



# 1SMC5338~1SMC5369

## SURFACE MOUNT SILICON ZENER DIODES

**VOLTAGE** 5.1 ~ 51 Volt **CURRENT** 5 Watt

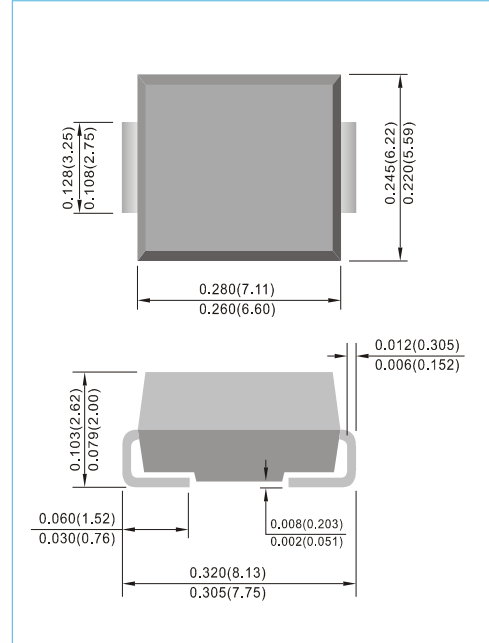
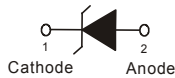
**SMC / DO-214AB** Unit : inch(mm)

### FEATURES

- For surface mounted applications in order to optimize board space
- Low inductance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case: JEDEC DO-214AB, Molded plastic over passivated junction.
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard Packaging: 16mm tape (EIA-481)
- Weight: 0.0082 ounce, 0.2325 gram



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
DC Power Dissipation on TL=75°C ,Measure at Zero Lead Length Derate above 75°C	P <sub>D</sub>	5	Watts
Typical thermal resistance (Note 1)	R <sub>θJA</sub>	100	°C/W
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

NOTES : 1.Mounted on a FR4 PCB, single-sided copper, mini pad.



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Part Number	Nominal Zener Voltage			Max. Zener Impedance				Max. Reverse Leakage Current		Marking Code
	V <sub>Z</sub> @ I <sub>ZT</sub>			Z <sub>ZT</sub> @ I <sub>ZT</sub>		Z <sub>ZK</sub> @ I <sub>ZK</sub>		I <sub>R</sub> @ V <sub>R</sub>		
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V	
1SMC5338	5.1	4.85	5.36	2	240	400	1	10	1.0	338B
1SMC5339	5.6	5.32	5.88	1	220	400	1	10	2.0	339B
1SMC5340	6.0	5.70	6.30	1	200	300	1	10	3.0	340B
1SMC5341	6.2	5.89	6.51	1	200	200	1	10	3.0	341B
1SMC5342	6.8	6.46	7.14	1	175	200	1	10	5.2	342B
1SMC5343	7.5	7.13	7.88	2	175	200	1	10	5.7	343B
1SMC5344	8.2	7.79	8.61	2	150	200	1	10	6.2	344B
1SMC5345	8.7	8.27	9.14	2	150	200	1	10	6.6	345B
1SMC5346	9.1	8.65	9.56	2	150	150	1	7.5	6.9	346B
1SMC5347	10	9.5	10.5	2	125	125	1	5	7.6	347B
1SMC5348	11	10.45	11.55	3	125	125	1	5	8.4	348B
1SMC5349	12	11.4	12.6	3	100	125	1	2	9.1	349B
1SMC5350	13	12.35	13.65	3	100	100	1	1	9.9	350B
1SMC5351	14	13.3	14.7	3	100	75	1	1	10.6	351B
1SMC5352	15	14.25	15.75	3	75	75	1	1	11.5	352B
1SMC5353	16	15.2	16.8	3	75	75	1	1	12.2	353B
1SMC5354	17	16.15	17.85	3	70	75	1	0.5	12.9	354B
1SMC5355	18	17.1	18.9	3	65	75	1	0.5	13.7	355B
1SMC5356	19	18.05	19.95	3	65	75	1	0.5	14.4	356B
1SMC5357	20	19	21	3	65	75	1	0.5	15.2	357B
1SMC5358	22	20.9	23.1	4	50	75	1	0.5	16.7	358B
1SMC5359	24	22.8	25.2	4	50	100	1	0.5	18.2	359B
1SMC5360	25	23.75	26.25	4	50	110	1	0.5	19	360B
1SMC5361	27	25.65	28.35	5	50	120	1	0.5	20.6	361B
1SMC5362	28	26.6	29.4	6	50	130	1	0.5	21.2	362B
1SMC5363	30	28.5	31.5	8	40	140	1	0.5	22.8	363B
1SMC5364	33	31.35	34.65	10	40	150	1	0.5	25.1	364B
1SMC5365	36	34.2	37.8	11	30	160	1	0.5	27.4	365B
1SMC5366	39	37.05	40.95	14	30	170	1	0.5	29.7	366B
1SMC5367	43	40.85	45.15	20	30	190	1	0.5	32.7	367B
1SMC5368	47	44.65	49.35	25	25	210	1	0.5	35.8	368B
1SMC5369	51	48.45	53.55	27	25	230	1	0.5	38.8	369B



