

Ultra fast Rectifier

STTH20L03CG

FEATURES

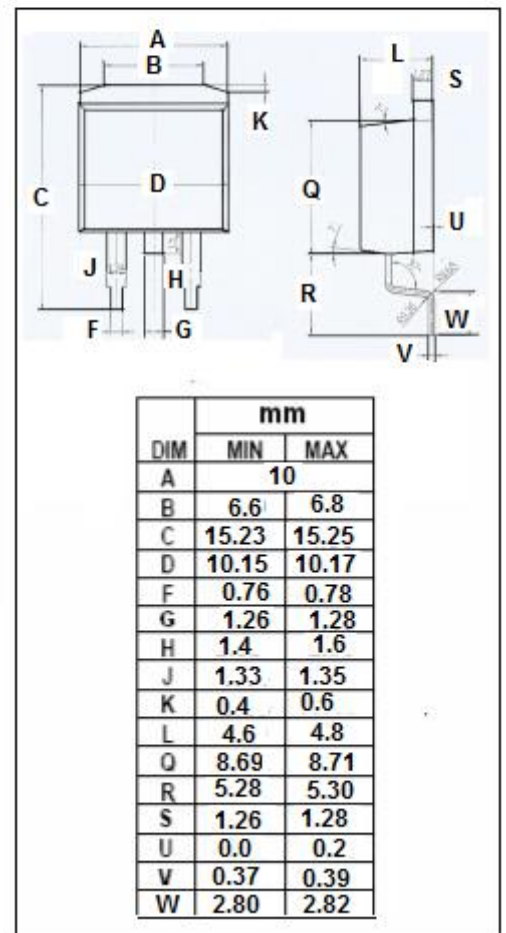
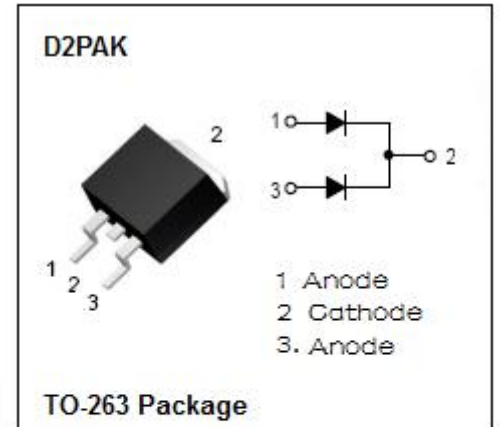
- Ultrafast, soft and noise-free recovery
- Packaged in TO-263(D2PAK)
- Low forward voltage drop
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching power supply
- Power switching circuits
- General purpose

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

| SYMBOL | PARAMETER | VALUE | UNIT | | |
|---------|---|--------------------|------------|----|---|
| VRRM | Peak Repetitive Reverse Voltage | 300 | V | | |
| VRWM | Working Peak Reverse Voltage | | | | |
| VR | DC Blocking Voltage | tw=500ns;duty=1/40 | | | |
| IF(AV) | Average Rectified Forward Current | Tc=155°C | Per diode | 10 | A |
| | | Tc=150°C | 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 | °C | | |
| Tstg | Storage Temperature Range | -65~175 | °C | | |



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STTH20L03CG**THERMAL CHARACTERISTICS**

| SYMBOL | PARAMETER | | MAX | UNIT |
|-------------|--------------------------------------|--------------------|------------|-----------------------------|
| R_{thj-c} | Thermal Resistance, Junction to Case | Per diode Total | 1.5 1.0 | $^{\circ}\text{C}/\text{W}$ |

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$) (Pulse Test: Pulse Width=300 μs , Duty Cycle $\leq 2\%$)

| SYMBOL | PARAMETER | CONDITIONS | MAX | UNIT |
|----------|---------------------------------------|---|-------------|---------------|
| V_F | Maximum Instantaneous Forward Voltage | $I_F=10\text{A}; T_j=25^{\circ}\text{C}$ $I_F=10\text{A}; T_j=125^{\circ}\text{C}$ | 1.2 0.95 | V |
| I_R | Maximum Instantaneous Reverse Current | $V_R=V_{RWM}; T_j=25^{\circ}\text{C}$ $V_R=V_{RWM}; T_j=125^{\circ}\text{C}$ | 10 100 | μA |
| t_{rr} | Maximum Reverse Recovery Time | $I_F=1\text{A}; V_R=30\text{V}; dI_F/dt=-100\text{A}/\mu\text{s}$ | 35 | ns |