



1SMC5338~1SMC5369

SURFACE MOUNT SILICON ZENER DIODES

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

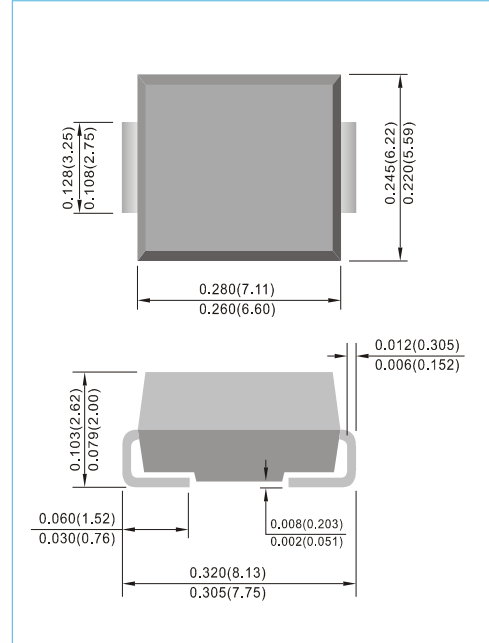
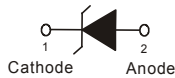
SMC / DO-214AB Unit : inch(mm)

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 _D | 5 | Watts |
| Typical thermal resistance (Note 1) | R _{θJA} | 100 | °C/W |
| Operating Junction and Storage Temperature Range | T _J , T _{STG} | -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 _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 | |
| 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