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## RATING AND CHARACTERISTIC CURVES

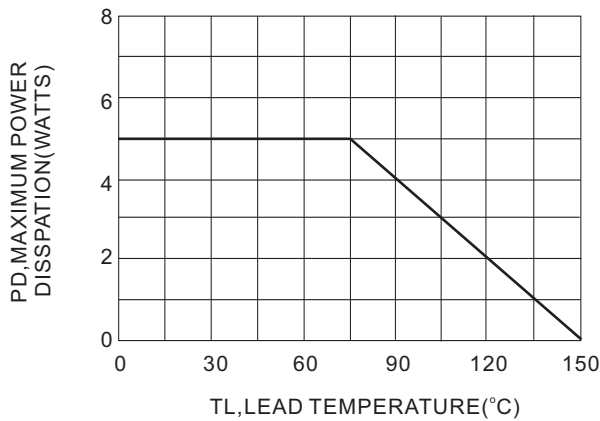


Fig.1-POWER TEMPERATURE DERATING CURVE

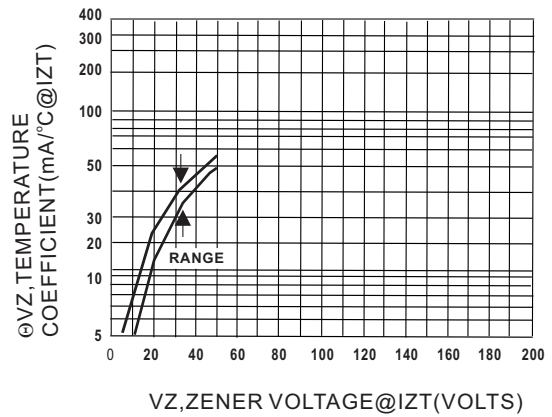


Fig.2-TEMPERATURE COEFFICIENT-RANGE

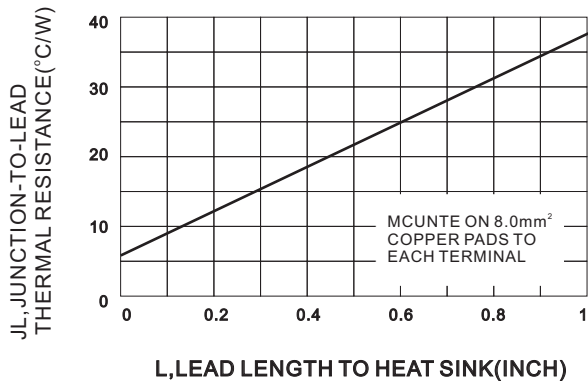


