



# MBR1H150 \ SX1H15

## ULTRA LOW IR SCHOTTKY BARRIER RECTIFIERS

**Voltage**

**150 V**

**Current**

**1 A**

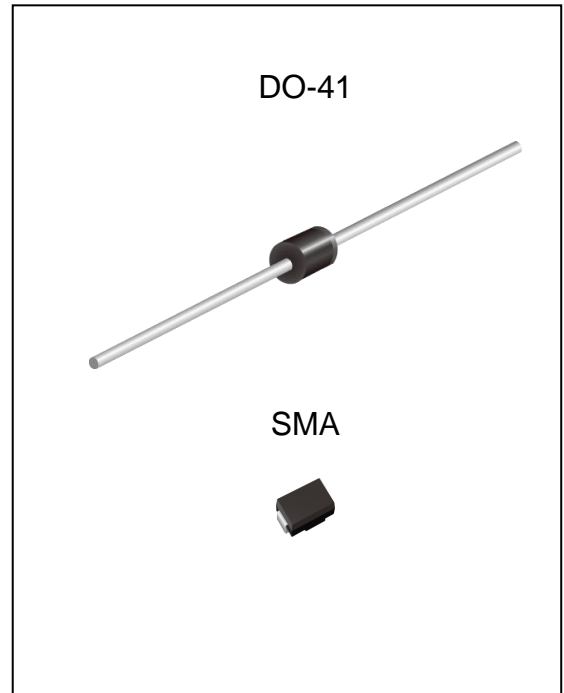
### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- High current capability
- High junction temperature capability
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free) (SMA)

### Mechanical Data

- Case: SMA, DO-41 package
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- SMA Weight: 0.0024 ounces, 0.068 grams.
- DO-41 Weight: 0.012 ounces, 0.336 grams.
- Marking: Part number

|       |          |
|-------|----------|
|       | 150V     |
| SMA   | SX1H15   |
| DO-41 | MBR1H150 |



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

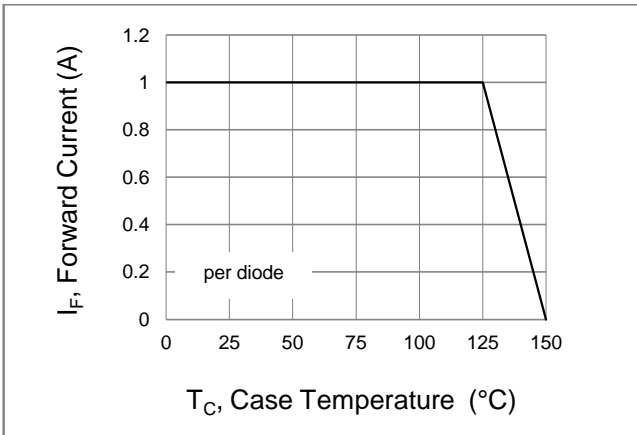
| PARAMETER   |                       | SYMBOL             | 150V        | UNIT |
|---|-----------------------|--------------------|-------------|------|
| Maximum repetitive peak reverse voltage   |                       | V <sub>RRM</sub>   | 150         | V    |
| Maximum rms voltage   |                       | V <sub>RMS</sub>   | 105         | V    |
| Maximum dc blocking voltage   |                       | V <sub>R</sub>     | 150         | V    |
| Maximum average forward rectified current   |                       | I <sub>F(AV)</sub> | 1           | A    |
| Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load |                       | I <sub>FSM</sub>   | 30          | A    |
| Maximum forward voltage at 1A   |                       | V <sub>F</sub>     | 0.85        | V    |
| Maximum dc reverse current at rated dc blocking voltage                             | T <sub>J</sub> =25°C  | I <sub>R</sub>     | 0.5         | μA   |
|   | T <sub>J</sub> =125°C |                    | 1           | mA   |
| Typical thermal resistance  | SMA(Note 1)           | R <sub>θJL</sub>   | 35          | °C/W |
|   | DO-41(Note 2)         |                    | 47          |      |
| Operating junction temperature range  |                       | T <sub>J</sub>     | -55 to +175 | °C   |
| Storage temperature range   |                       | T <sub>STG</sub>   | -55 to +175 | °C   |

