

# SD1020CS~SD1060CS

## SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 20 to 60 Volts **CURRENT** 10.0 Ampere

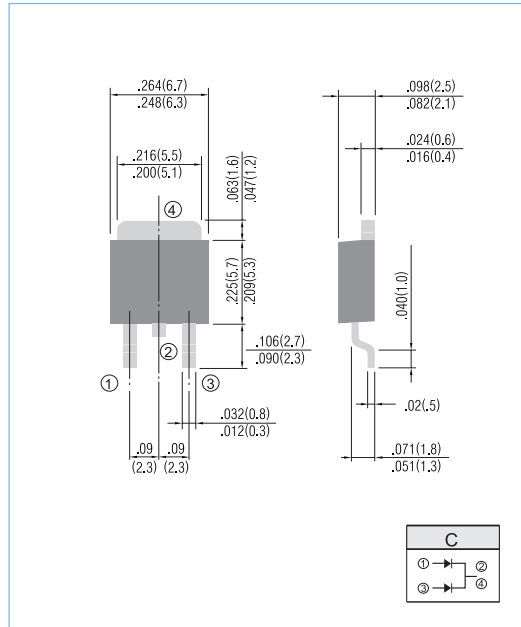
TO-252 Unit: inch ( mm )

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Low power loss, High efficiency
- High surge capacity
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Lead free in comply with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: TO-252 molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marking
- Weight: 0.0104 ounces, 0.297 grams.



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| PARAMETER   | SYMBOL                               | SD1020CS    | SD1030CS | SD1040CS    | SD1050CS  | SD1060CS | UNITS     |
|---|--------------------------------------|-------------|----------|-------------|-----------|----------|-----------|
| Maximum Recurrent Peak Reverse Voltage  | V <sub>RRM</sub>                     | 20          | 30       | 40          | 50        | 60       | V         |
| Maximum RMS Voltage   | V <sub>RMS</sub>                     | 14          | 21       | 28          | 35        | 42       | V         |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>                      | 20          | 30       | 40          | 50        | 60       | V         |
| Maximum Average Forward Rectified Current at T <sub>C</sub> =75°C                                     | I <sub>F(AV)</sub>                   | 10.0        |          |             |           |          | A         |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method)     | I <sub>FSM</sub>                     | 100         |          |             |           |          | A         |
| Maximum Instantaneous Forward Voltage at 5.0A per leg   | V <sub>F</sub>                       | 0.55        |          |             | 0.75      |          | V         |
| Maximum DC Reverse Current T <sub>J</sub> =25°C<br>at Rated DC Blocking Voltage T <sub>J</sub> =100°C | I <sub>R</sub>                       | 0.2<br>20   |          |             | 0.1<br>20 |          | mA        |
| Typical Thermal Resistance  | R <sub>θJC</sub><br>R <sub>θJA</sub> | 5.0<br>80   |          |             |           |          | °C /<br>W |
| Operating Junction Temperature Range  | T <sub>J</sub>                       | -55 to +125 |          | -55 to +150 |           |          | °C        |
| Storage Temperature Range   | T <sub>STG</sub>                     | -55 to +150 |          |             |           |          | °C        |

### NOTES:

1. Both Bonding and Chip structure are available.

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### RATING AND CHARACTERISTIC CURVES