Fig.3-TYPICAL THERMAL RESISTANCE

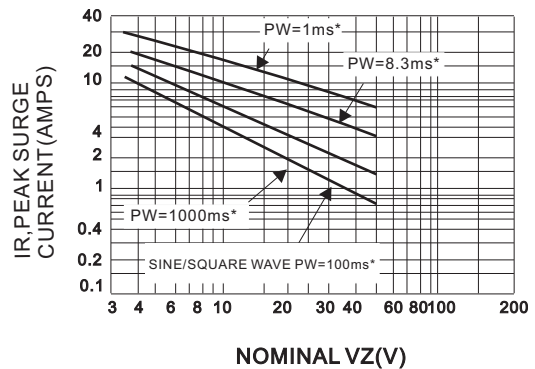


Fig.4-MAXIMUM NON-REPETITIVE SURGE CURRENT VERSUS NOMINAL ZENER VOLTAGE

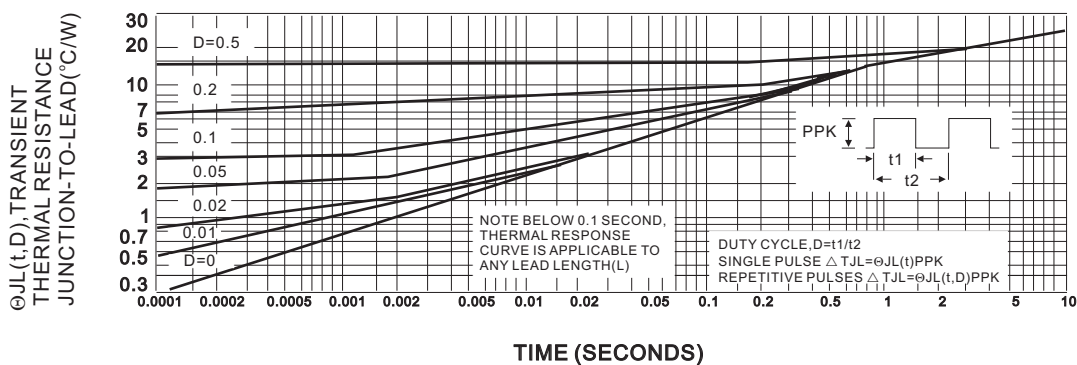


Fig.5-TYPICAL THERMAL RESPONSE



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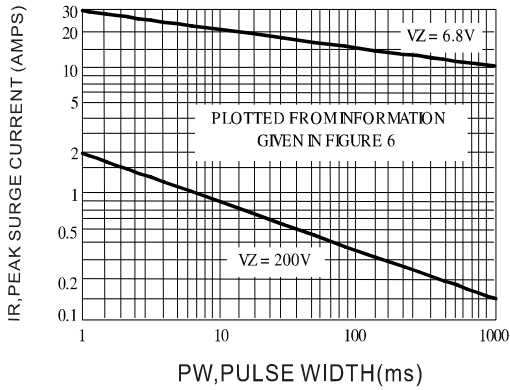


