

TECHNICAL DATA  
DATA SHEET 6190, REV. -

## POWER SCHOTTKY RECTIFIER

### Low Reverse Leakage

**Applications:**

- Switching Power Supply • Converters • Free-Wheeling Diodes • Polarity Protection Diode

**Features:**

- Ultra Low Reverse Leakage Current
- Low Forward Voltage Drop
- Low Power Loss, High Efficiency
- High Surge Capacity
- Guard Ring for Enhanced Durability and Long-Term Reliability

**Maximum Ratings:**

| Characteristics                                  | Symbol      | Condition                             | Max.        | Units |
|--|-------------|---------------------------------------|-------------|-------|
| Peak Inverse Voltage                             | $V_{RWM}$   | -                                     | 150         | V     |
| Max. Average Forward Current                     | $I_{F(AV)}$ | 50% duty cycle, rectangular wave form | 60          | A     |
| Max. Peak One Cycle Non-Repetitive Surge Current | $I_{FSM}$   | 8.3 ms, half Sine wave (per leg)      | 300         | A     |
| Thermal Resistance                               | $R_{thJC}$  | Per Package                           | 0.7         | °C/W  |
| Max. Junction Temperature                        | $T_J$       | -                                     | -65 to +175 | °C    |
| Max. Storage Temperature                         | $T_{stg}$   | -                                     | -55 to +150 | °C    |

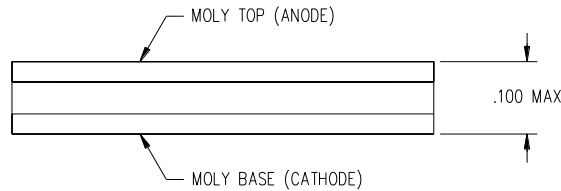
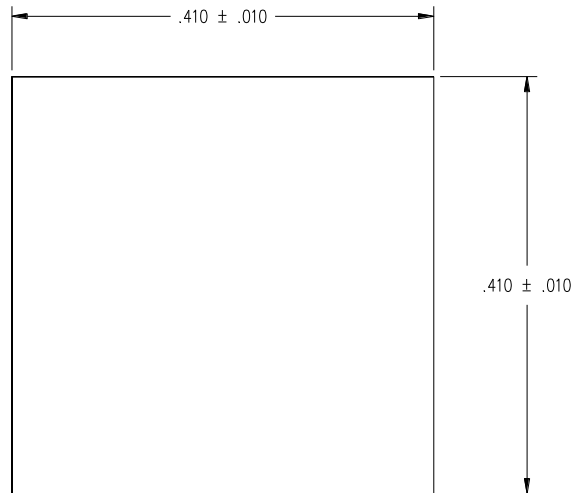
**Electrical Characteristics:**

| Characteristics           | Symbol   | Condition   | Max. | Units   |
|---------------------------|----------|---|------|---------|
| Max. Forward Voltage Drop | $V_{F1}$ | @ 10A, Pulse, $T_J = 25\text{ °C}$                                    | 0.74 | V       |
|                           |          | @ 20A, Pulse, $T_J = 25\text{ °C}$                                    | 0.79 |         |
|                           |          | @ 30A, Pulse, $T_J = 25\text{ °C}$                                    | 0.83 |         |
|                           |          | @ 60A, Pulse, $T_J = 25\text{ °C}$                                    | 0.89 |         |
|                           | $V_{F2}$ | @ 10A, Pulse, $T_J = 125\text{ °C}$                                   | 0.62 | V       |
|                           |          | @ 20A, Pulse, $T_J = 125\text{ °C}$                                   | 0.68 |         |
|                           |          | @ 30A, Pulse, $T_J = 125\text{ °C}$                                   | 0.72 |         |
|                           |          | @ 60A, Pulse, $T_J = 125\text{ °C}$                                   | 0.80 |         |
| Max. Reverse Current      | $I_{R1}$ | @ $V_R = 150V$ , Pulse, $T_J = 25\text{ °C}$                          | 20   | $\mu A$ |
|                           | $I_{R2}$ | @ $V_R = 150V$ , Pulse, $T_J = 125\text{ °C}$                         | 2    | mA      |
| Max. Junction Capacitance | $C_T$    | @ $V_R = 10\text{ V}$ , $T_C = 25\text{ °C}$ $f_{SIG} = 1\text{ MHz}$ | 870  | pF      |

