

### Description

The 1N4148WS is silicon diode, SOD-323 plastic package.

### Applications

- Small signal diode

### Features

- Fast switching diodes
- Halogen-free Product

| $V_{RRM}$ | $I_o$  | $I_{FM}$ |
|-----------|--------|----------|
| 100 V     | 150 mA | 300 mA   |

### Equivalent Circuit & Pinning



PIN1:Cathode

PIN2:Anode

### Marking

|         |     |
|---------|-----|
| Marking | HA2 |
|---------|-----|

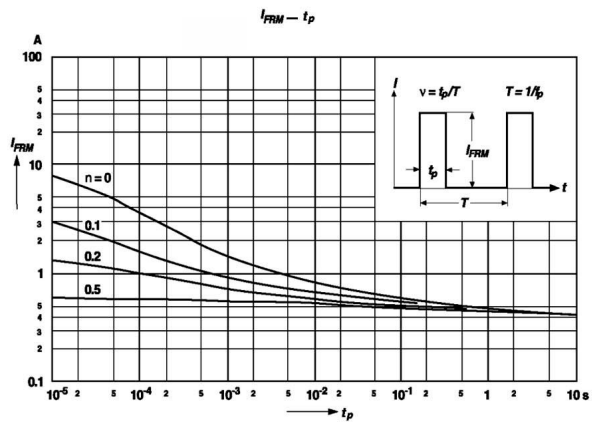
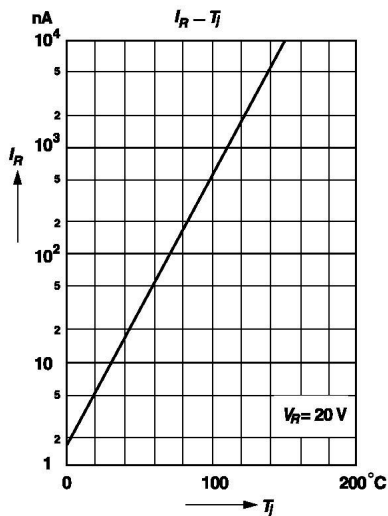
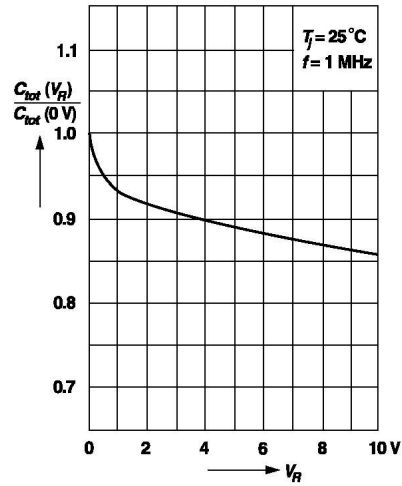
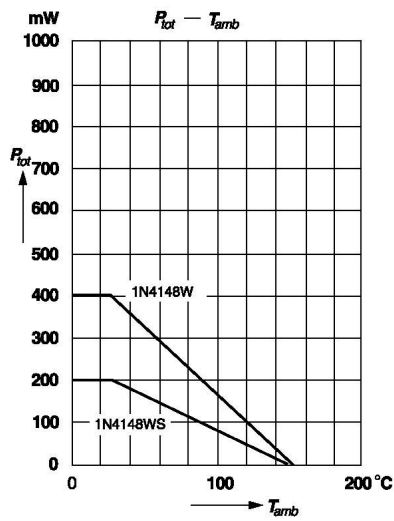
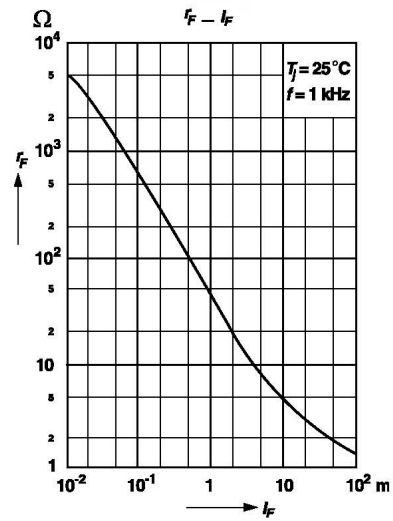
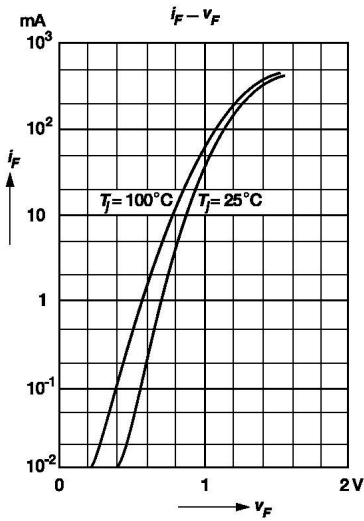
**Absolute Maximum Ratings(Ta=25°C)**

