



BAT42W THRU BAT43W

Features

- For General Purpose applications
- These diodes are also available in the DO-35 case with the type designations BAT42 to BAT43 and in the MiniMELF case with the type designations LL42 to LL43.
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

Mechanical Data

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking code: BAT42W=S7 ,L2
BAT43W=S8 ,L3

Maximum Ratings

| Symbol | Rating | Rating | Unit |
|-----------|--|-------------|--------------|
| V_{RRM} | Repetitive Peak Reverse Voltage | 30 | V |
| I_F | Forward DC Current at $T_{amb}=25^\circ C$ | 200 | mA |
| I_{FRM} | Repetitive Peak Forward Current at $t_p < 1s$, $T_{amb}=25^\circ C^{(1)}$ | 500 | mA |
| I_{FSM} | Surge Forward Current at $t_p < 10ms$, $T_j=25^\circ C^{(1)}$ | 4.0 | A |
| P_{tot} | Power Dissipation at $T_{amb}=65^\circ C^{(1)}$ | 200 | mW |
| R_{JA} | Thermal Resistance Junction to Ambient Air ⁽¹⁾ | 300 | $^\circ C/W$ |
| T_j | Junction Temperature | -55 to +125 | $^\circ C$ |
| T_{STG} | Storage Temperature | -55 to +150 | $^\circ C$ |

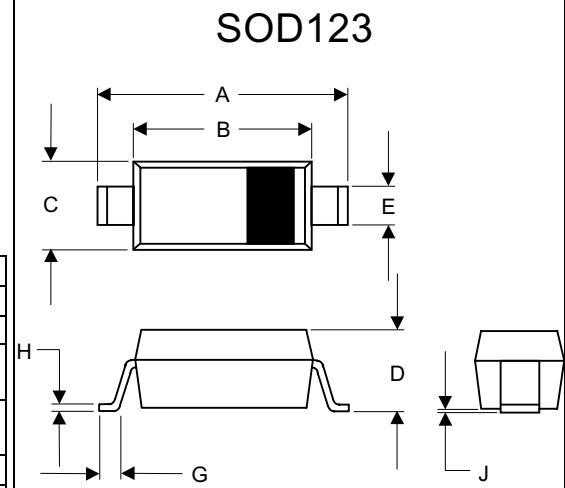
Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol | Parameter | Min | Typ | Max | Units |
|-------------|--|--------|------|------------|-------|
| $V_{(BR)R}$ | Reverse Breakdown Voltage ($I_R=100\mu A$ dc Pulsed) | 30 | --- | --- | V |
| V_F | Forward Voltage ⁽²⁾ $I_F=200mA$ dc | --- | --- | 1.0 | V |
| | $I_F=10mA$ dc | BAT42W | --- | 0.4 | |
| | $I_F=50mA$ dc | BAT42W | --- | 0.65 | |
| | $I_F=2.0mA$ dc | BAT43W | 0.26 | 0.33 | |
| | $I_F=15mA$ dc | BAT43W | --- | 0.45 | |
| I_R | Leakage Current ⁽²⁾ ($V_R=25V$ dc) ($V_R=25V$ dc, $T_j=100^\circ C$) | --- | --- | 0.5 100 | uA |
| C_{tot} | Capacitance ($V_R=1.0$, $f=1.0MHz$) | --- | 7.0 | --- | pF |
| t_{rr} | Reverse Recovery Time ($I_F=10mA$, $I_R=10mA$) ($I_{rr}=1.0mA$, $R_L=100\Omega$) | --- | --- | 5.0 | ns |

Notes:

- Valid provided that electrodes are kept at ambient temperature
- Pulse Test $t_p < 300\mu s$, Duty Cycle < 2%

**200mW
Schottky Diodes
30 Volts**



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|-------|-------|------|
| | MIN | MAX | MIN | MAX | |
| A | .140 | .152 | 3.55 | 3.85 | |
| B | .100 | .112 | 2.55 | 2.85 | |
| C | .055 | .071 | 1.40 | 1.80 | |
| D | ----- | .053 | ----- | 1.35 | |
| E | .012 | .031 | 0.30 | .78 | |
| G | .006 | ----- | 0.15 | ----- | |
| H | ----- | .01 | ----- | .25 | |
| J | ----- | .006 | ----- | .15 | |

