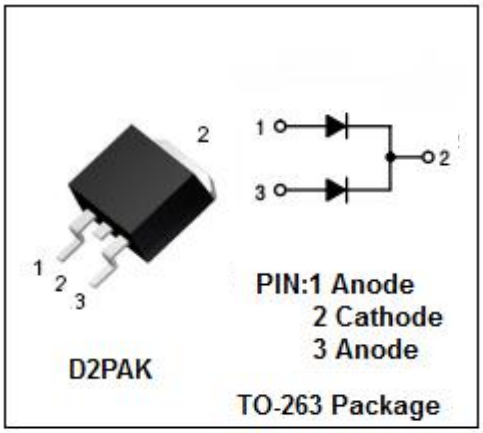
# Ultra fast Rectifier STTH2003CG

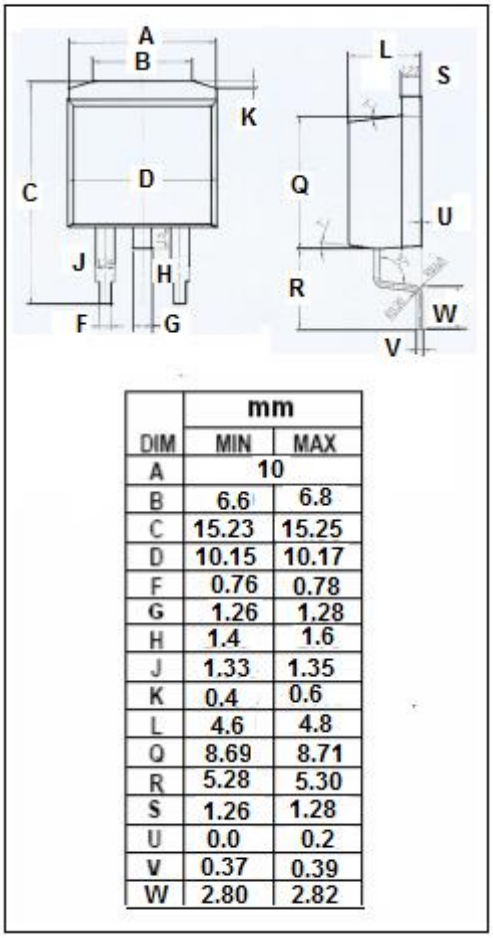



## FEATURES

- With TO-263(DPAK) packaging
- Low forward voltage drop
- Super high speed switching
- High reliability by planer design
- High surge current capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- Switching power supply
- Power switching circuits
- High speed power switching




| DIM | mm MIN | MAX |
|---|---|---|
| A | 10 | |
| B | 6.6 | 6.8 |
| C | 15.23 | 15.25 |
| D | 10.15 | 10.17 |
| F | 0.76 | 0.78 |
| G | 1.26 | 1.28 |
| H | 1.4 | 1.6 |
| J | 1.33 | 1.35 |
| K | 0.4 | 0.6 |
| L | 4.6 | 4.8 |
| Q | 8.69 | 8.71 |
| R | 5.28 | 5.30 |
| S | 1.26 | 1.28 |
| U | 0.0 | 0.2 |
| V | 0.37 | 0.39 |
| W | 2.80 | 2.82 |

## ABSOLUTE MAXIMUM RATINGS($T_a$=25℃)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| VRRM<br>VRWM<br>VR | Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | 300 | V |
| IF(AV) | Average Rectified Forward Current<br>@Tc=140℃;Square Wave; Duty=1/2 | 20 | A |
| IFSM | Nonrepetitive Peak Surge Current<br>8.3ms single half sine-wave superimposed on rated load conditions | 110 | A |
| TJ | Junction Temperature | -65~175 | ℃ |
| Tstg | Storage Temperature Range | -65~175 | ℃ |

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## THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---|---|---|---|
| $R_{th\ j\text{-}c}$ | Thermal Resistance,Junction to Case | 2.5 | ℃/W |

## ELECTRICAL CHARACTERISTICS($T_a$=25℃) (Pulse Test: Pulse Width=300 μs,Duty Cycle≤2%)

| SYMBOL | PARAMETER | CONDITIONS | MAX | UNIT |
|---|---|---|---|---|
| $V_F$ | Maximum Instantaneous Forward Voltage | $I_F$=10A ;Tc=25℃<br>$I_F$=10A ;Tc=125℃ | 1.25<br>1.0 | V |
| $I_R$ | Maximum Instantaneous Reverse Current | $V_R$= $V_{RWM}$Tc=25℃<br>$V_R$= $V_{RWM}$Tc=125℃ | 20<br>300 | mA |
| $t_{rr}$ | Maximum Reverse Recovery Time | $I_F$ =1A;dI/dt=-50A/ μs;VR=30V | 35 | ns |