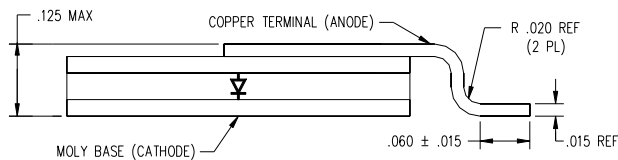
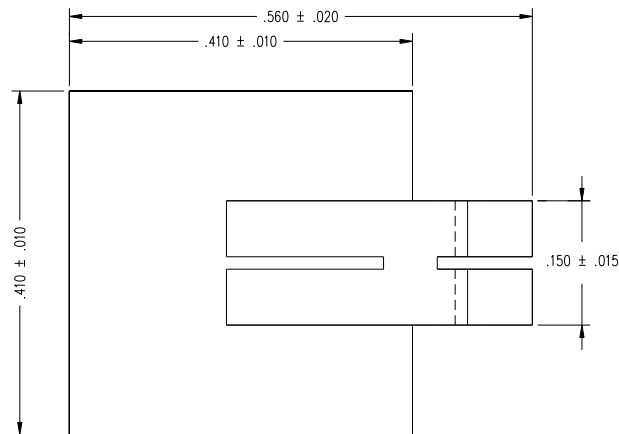
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**MECHANICAL DIMENSIONS\*: In Inches / mm**  
\*Dimensions shown are with solder dipping.

**SHD-3 HIGH PROFILE**



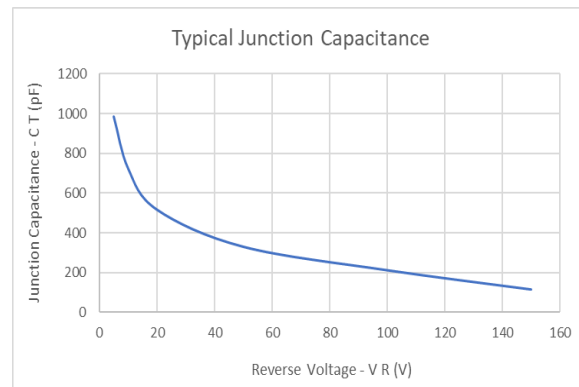
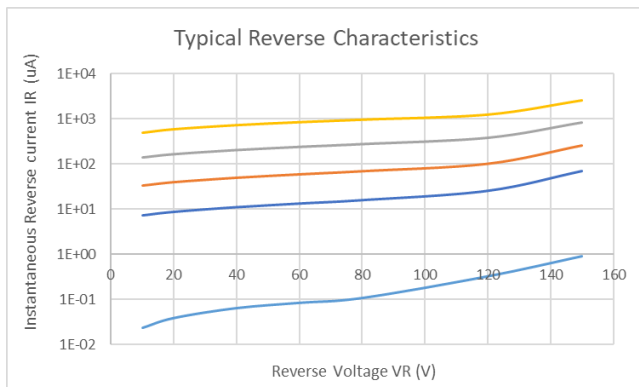
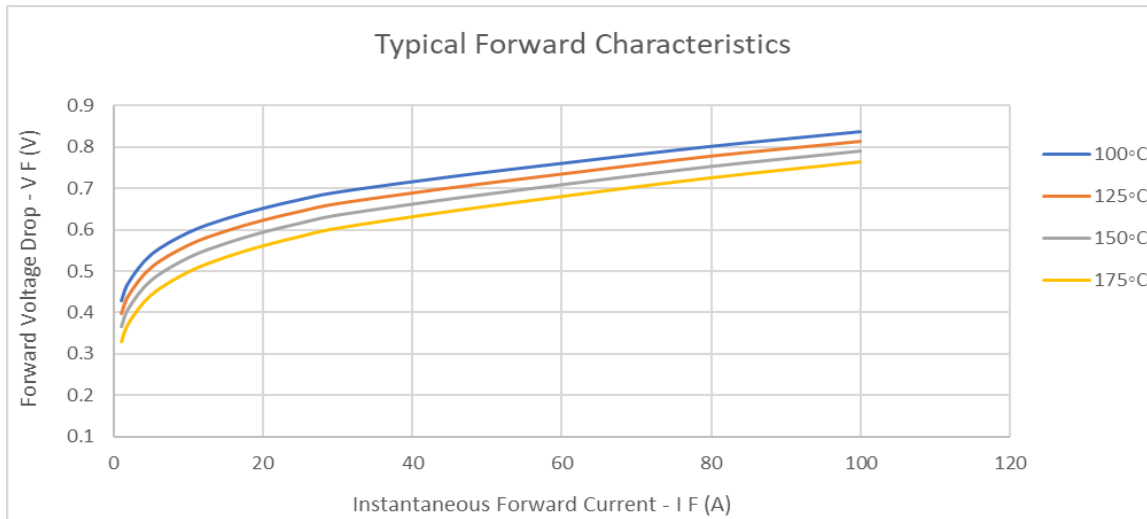
**SHD-3B HIGH PROFILE**



| TYPE   | PIN 1 (Base) | PIN 2 |
|--|--------------|-------|
| SINGLE RECTIFIER<br>in a Surface Mount Package | CATHODE      | ANODE |

PIN  
OUT  
TAB  
LE

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