

# **Schottky Barrier Rectifier**

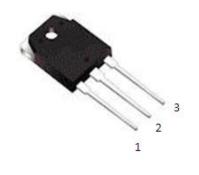
## FEATURES

- Low power loss, high efficiency
- Low forward voltage drop
- High forward surge capability
- High frequency operation
- Excellent high temperature stability
- Trench MOS Schottky technology
- Suffix "H" indicates halogen free parts

## **MECHANICAL DATA**

- Case: TO-3P
- Terminals: Pure tin plated, lead free
- Polarity: As marked
- Weight: Approximated 1.86 grams

| Primary Characteristic                     |       |  |
|--|-------|--|
| Ι <sub>Ο</sub>                             | 2X20A |  |
| V <sub>RRM</sub>                           | 60V   |  |
| I <sub>FSM</sub>                           | 400A  |  |
| V <sub>F</sub> @20A, T <sub>J</sub> =125°C | 0.5V  |  |
| T <sub>Jmax</sub>                          | 150°C |  |





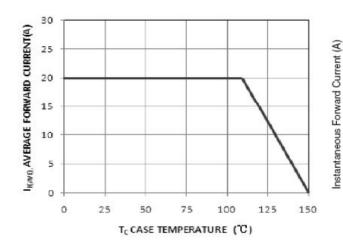
| Maximum Ratings Ta=25°C unless otherwise specified   |                  |                            |      |
|--|------------------|----------------------------|------|
| Characteristics  | Symbol           | Value                      | Unit |
| Maximum Repetitive Peak Reverse Voltage  | V <sub>RRM</sub> | 60                         | V    |
| Working Peak Reverse Voltage   | V <sub>RWM</sub> | 60                         | V    |
| Maximum DC Blocking Voltage  | V <sub>DC</sub>  | 60                         | V    |
| RMS Reverse Voltage  | V <sub>RMS</sub> | 42                         | V    |
| Forward Voltage Drop<br>$I_F=5A, T_J=25^{\circ}C$<br>$I_F=20A, T_J=25^{\circ}C$<br>$I_F=5A, T_J=125^{\circ}C$<br>$I_F=20A, T_J=125^{\circ}C$ | V <sub>F</sub>   | 0.38<br>0.58<br>0.3<br>0.5 | V    |
| Maximum Reverse Current at Rated V <sub>RRM</sub><br>T <sub>J</sub> =25°C<br>T <sub>J</sub> =125°C   | I <sub>R</sub>   | 0.2<br>50                  | mA   |
| Maximum Average Forward Rectified Current<br>Total device<br>Per diode   | Ι <sub>Ο</sub>   | 40<br>20                   | A    |
| Peak Forward Surge Current,<br>8.3 ms Single Half Sine-wave<br>Superimposed on Rated Load (JEDEC method)                                     | I <sub>FSM</sub> | 400                        | A    |
| Operating Temperature Range  | TJ               | -65 to +150                | °C   |
| Storage Temperature Range  | T <sub>STG</sub> | -65 to +150                | °C   |

Notes: (1) Pulse test: 300 µs pulse width, 1 % duty cycle



## S40D60PT

## **RATINGS AND CHARACTERISTICS CURVES**



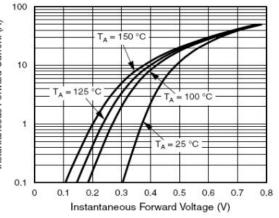


FIG1.MAXIMUM FORWARD CURRENT DERATING

#### CURVE

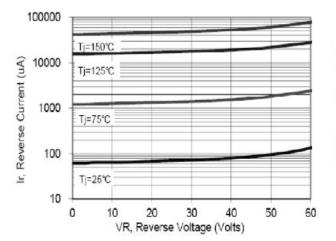
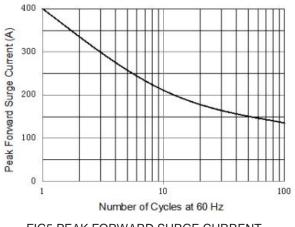


FIG3.TYPICAL REVERSE CHARACTERISTICS PER LEG





### FIG2.TYPICAL FORWARD CHARACTERISTICS

PER LEG

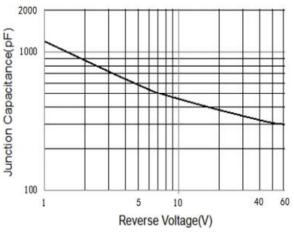


FIG4.TYPICAL JUNCTION CAPACITANCE