SUGGESTED SOLDER PAD LAYOUT

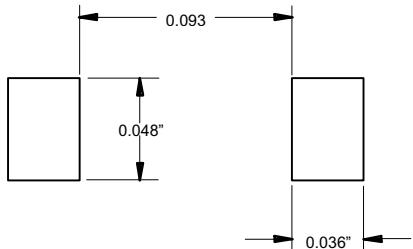


Fig. 1 – Admissible Power Dissipation vs. Ambient Temperature

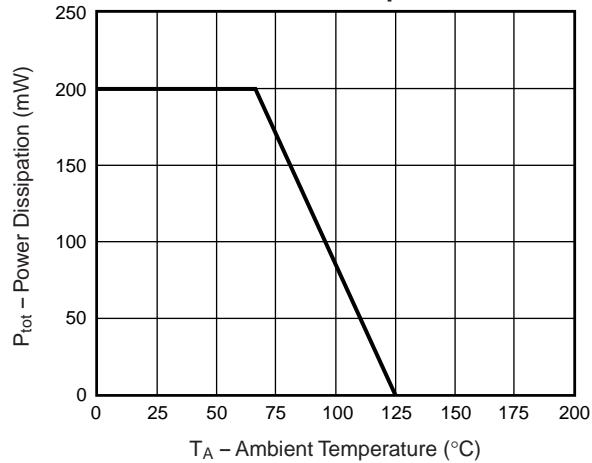


Fig. 2 – Typical Reverse Characteristics

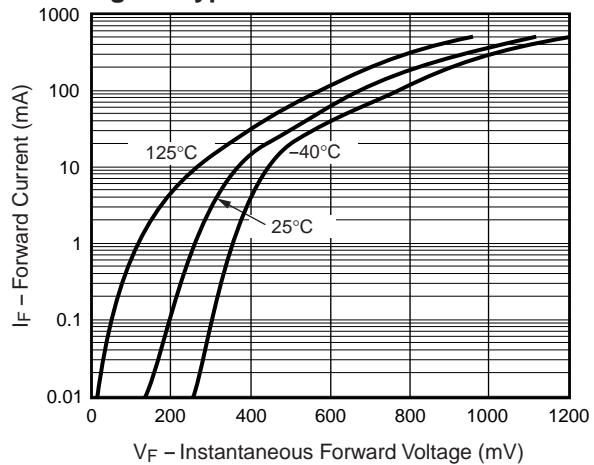


Fig. 3 – Typical Reverse Characteristics

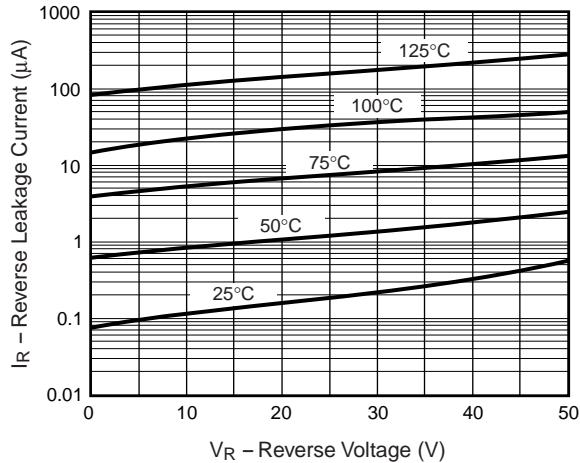
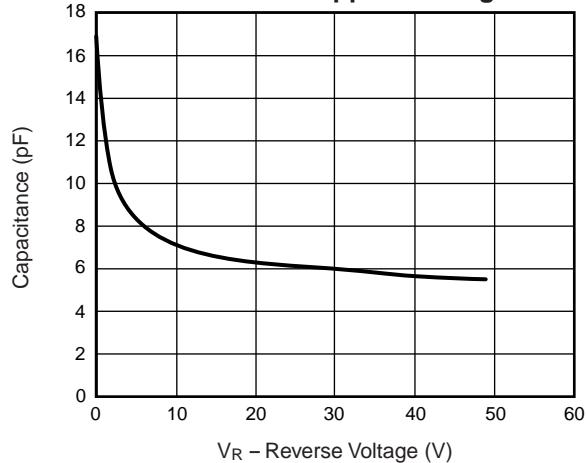


Fig. 4 – Typical Capacitance vs. Reverse Applied Voltage



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Ordering Information :

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

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