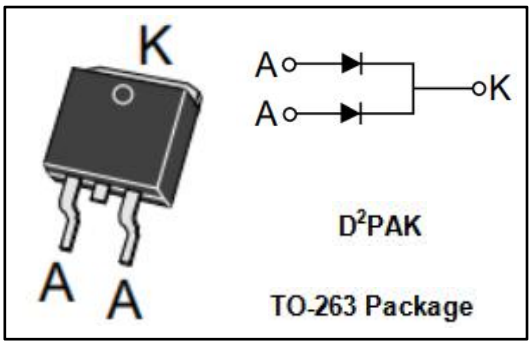
# Schottky Barrier Rectifier STPS40170CG

## FEATURES

- Plastic material used carriers Unerwriter Laboratory
- Metal silicon rectifier, majonty carrier conduction
- Low Power Loss,High Efficiency
- Guard ring for transient protection
- High Surge Capability,High Current Capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation




## 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 | 170 | V |
| $I_{F(AV)}$ | Average Rectified Forward Current | 40 | A |
| $I_{FSM}$ | Nonrepetitive Peak Surge Current<br>8.3ms single half sine-wave superimposed on rated load conditions | 250 | A |
| $T_J$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -40~150 | ℃ |
| dv/dt | Voltage Rate of Change (Rated $V_R$) | 10,000 | V/μs |

## THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---|---|---|---|
| $R_{th\ j\text{-}c}$ | Thermal Resistance,Junction to Case | 1.2 | ℃/W |

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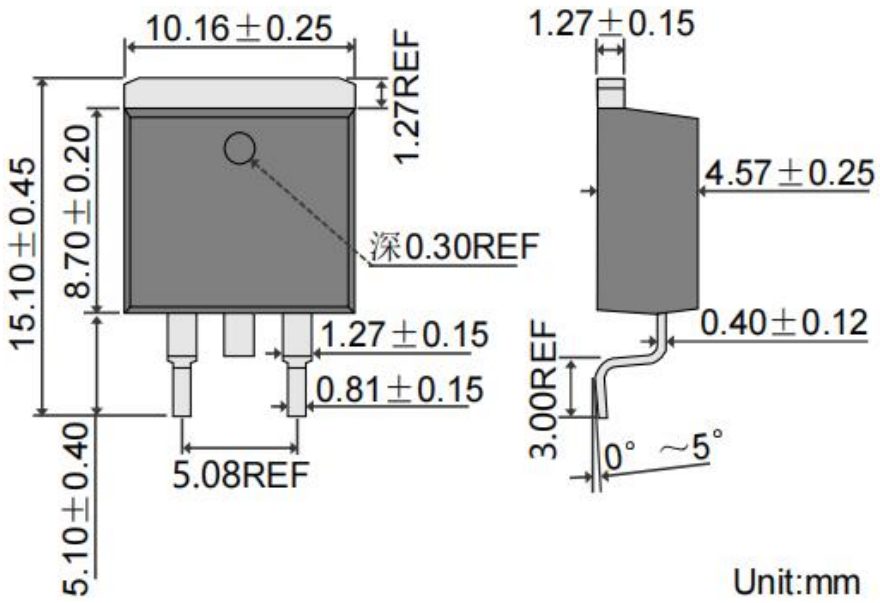
**ELECTRICAL CHARACTERISTICS** (Pulse Test: Pulse Width=300 μ s,Duty Cycle≤1%)

| SYMBOL | PARAMETER | CONDITIONS | MAX | UNIT |
|---|---|---|---|---|
| $V_F$ | Maximum Instantaneous Forward Voltage | $I_F$= 20A ; Tc= 25℃ | 0.92 | V |
| | | $I_F$= 20A ; Tc= 125℃ | 0.8 | |
| $I_R$ | Maximum Instantaneous Reverse Current | $V_R$= $V_{RWM;}$Tc= 25℃ | 30 | uA |
| | | $V_R$= $V_{RWM;}$Tc= 125℃ | 30 | mA |

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