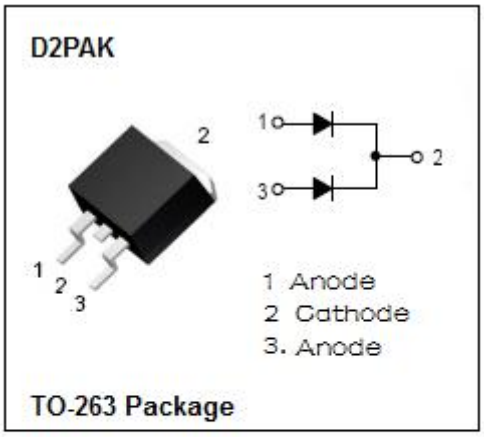
Ultra fast Rectifier

STTH20L03CG



FEATURES

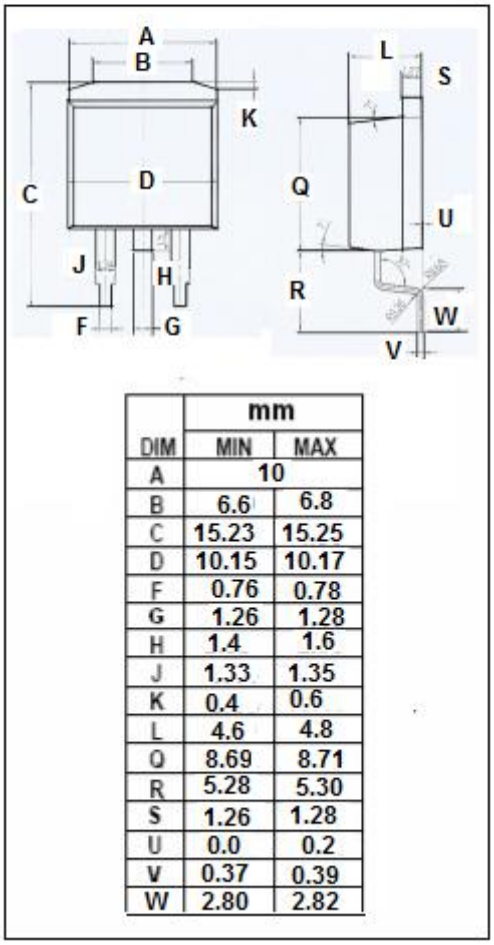
- Ultrafast, soft and noise-free recovery
- Packaged in TO-263(D2PAK)
- Low forward voltage drop
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching power supply
- Power switching circuits
- General purpose

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER			VALUE	UNIT
VRRM VRWM VR	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage 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	℃



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

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER		MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	Per diode Total	1.5 1.0	℃/W

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	I_F=10A ;Tj=25℃ I_F=10A ;Tj=125℃	1.2 0.95	V
I_R	Maximum Instantaneous Reverse Current	V_R= $V_{RWM;}$Tj=25℃ V_R= $V_{RWM;}$Tj=125℃	10 100	μA
t_{rr}	Maximum Reverse Recovery Time	IF =1A;V_R= 30V;dI_F/dt=-100A/μs	35	ns