

# 1N4148W-AU

## SURFACE MOUNT SWITCHING DIODES

**VOLTAGE** 100 Volts **POWER** 410mWatts

**SOD-123**

Unit : inch(mm)

### FEATURES

- Fast switching Speed.
- Electrically Identical to Standard JEDEC
- High Conductance
- Surface Mount Package Ideally Suited for Automatic Insertion.
- Acquire quality system certificate : TS16949
- AEC-Q101 qualified
- Lead free in comply with EU RoHS 2002/95/EC directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

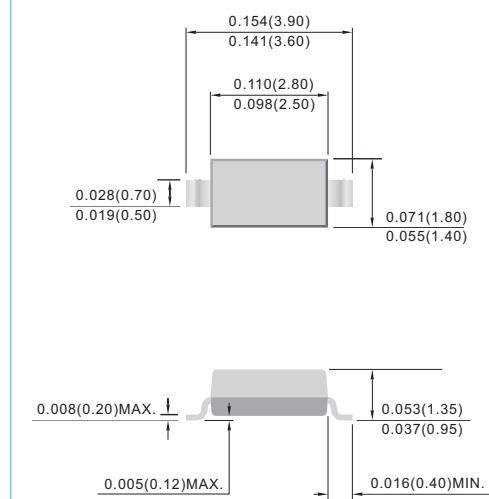
Case: SOD-123 plastic case.

Terminals : Solderable per MIL-STD-750,Method 2026

Standard packaging: 8mm tape

Weight: approximately 0.0004 ounces, 0.01 grams

Marking Code: A2



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T<sub>J</sub> =25°C unless otherwise noted)

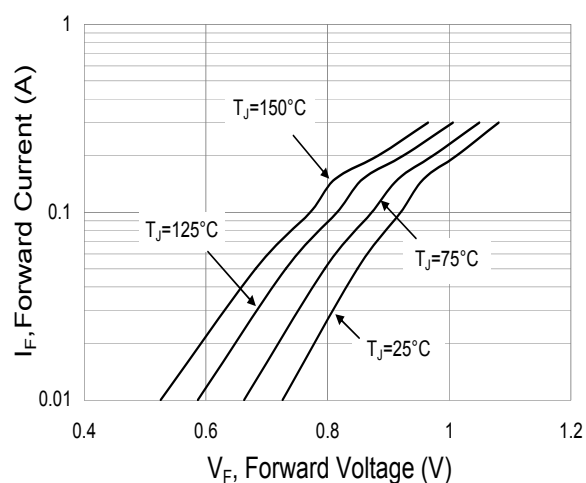
| PARAMETER                                                                        | SYMBOL           | 1N4148W-AU                                             | UNITS  |
|----------------------------------------------------------------------------------|------------------|--------------------------------------------------------|--------|
| Reverse Voltage                                                                  | V <sub>R</sub>   | 75                                                     | V      |
| Peak Reverse Voltage                                                             | V <sub>RM</sub>  | 100                                                    | V      |
| RMS Voltage                                                                      | V <sub>RMS</sub> | 50                                                     | V      |
| Maximum DC Blocking Voltage                                                      | V <sub>DC</sub>  | 75                                                     | V      |
| Maximum Average Forward Current at T <sub>A</sub> =25°C                          | I <sub>AV</sub>  | 150                                                    | mA     |
| Peak Forward Surge Current, 1.0μs                                                | I <sub>FSM</sub> | 4                                                      | A      |
| Power Dissipation Derate Above 25°C                                              | P <sub>TOT</sub> | 410                                                    | mW     |
| Maximum Forward Voltage                                                          | V <sub>F</sub>   | 0.715@0.001A<br>0.855@0.01A<br>1.0@0.05A<br>1.25@0.15A | V      |
| Maximum DC Reverse Current at Rated DC Blocking Voltage<br>T <sub>J</sub> = 25°C | I <sub>R</sub>   | 0.025@20V<br>2.5@75V                                   | μA     |
| Junction Capacitance( Notes1)                                                    | C <sub>J</sub>   | 1.5                                                    | pF     |
| Maximum Reverse Recovery (Notes2)                                                | T <sub>RR</sub>  | 4.0                                                    | ns     |
| Typical Thermal Resistance                                                       | R <sub>θJA</sub> | 450                                                    | °C / W |
| Operating and Storage Temperature Range                                          | T <sub>J</sub>   | -55 to +150                                            | °C     |

NOTE:

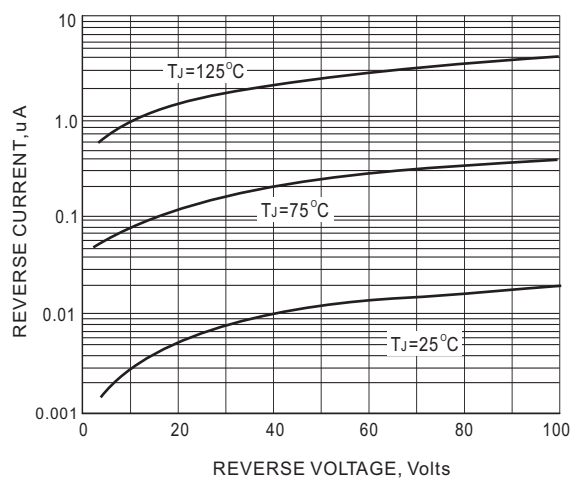
1. C<sub>J</sub> at V<sub>R</sub>=0, f=1MHZ

2.From I<sub>F</sub>=10mA to I<sub>R</sub>=1mA, V<sub>R</sub>=6Volts, R<sub>L</sub>=100Ω

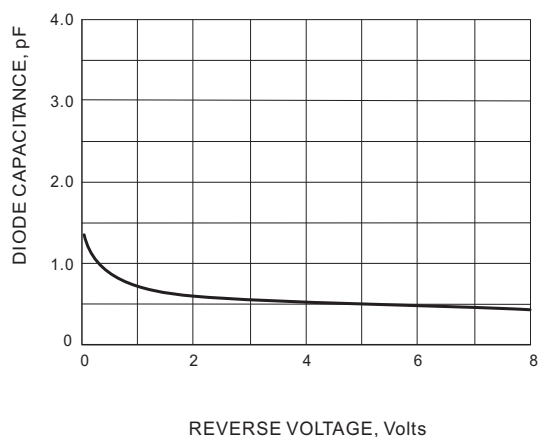
## 1N4148W-AU



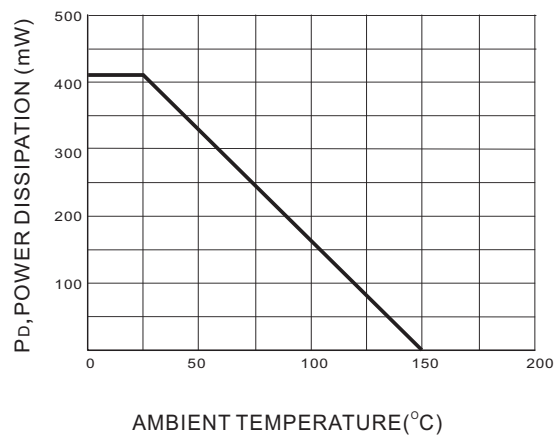
**Fig.1 Typical Forward Characteristics**



**FIG.2 TYPICAL REVERSE CHARACTERISTICS**



**FIG.3 TYPICAL JUNCTION CAPACITANCE**



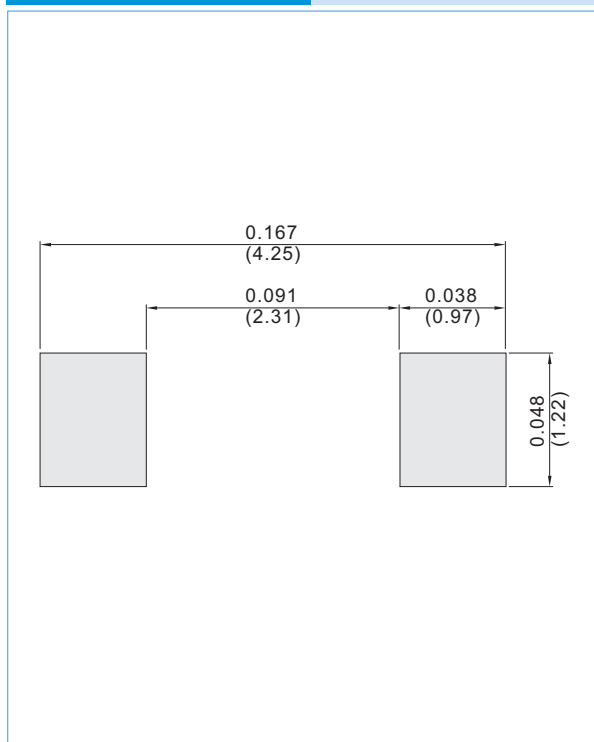
**FIG.4 POWER DERATING CURVE**

## 1N4148W-AU

### MOUNTING PAD LAYOUT

SOD-123

Unit : inch(mm)



### ORDER INFORMATION

- Packing information
  - T/R - 10K per 13" plastic Reel
  - T/R - 3K per 7" plastic Reel

## 1N4148W-AU

### Part No\_packing code\_Version

1N4148W-AU\_R1\_000A1

1N4148W-AU\_R2\_000A1

For example :

**RB500V-40** **R2** **00001**

Part No.

Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

| 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>             |                           |                      |                                       |



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