Fig.6-PEAK SURGE CURRENT VERSUS PULSE WIDTH

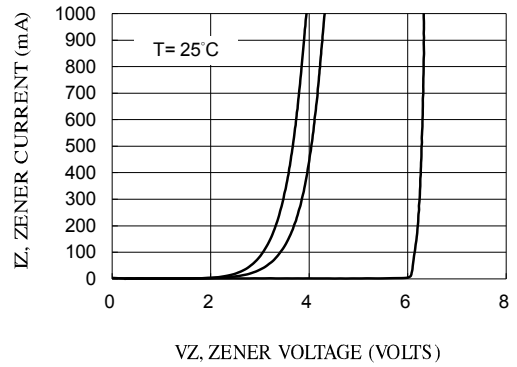


Fig.7-ZENER VOLTAGE VERSUS ZENER CURRENT VZ=3.6 THRU 6 VOLTS

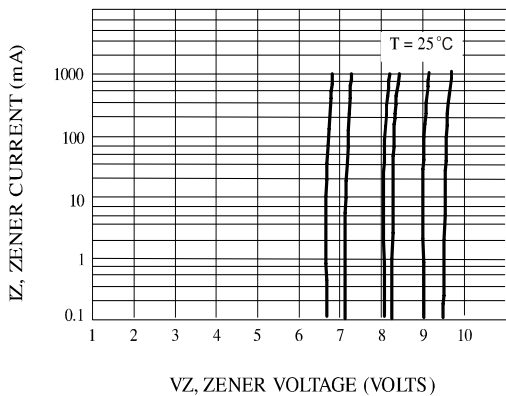


Fig.8-ZENER VOLTAGE VERSUS ZENER CURRENT VZ=6.8 THRU 10 VOLTS

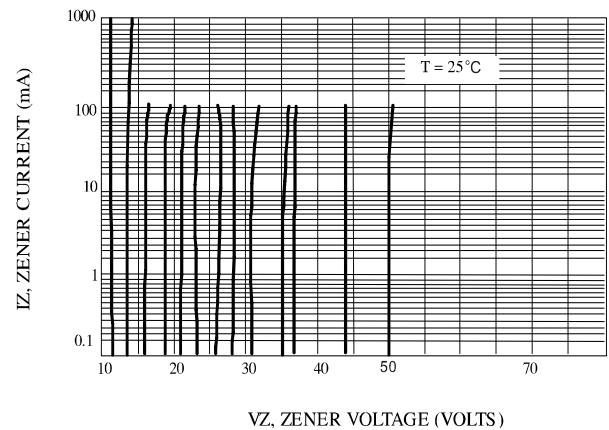
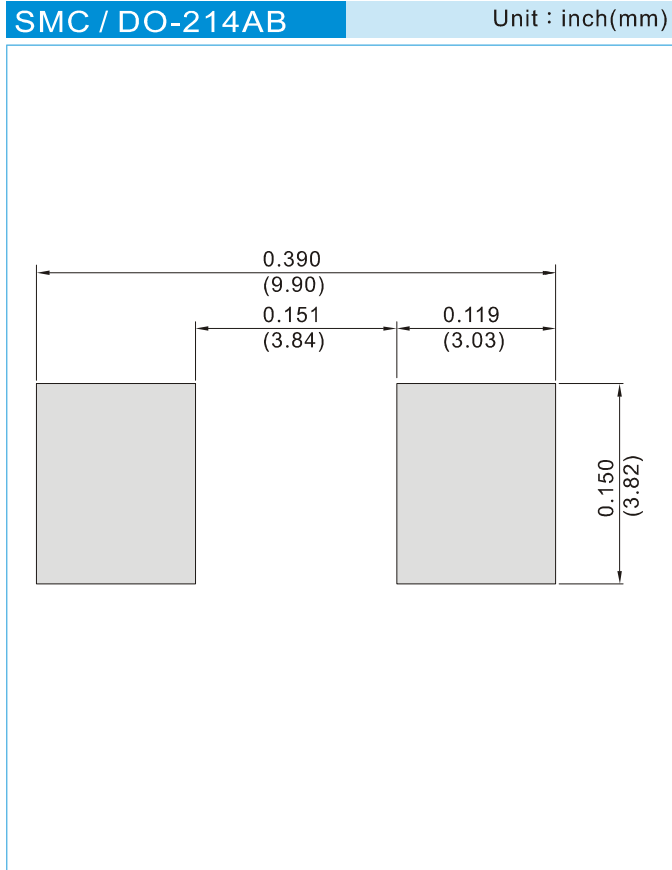


Fig.9-ZENER VOLTAGE VERSUS ZENER CURRENT VZ=11 THRU 51 VOLTS



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information
  - T/R - 3K per 13" plastic Reel
  - T/R - 0.8K per 7" plastic Reel



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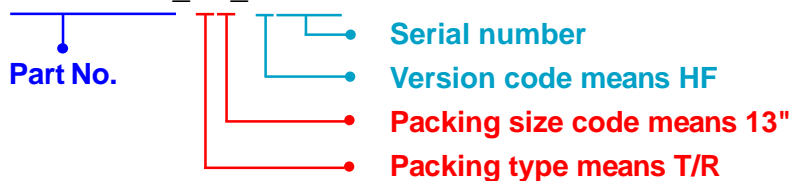
## Part No\_packing code\_Version

1SMC5338\_R1\_00001

1SMC5338\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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