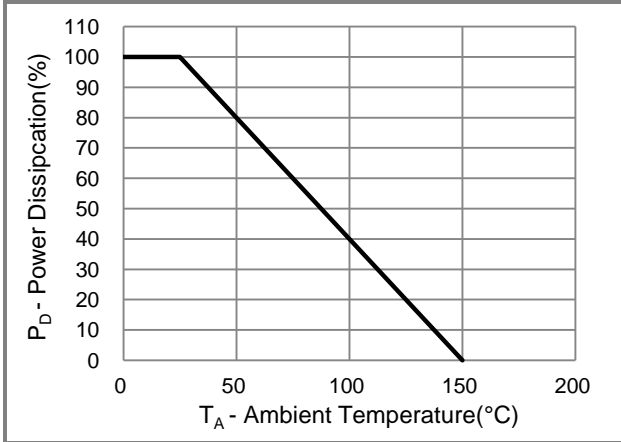


Fig.1 Power Derating Curve

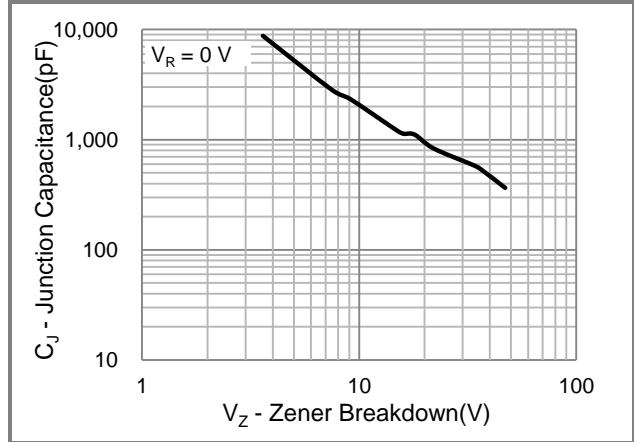


Fig.2 Typical Junction Capacitance

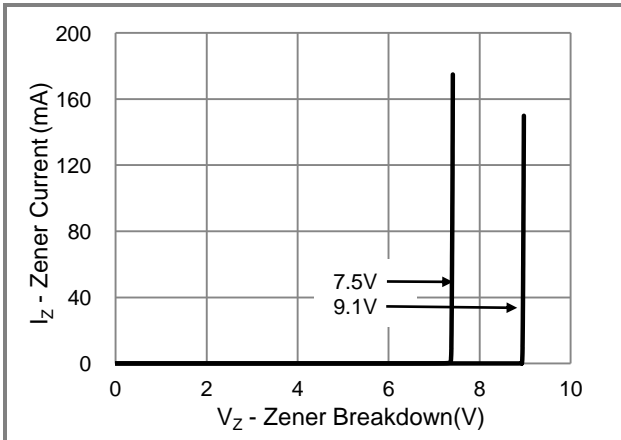


Fig.3 Typical Zener Breakdown

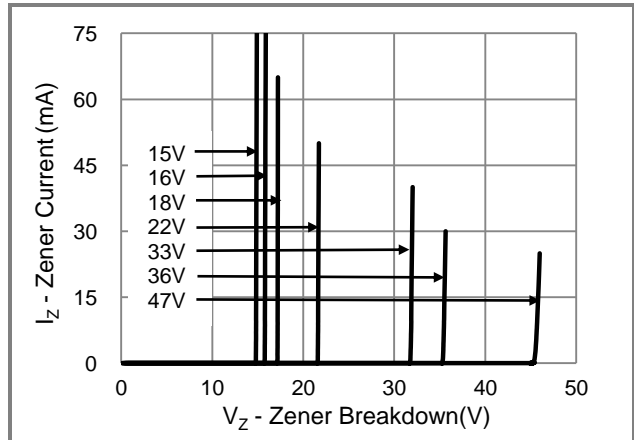


Fig.4 Typical Zener Breakdown

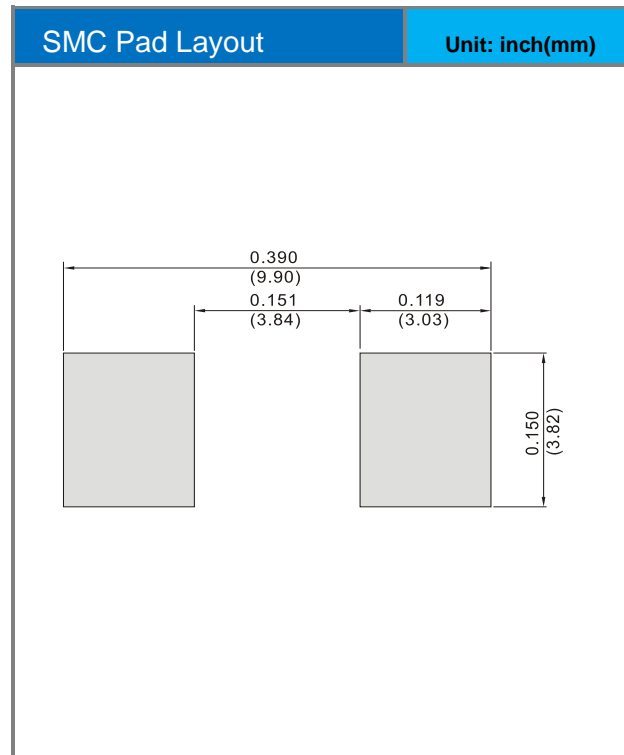
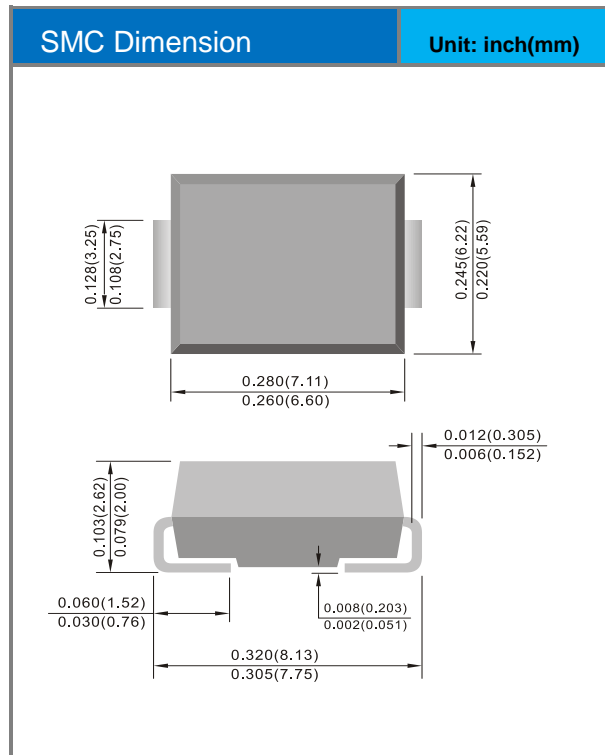


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## Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
1SMC53xx-AU_R2_000A1	SMC	3K pcs / 13" reel	See Table	Halogen free

## Packaging Information & Mounting Pad Layout





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