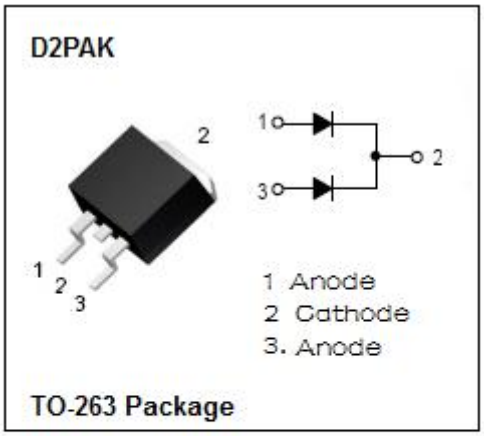
# Ultra fast Rectifier

# STTH20L03CG

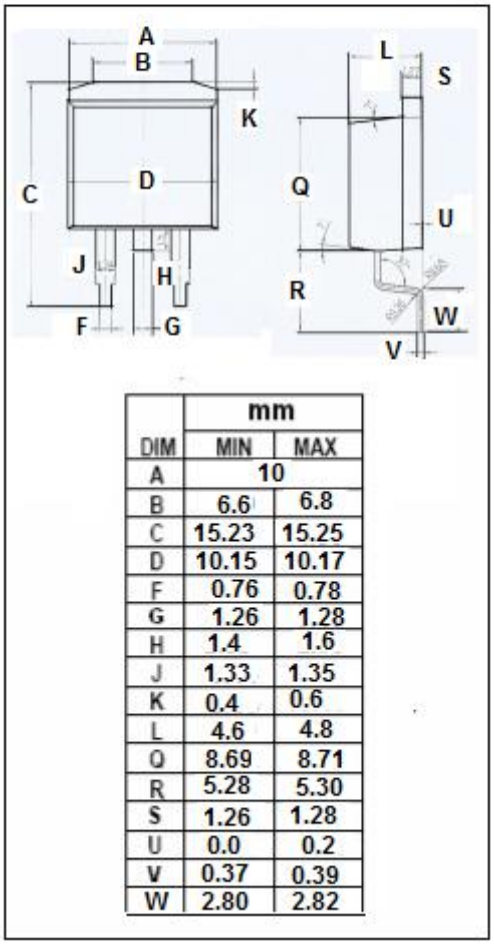



## FEATURES

- Ultrafast, soft and noise-free recovery
- Packaged in TO-263(D2PAK)
- Low forward voltage drop
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- Switching power supply
- Power switching circuits
- General purpose




| 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 tw=500ns;duty=1/40 | | | 300 | V |
| IF(AV) | Average Rectified Forward Current | Tc=155℃ | Per diode | 10 | A |
| | | Tc=150℃ | Per device | 20 | |
| IF(RMS) | Forward rms current | | | 30 | A |
| IFSM | Nonrepetitive Peak Surge Current $t_P$=10ms sinusoidal | | | 150 | A |
| TJ | Junction Temperature | | | -40~175 | ℃ |
| Tstg | Storage Temperature Range | | | -65~175 | ℃ |



Download from alldatasheet.com

## THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | | MAX | UNIT |
|---|---|---|---|---|
| $R_{th\ j\text{-}c}$ | Thermal Resistance,Junction to Case | Per diode<br>Total | 1.5<br>1.0 | ℃/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 ;Tj=25℃<br>$I_F$=10A ;Tj=125℃ | 1.2<br>0.95 | V |
| $I_R$ | Maximum Instantaneous Reverse Current | $V_R$= $V_{RWM;}$Tj=25℃<br>$V_R$= $V_{RWM;}$Tj=125℃ | 10<br>100 | μA |
| $t_{rr}$ | Maximum Reverse Recovery Time | IF =1A;$V_R$= 30V;$dI_F/dt$=-100A/μs | 35 | ns |



Download from alldatasheet.com