

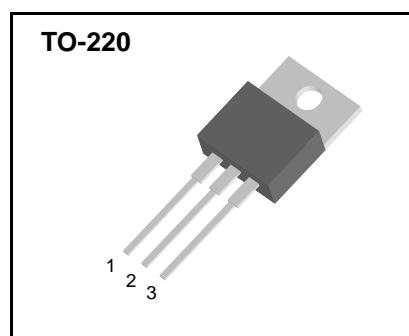
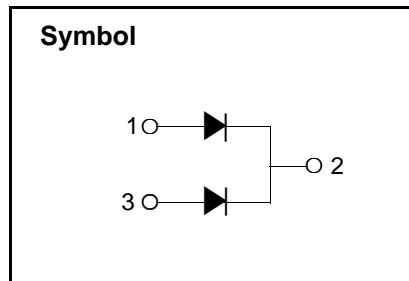
20A Schottky Barrier Rectifier

Features

- ◆ Plastic material meets UL94V-0
- ◆ Metal silicon junction
- ◆ Very low forward voltage drop
- ◆ High current / High surge capability
- ◆ Guarding for over voltage protection
- ◆ Lead solderable per MIL-STD202,method 208 guaranteed
- ◆ Lead temperature for soldering purpose 250°C Max for 10 second
- ◆ Weight : 2.2 gram (approximately)

General Description

The P20M40CT schottky Rectifier has been designed for applications requiring low forward voltage drop and switching power supply, dc-dc converter, free-wheeling diode, battery charging, polarity protection application.



Absolute Maximum Ratings

| Symbol | Parameter | Value | Units |
|-------------|---|--------------|------------------|
| V_{RRM} | Repetitive Peak Reverse Voltage | 40 | V |
| V_R | Maximum DC Reverse Voltage | 40 | V |
| $I_{F(AV)}$ | Average Forward Current @ $T_C = 105^\circ\text{C}$ | Per Diode | 10 |
| | | Total Device | 20 |
| I_{FSM} | Non-Repetitive Peak Surge Current (Surge applied at rated load conditions half sinewave, single phase, 60Hz) | 250 | A |
| Eas | Non-Repetitive Avalanche Energy @ $T_C=25^\circ\text{C}$, $V_{dd} = 15\text{V}$, $L=18\mu\text{H}$ | 9.0 | mJ |
| T_J | Maximum Junction Temperature | - 65 ~ 125 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature Range | - 65 ~ 150 | $^\circ\text{C}$ |

Thermal Characteristics

| Symbol | Parameter | Value | Units |
|-----------------|--|-------|--------------------|
| $R_{\theta JC}$ | Maximum Thermal Resistance, Junction-to-Case (per diode) | 2.5 | $^\circ\text{C/W}$ |

P20M40CT

Electrical Characteristics

| Symbol | Parameter | Min | Typ | Max | Units |
|--------|--|-----|-----|------------------------------|-------|
| I_R | Reverse Leakage Current $V_R = V_{RRM}$ $T_C = 25\text{ }^\circ\text{C}$ $T_C = 125\text{ }^\circ\text{C}$ | - | - | 1 50 | mA |
| V_F | Forward Voltage Drop $I_F = 10\text{ A}$ $T_C = 25\text{ }^\circ\text{C}$ $I_F = 10\text{ A}$ $T_C = 125\text{ }^\circ\text{C}$ $I_F = 20\text{ A}$ $T_C = 25\text{ }^\circ\text{C}$ $I_F = 20\text{ A}$ $T_C = 125\text{ }^\circ\text{C}$ | - | - | 0.55 0.50 0.70 0.60 | V |
| C_T | Typical Junction Capacitance @ $f_T=1\text{MHz}$, $V_R=4\text{V}$, $T_J=25\text{ }^\circ\text{C}$ | | | 600 | pF |



Fig 1. VF-IF Characteristic

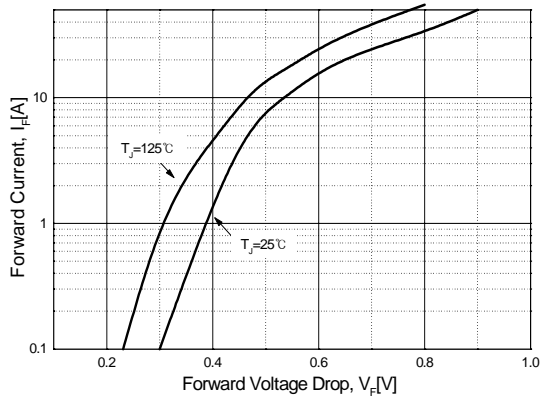


Fig 2. VR-IR Characteristic

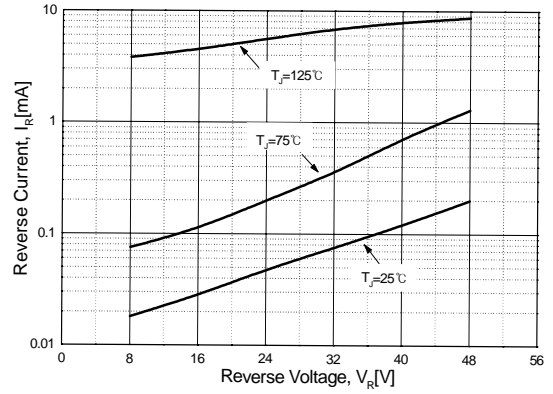


Fig 3. Typical Junction Capacitance

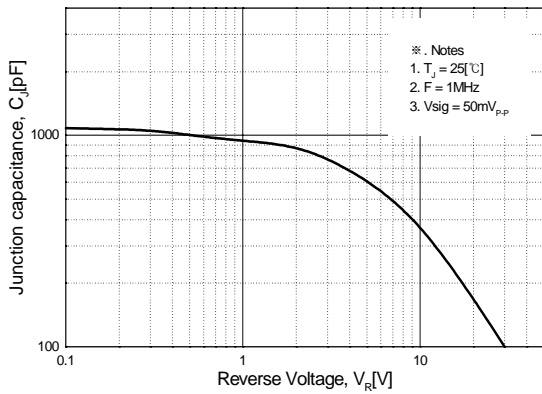


Fig 4. Forward Current derating Curve

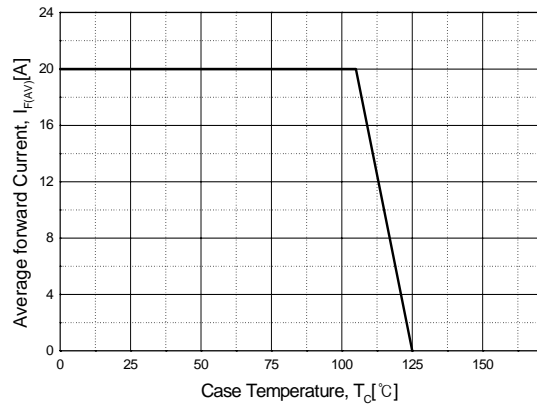


Fig 5. Maximum non-Repetitive forward

