

Silicon Super Fast Recovery Diode

$V_{RRM} = 50\text{ V} - 600\text{ V}$

$I_F = 100\text{ A}$

Features

- High Surge Capability
- Types up to 600 V V_{RRM}

TO-244 Package



Maximum ratings, at $T_j = 25\text{ }^\circ\text{C}$, unless otherwise specified ("R" devices have leads reversed)

| Parameter | Symbol | Conditions | MURF10005 (R) | MURF10010 (R) | MURF10020 (R) | Unit |
|--|------------|--|---------------|---------------|---------------|------------------|
| Repetitive peak reverse voltage | V_{RRM} | | 50 | 100 | 200 | V |
| RMS reverse voltage | V_{RMS} | | 35 | 70 | 140 | V |
| DC blocking voltage | V_{DC} | | 50 | 100 | 200 | V |
| Continuous forward current | I_F | $T_C \leq 140\text{ }^\circ\text{C}$ | 100 | 100 | 100 | A |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25\text{ }^\circ\text{C}$, $t_p = 8.3\text{ ms}$ | 400 | 400 | 400 | A |
| Operating temperature | T_j | | -40 to 175 | -40 to 175 | -40 to 175 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | | -40 to 175 | -40 to 175 | -40 to 175 | $^\circ\text{C}$ |

Electrical characteristics, at $T_j = 25\text{ }^\circ\text{C}$, unless otherwise specified

| Parameter | Symbol | Conditions | MURF10005 (R) | MURF10010 (R) | MURF10020 (R) | Unit |
|-----------------------|--------|---|---------------|---------------|---------------|---------------|
| Diode forward voltage | V_F | $I_F = 50\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$ | 1.3 | 1.3 | 1.3 | V |
| Reverse current | I_R | $V_R = 50\text{ V}$, $T_j = 25\text{ }^\circ\text{C}$ | 25 | 25 | 25 | μA |
| | | $V_R = 50\text{ V}$, $T_j = 125\text{ }^\circ\text{C}$ | 1 | 1 | 1 | mA |

Recovery Time

| | | | | | | |
|-------------------------------|----------|---|----|----|----|----|
| Maximum reverse recovery time | T_{RR} | $I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{RR} = 0.25\text{ A}$ | 75 | 75 | 75 | nS |
|-------------------------------|----------|---|----|----|----|----|