| Parameter                                  | Symbol                 | Rating  | Unit |
|--|------------------------|---------|------|
| Reverse Voltage                            | $V_R$                  | 75      | V    |
| Peak Reverse Voltage                       | $V_{RM}$               | 100     | V    |
| Average Rectified Output Current           | $I_O$                  | 150     | mA   |
| Forward Continuous Current                 | $I_{FM}$               | 300     | mA   |
| Non-Repetitive Peak Forward Surge Current  | $I_{FSM} (t=1.0\mu s)$ | 2.0     | A    |
|  | $I_{FSM} (t=1.0s)$     | 1.0     | A    |
| Power Dissipation                          | $P_{tot}$              | 200     | mW   |
| Junction Temperature                       | $T_j$                  | 150     | °C   |
| Storage Temperature Range                  | $T_{stg}$              | -55~150 | °C   |
| Thermal Resistance Junction to Ambient Air | $R_{\theta JA}$        | 625     | °C/W |

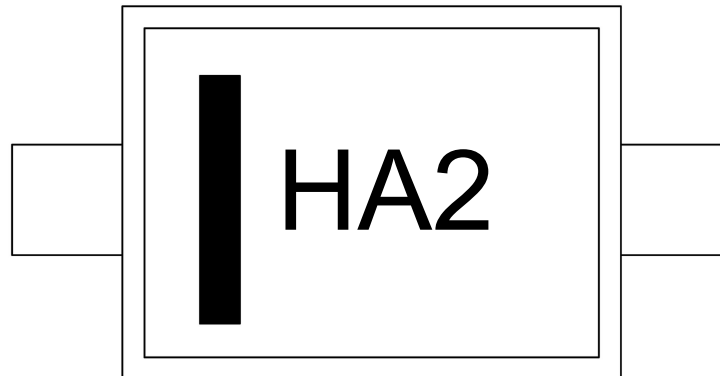
**Electrical Characteristics(Ta=25°C)**

| Parameter                             | Symbol    | Test Conditions                                    | Min | Typ | Max | Unit    |
|---------------------------------------|-----------|--|-----|-----|-----|---------|
| Forward Voltage                       | $V_F$     | $I_F=10mA$   |     |     | 1.0 | V       |
| Instantaneous Reverse Current         | $I_R$     | $V_R=20V$  |     |     | 25  | nA      |
|                                       |           | $V_R=75V$  |     |     | 5   | $\mu A$ |
|                                       |           | $V_R=20V$ $T_j=150^\circ C$                        |     |     | 50  | $\mu A$ |
| Capacitance                           | $C_{tot}$ | $V_F=V_R=0V$                                       |     |     | 4   | pF      |
| Reverse Recovery Time                 | $t_{rr}$  | $I_F=10mA$ $V_R=6.0V$<br>$I_R=1mA$ $R_L=100\Omega$ |     |     | 4   | ns      |
| Voltage Rise when Switching On tested | $V_{fr}$  | $t_p=0.1\mu s$ $f_p=5to100kHz$<br>Time<30ns        |     |     | 2.5 | V       |
| Total Capacitance                     | $C_T$     | $V_R=0$ $f=1.0MHz$                                 |     |     | 2.0 | pF      |

Electrical Characteristic Curve



Marking Instructions



Note:

H: Company Code.

A2: Product Type.

Packaging SPEC.

REEL INFORMATION

| Package Type | Units      |                 |                 |                       |                 | Dimension (unit: mm <sup>3</sup> ) |             |             |
|--------------|------------|-----------------|-----------------|-----------------------|-----------------|------------------------------------|-------------|-------------|
|              | Units/Reel | Reels/Inner Box | Units/Inner Box | Inner Boxes/Outer Box | Units/Outer Box | Reel                               | Inner Box   | Outer Box   |
| SOD-323      | 3,000      | 10              | 30,000          | 6                     | 180,000         | 7" x8                              | 180×120×180 | 390×385×205 |

Package Outline Dimensions