Note : 1. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area

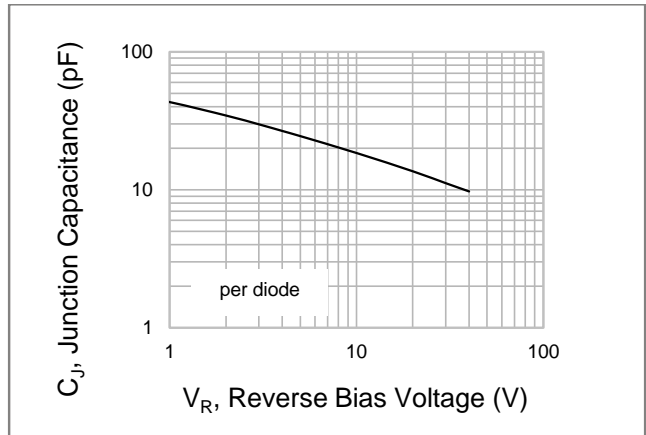
2. The testing condition of the thermal resistance (junction to lead) is based on 10 mm lead length between two 10cm x 10cm FR4 PCB single-sided copper pad



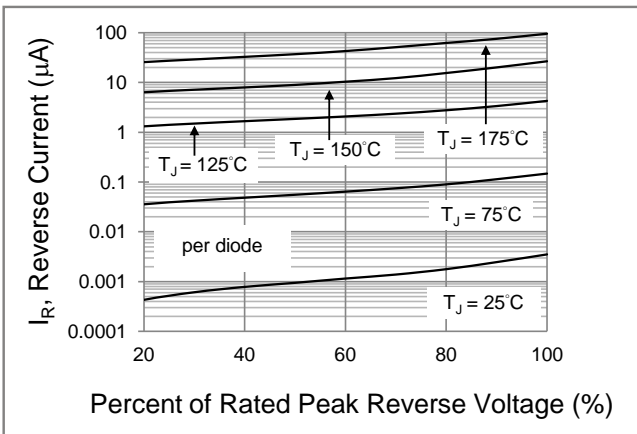
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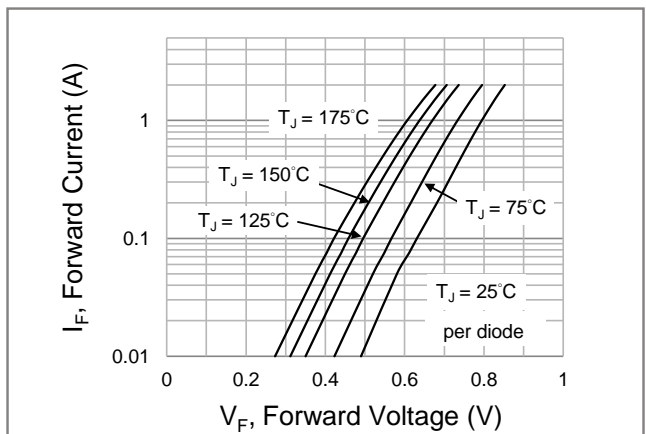
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**

