

**Small Signal Product**
**200mW Surface Mount Schottky Barrier Diode**
**FEATURES**

- Fast switching speed
- Low forward voltage
- Surface mount device type
- Moisture sensitivity level 1
- Pb free and RoHS compliant
- Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code
- Ultra high-speed swithing
- Voltage clamping
- Protection circuits


**SOT-323**

**MECHANICAL DATA**

- Case: SOT-323 small outline plastic package
- High temperature soldering guaranteed: 260°C/10s
- Weight: 5mg (approximately)

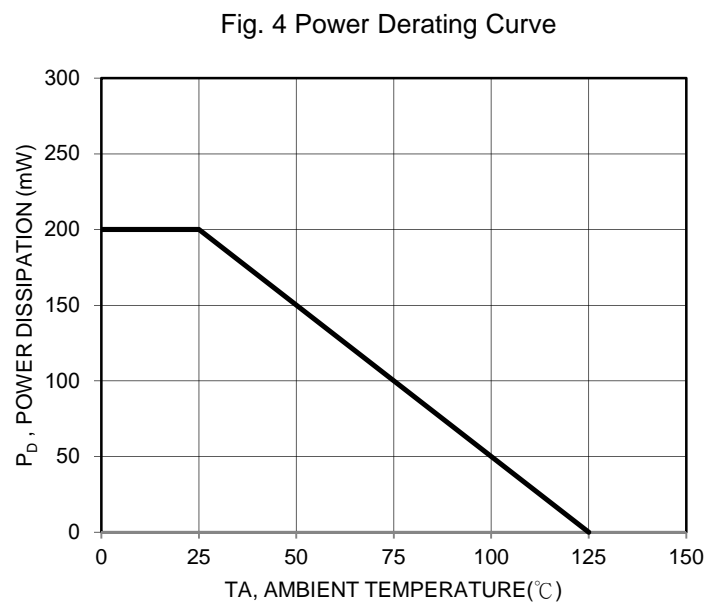
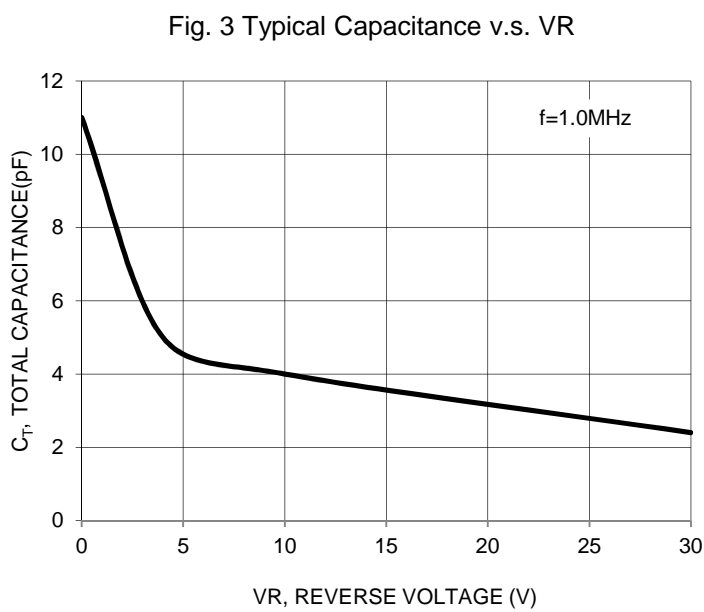
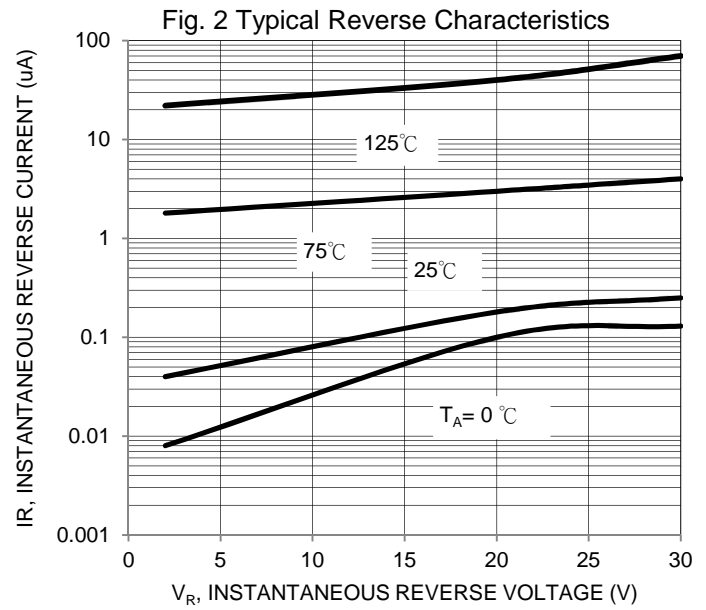
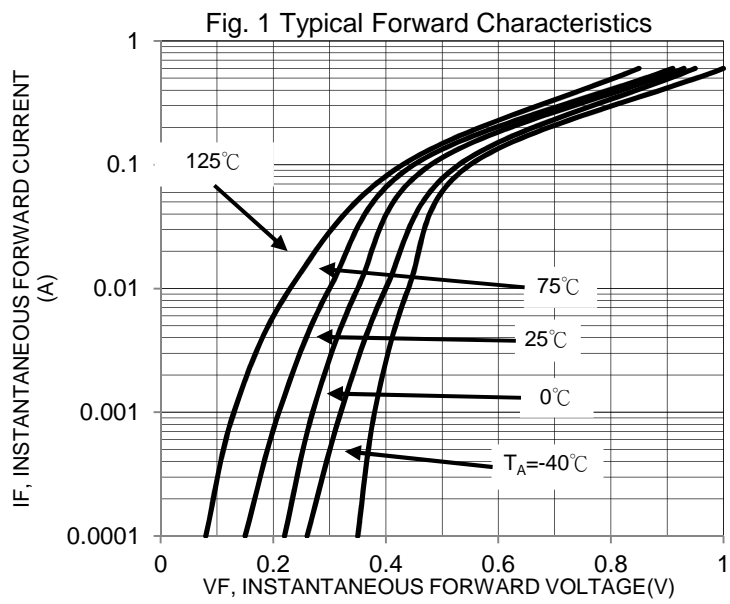
| <b>MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS</b> ( $T_A=25^\circ\text{C}$ unless otherwise noted) |               |               |                  |
|--------------------------------------------------------------------------------------------------------|---------------|---------------|------------------|
| <b>PARAMETER</b>                                                                                       | <b>SYMBOL</b> | <b>VALUE</b>  | <b>UNIT</b>      |
| Peak Repetitive Reverse Voltage                                                                        | $V_{RRM}$     | 30            | V                |
| Reverse Voltage                                                                                        | $V_R$         | 30            | V                |
| Forward Current                                                                                        | $I_F$         | 200           | mA               |
| Repetitive Peak Forward Current                                                                        | $I_{FRM}$     | 300           | mA               |
| Peak Forward Surge Current (tp=10ms)                                                                   | $I_{FSM}$     | 600           | mA               |
| Total Power Dissipation                                                                                | $P_{tot}$     | 200           | mW               |
| Thermal Resistance form Junction Ambient                                                               | $R_{thjA}$    | 625           | K/W              |
| Junction Temperature                                                                                   | $T_J$         | 125           | $^\circ\text{C}$ |
| Storage Temperature Range                                                                              | $T_{STG}$     | - 55 to + 150 | $^\circ\text{C}$ |

