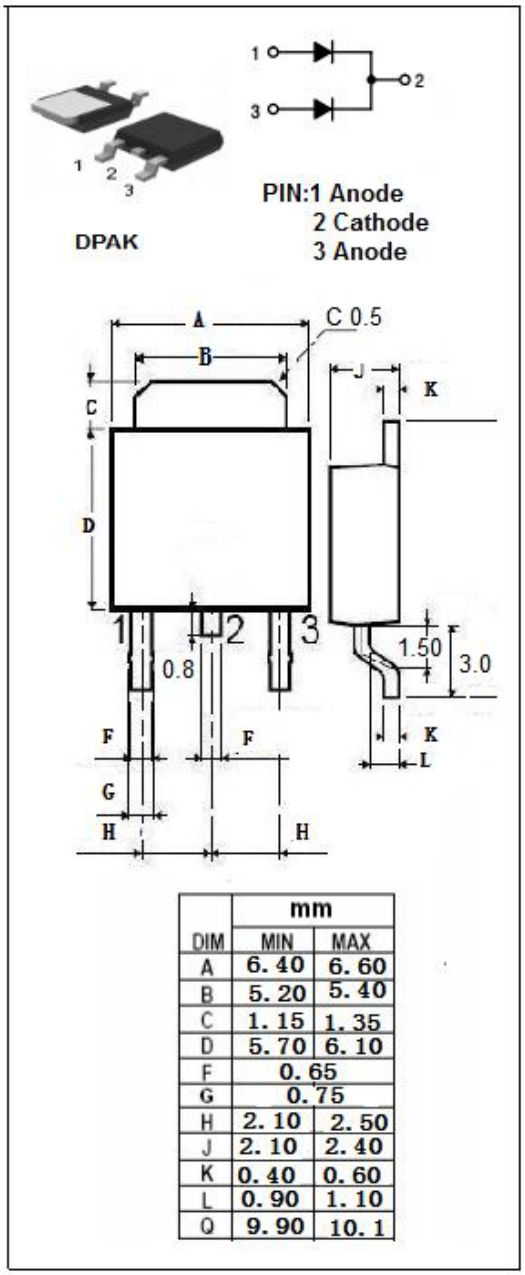
# Schottky Rectifier STPS15H100CB

## FEATURES

- Plastic material used carriers Underwriter Laboratory
- Metal silicon junction, majority carrier conduction
- Low Power Loss,high Efficiency
- Guard ring for overvoltage protection
- High Surge Capability,High Current Capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation




| DIM | mm MIN | MAX |
|---|---|---|
| A | 6.40 | 6.60 |
| B | 5.20 | 5.40 |
| C | 1.15 | 1.35 |
| D | 5.70 | 6.10 |
| F | 0.65 | |
| G | 0.75 | |
| H | 2.10 | 2.50 |
| J | 2.10 | 2.40 |
| K | 0.40 | 0.60 |
| L | 0.90 | 1.10 |
| Q | 9.90 | 10.1 |

## APPLICATIONS

- For use in low voltage,high frequency inverters,free wheeling and polarity protection applications.

## ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

| SYMBOL | PARAMETER | | VALUE | UNIT |
|---|---|---|---|---|
| $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | | 100 | V |
| IF(RMS) | RMS Forward current | | 10 | A |
| $I_{F(AV)}$ | Average Rectified Forward Current Tc=135℃; δ =0.5 | per diode<br>Total package | 7.5<br>15 | A |
| $I_{FSM}$ | Nonrepetitive Peak Surge Current<br>8.3ms single half sine-wave superimposed on rated load conditions<br>tp=10 ms sinusoidal | | 75 | A |
| $T_J$ | Junction Temperature | | 175 | ℃ |
| $T_{stg}$ | Storage Temperature Range | | -65~175 | ℃ |
| dv/dt | Voltage Rate of Change (Rated $V_R$) | | 10000 | V/μs |

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## THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | | MAX | UNIT |
|---|---|---|---|---|
| $R_{th\ j\text{-}c}$ | Thermal Resistance,Junction to Case | Per diode<br>Total | 4<br>2.4 | ℃/W |

## ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width=300 μs,Duty Cycle≤1%)

| SYMBOL | PARAMETER | CONDITIONS | MAX | UNIT |
|---|---|---|---|---|
| $V_F$ | Maximum Instantaneous Forward Voltage | $I_F$= 7.5A ; Tc= 25℃ | 0.8 | V |
| | | $I_F$= 7.5A ; Tc=125℃ | 0.67 | |
| | | $I_F$=12A ; Tc= 25℃ | 0.85 | |
| | | $I_F$=12A ; Tc= 125℃ | 0.73 | |
| | | $I_F$=15A ; Tc= 25℃ | 0.89 | |
| | | $I_F$=15A ; Tc=125℃ | 0.76 | |
| $I_R$ | Maximum Instantaneous Reverse Current | $V_R$= $V_{RWM;}$Tc= 25℃ | 3 | mA |
| | | $V_R$= $V_{RWM;}$Tc= 125℃ | 4 | |