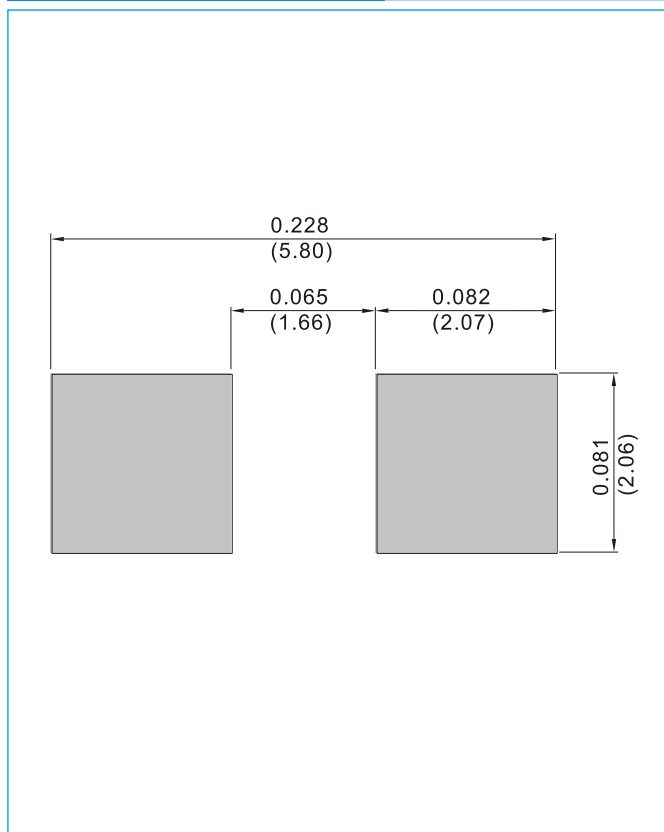


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## MOUNTING PAD LAYOUT

**SMA / DO-214AC**

Unit : inch(mm)



## ORDER INFORMATION

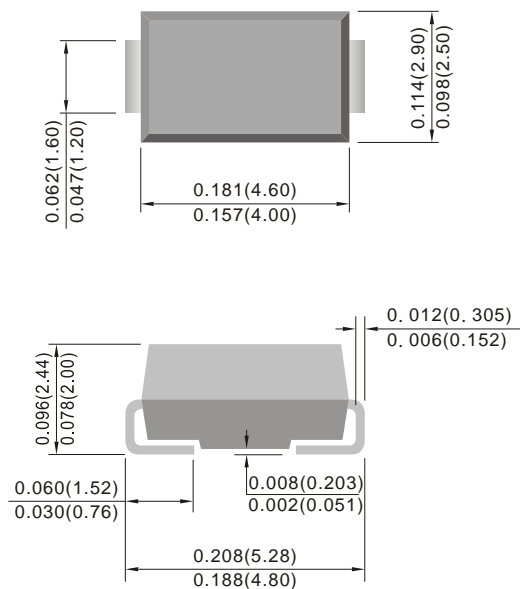
- Packing information  
T/R – 7.5K per 13" plastic Reel  
T/R – 1.8K per 7" plastic Reel



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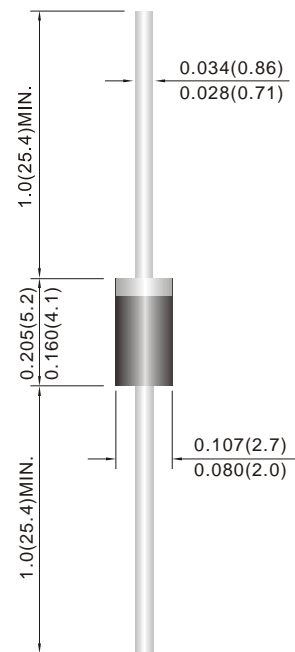
## SMA / DO-214AC

Unit : inch(mm)



## DO-41

Unit : inch(mm)





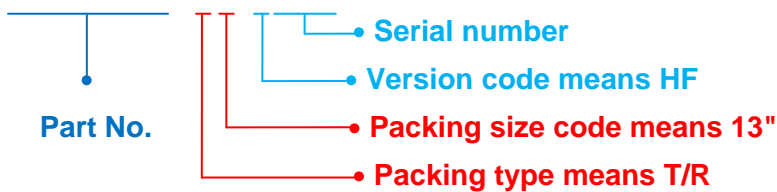
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## Part No\_packing code\_Version

- SX1H15\_R1\_00001
- SX1H15\_R2\_00001
- MBR1H150\_AY\_00001
- MBR1H150\_AY\_10001
- MBR1H150\_B0\_00001
- MBR1H150\_B0\_10001
- MBR1H150\_R2\_00001
- MBR1H150\_R2\_10001

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)        | 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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