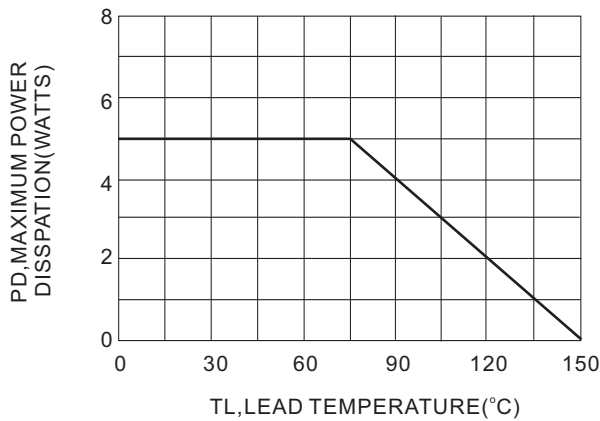


Fig.1-POWER TEMPERATURE DERATING CURVE

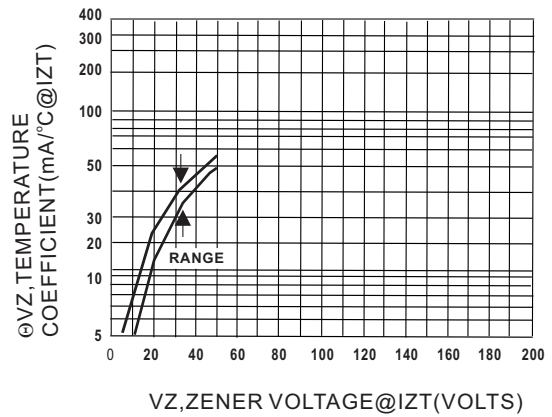


Fig.2-TEMPERATURE COEFFICIENT-RANGE

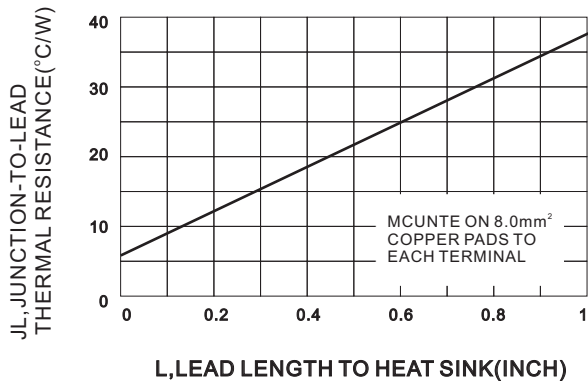


Fig.3-TYPICAL THERMAL RESISTANCE

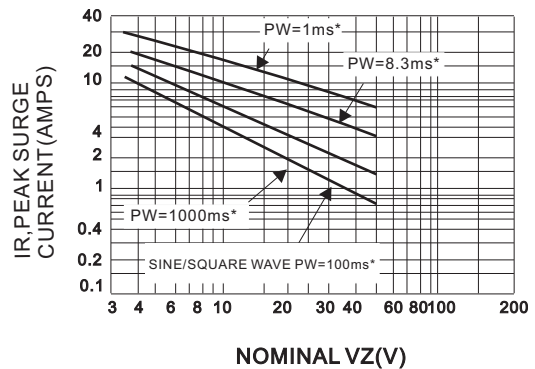


Fig.4-MAXIMUM NON-REPETITIVE SURGE CURRENT VERSUS NOMINAL ZENER VOLTAGE

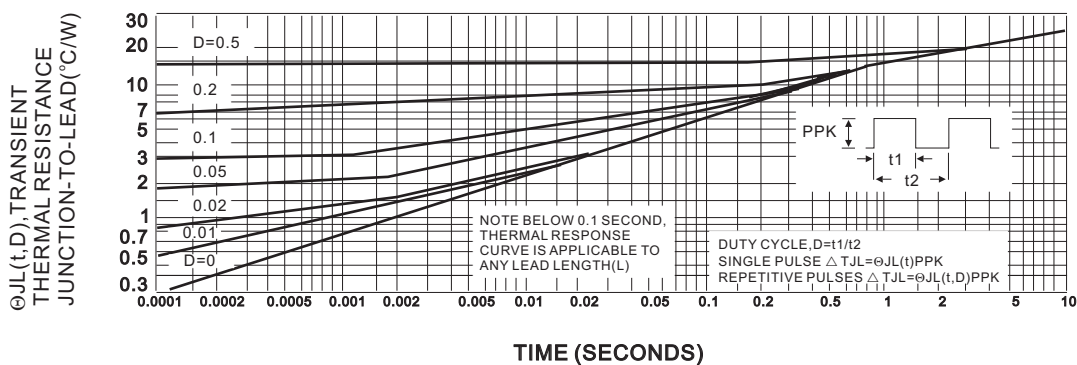


Fig.5-TYPICAL THERMAL RESPONSE



1SMC5338~1SMC5369

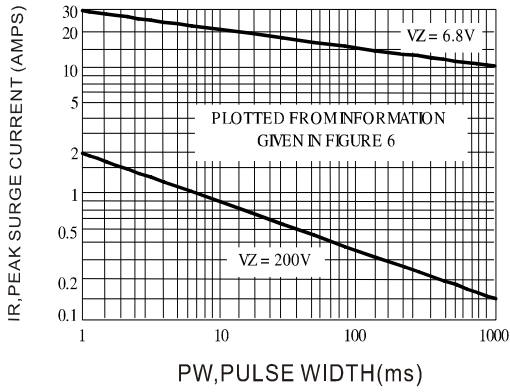


Fig.6-PEAK SURGE CURRENT VERSUS PULSE WIDTH

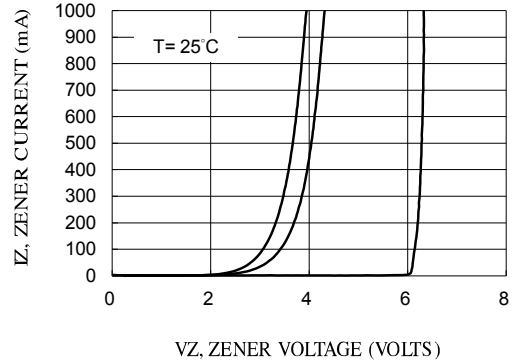


Fig.7-ZENER VOLTAGE VERSUS ZENER CURRENT VZ=3.6 THRU 6 VOLTS

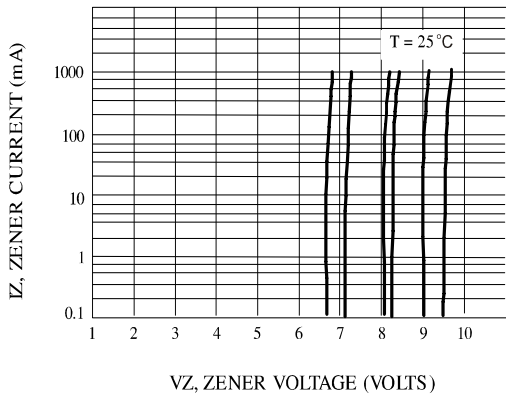