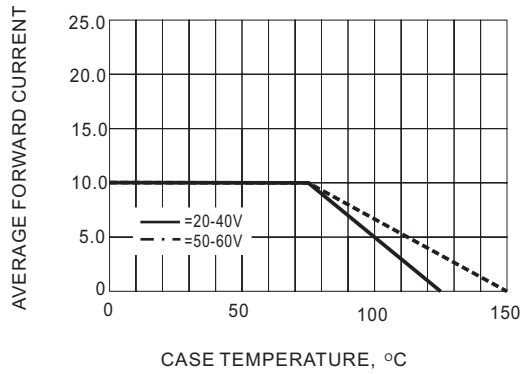


Fig.1- FORWARD CURRENT DERATING CURVE

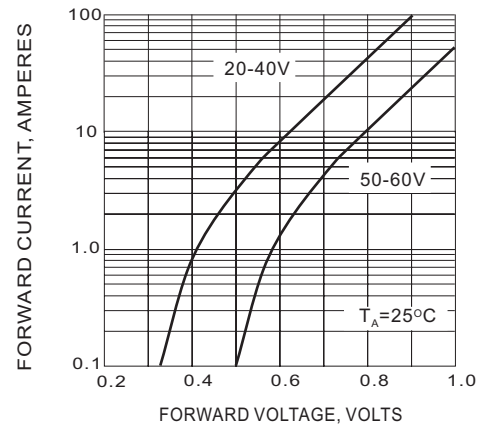


Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

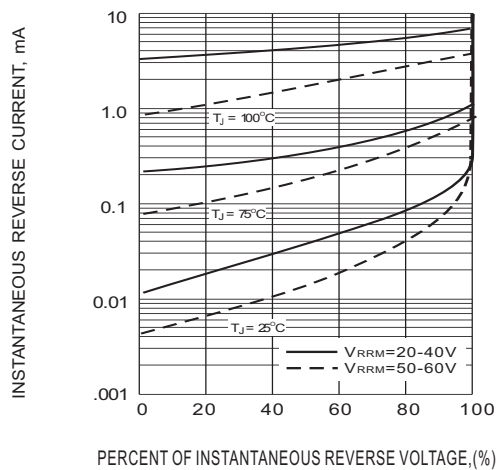


Fig.3- TYPICAL REVERSE CHARACTERISTICS

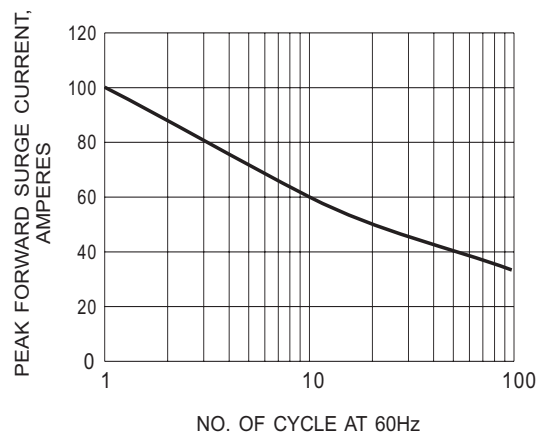
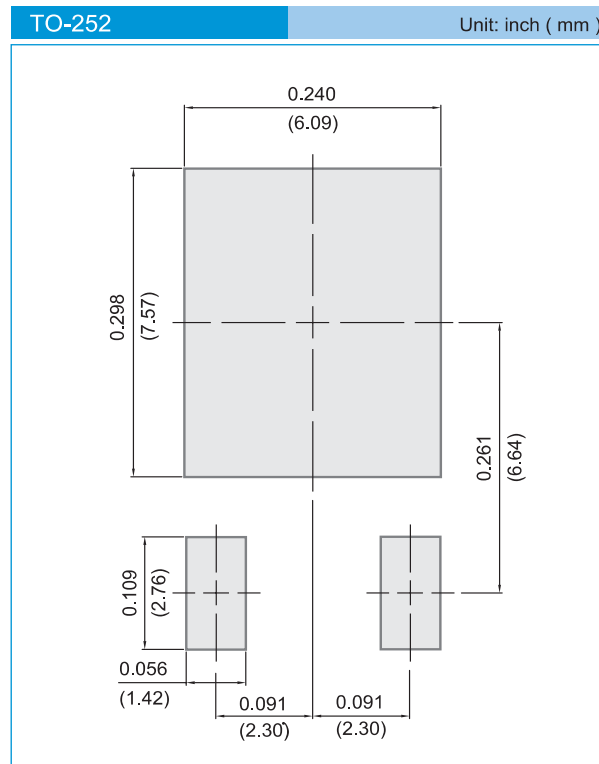


Fig.4- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



## SD1020CS~SD1060CS

### MOUNTING PAD LAYOUT



### ORDER INFORMATION

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

### LEGAL STATEMENT

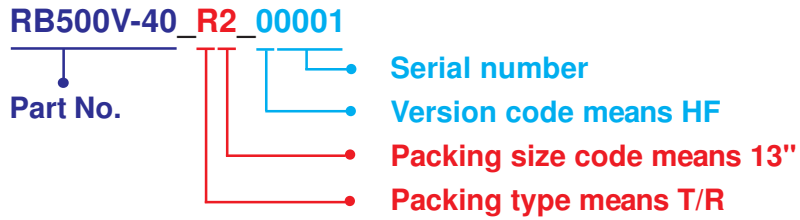
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For example :



| 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 |
| T/B                    | <b>A</b>             | N/A               | <b>0</b>             | HF                        | <b>0</b>             | serial number                         |
| T/R                    | <b>R</b>             | 7"                | <b>1</b>             | RoHS                      | <b>1</b>             | serial number                         |
| B/P                    | <b>B</b>             | 13"               | <b>2</b>             |                           |                      |                                       |
| T/P                    | <b>T</b>             | 26mm              | <b>X</b>             |                           |                      |                                       |
| TRR                    | <b>S</b>             | 52mm              | <b>Y</b>             |                           |                      |                                       |
| TRL                    | <b>L</b>             | PBCU              | <b>U</b>             |                           |                      |                                       |
| FORMING                | <b>F</b>             | PBCD              | <b>D</b>             |                           |                      |                                       |

Part No\_packing code\_Version

SD1020CS\_L2\_00001  
SD1020CS\_L2\_10001  
SD1020CS\_S2\_00001  
SD1020CS\_S2\_10001