| <b>PARAMETER</b>          | <b>SYMBOL</b> | <b>MIN</b>                | <b>MAX</b> | <b>UNIT</b>   |    |
|---------------------------|---------------|---------------------------|------------|---------------|----|
| Reverse Breakdown Voltage | $V_{(BR)R}$   | 30                        | --         | V             |    |
| Forward Voltage           | $V_F$         | at $I_F = 0.1 \text{ mA}$ | --         | 240           | mV |
|                           |               | at $I_F = 1 \text{ mA}$   | --         | 320           |    |
|                           |               | at $I_F = 10 \text{ mA}$  | --         | 400           |    |
|                           |               | at $I_F = 30 \text{ mA}$  | --         | 500           |    |
|                           |               | at $I_F = 100 \text{ mA}$ | --         | 1000          |    |
| Reverse Current           | $I_R$         | --                        | 2.0        | $\mu\text{A}$ |    |
| Total Capacitance         | $C_T$         | --                        | 10         | pF            |    |
| Reverse Recovery Time     | $t_{rr}$      | --                        | 5          | ns            |    |

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**RATINGS AND CHARACTERISTICS CURVES**

(TA=25°C unless otherwise noted)



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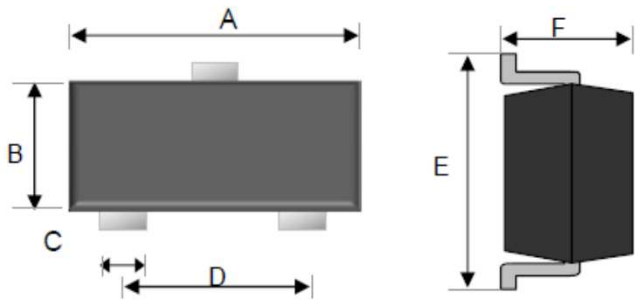
| <b>ORDERING INFORMATION</b> |                         |                     |                            |                |                |                |
|-----------------------------|-------------------------|---------------------|----------------------------|----------------|----------------|----------------|
| <b>PART NO.</b>             | <b>MANUFACTURE CODE</b> | <b>PACKING CODE</b> | <b>GREEN COMPOUND CODE</b> | <b>PACKAGE</b> | <b>PACKING</b> | <b>MARKING</b> |
| BAT54W                      | (Note)                  | RF                  | G                          | SOT-323        | 3K / 7" Reel   | L4             |
| BAT54AW                     |                         | RF                  | G                          | SOT-323        | 3K / 7" Reel   | L42            |
| BAT54CW                     |                         | RF                  | G                          | SOT-323        | 3K / 7" Reel   | L43            |
| BAT54SW                     |                         | RF                  | G                          | SOT-323        | 3K / 7" Reel   | L44            |

Note: Manufacture special control, if empty means no special control requirement.

| <b>EXAMPLE</b>       |                 |                         |                     |                            |                    |
|----------------------|-----------------|-------------------------|---------------------|----------------------------|--------------------|
| <b>PREFERRED P/N</b> | <b>PART NO.</b> | <b>MANUFACTURE CODE</b> | <b>PACKING CODE</b> | <b>GREEN COMPOUND CODE</b> | <b>DESCRIPTION</b> |
| BAT54W RFG           | BAT54W          |                         | RF                  | G                          | Green compound     |
| BAT54W-B0 RFG        | BAT54W          | B0                      | RF                  | G                          | Green compound     |

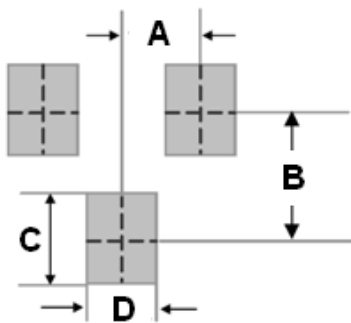
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**DIMENSIONS**



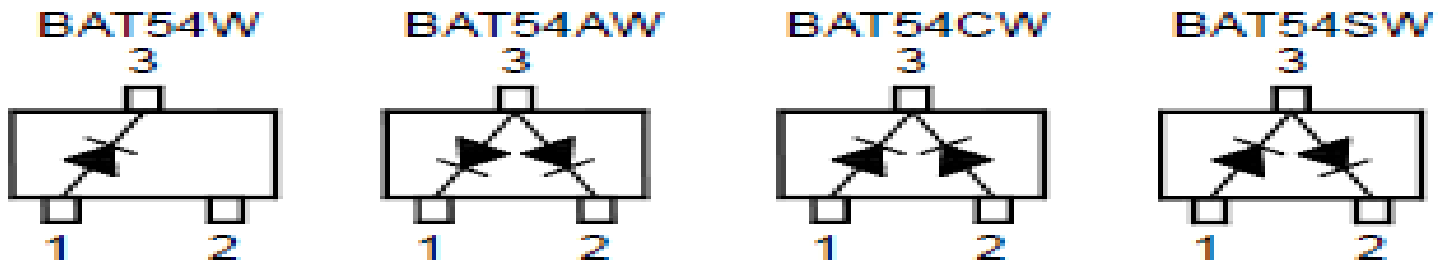
| DIM. | Unit (mm) |      | Unit (inch) |      |
|------|-----------|------|-------------|------|
|      | Min       | Max  | Min         | Max  |
| A    | 1.80      | 2.20 | 0.07        | 0.09 |
| B    | 1.15      | 1.35 | 0.05        | 0.05 |
| C    | 0.15      | 0.40 | 0.01        | 0.02 |
| D    | 1.20      | 1.40 | 0.05        | 0.06 |
| E    | 2.00      | 2.45 | 0.08        | 0.10 |
| F    | 0.80      | 1.10 | 0.03        | 0.04 |

**SUGGESTED PAD LAYOUT**



| DIM. | Unit (mm) | Unit (inch) |
|------|-----------|-------------|
|      | Typ.      | Typ.        |
| A    | 0.65      | 0.026       |
| B    | 1.6       | 0.063       |
| C    | 0.8       | 0.031       |
| D    | 0.8       | 0.031       |

**PIN CONFIGURATION**



**Small Signal Product****Notice**

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