Fig.8-ZENER VOLTAGE VERSUS ZENER CURRENT VZ=6.8 THRU 10 VOLTS

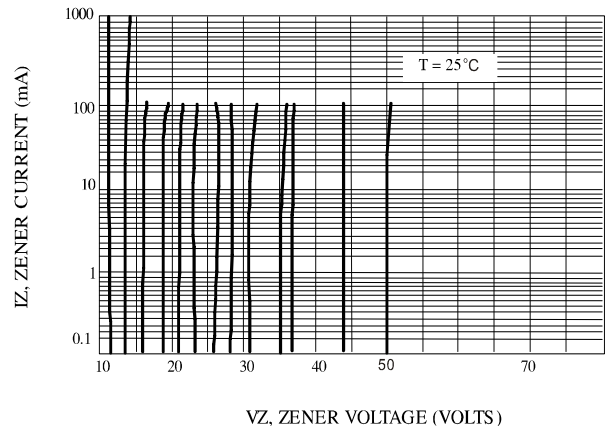


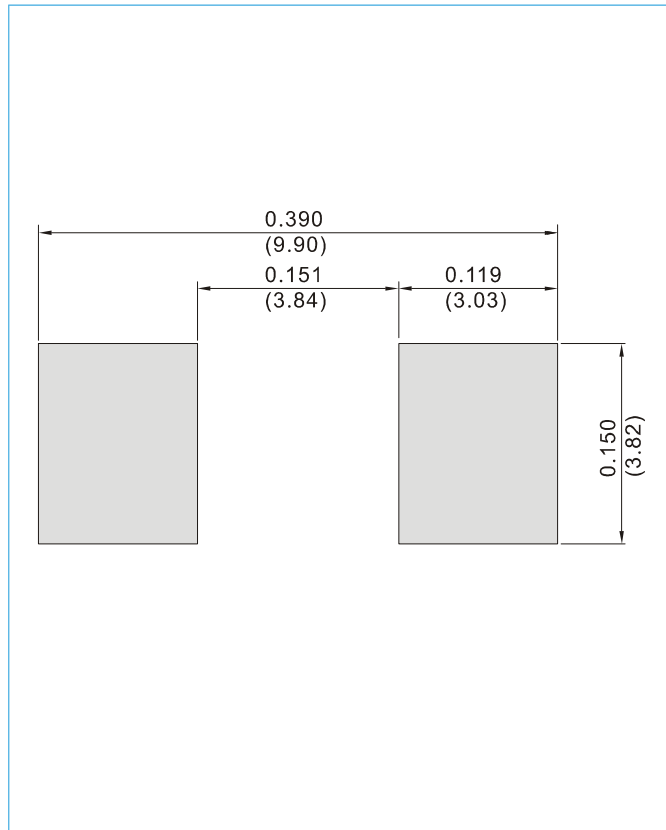
Fig.9-ZENER VOLTAGE VERSUS ZENER CURRENT VZ=11 THRU 51 VOLTS



1SMC5338~1SMC5369

MOUNTING PAD LAYOUT

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



ORDER INFORMATION

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



1SMC5338~1SMC5369

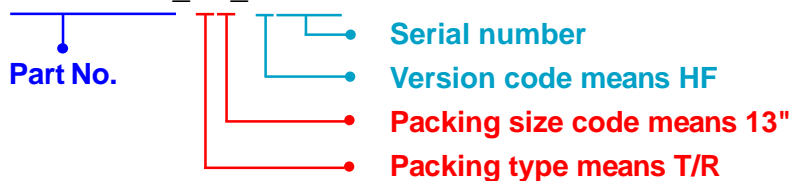
Part No_packing code_Version

1SMC5338_R1_00001

1SMC5338_R2_00001

For example :

RB500V-40_R2_00001



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



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