

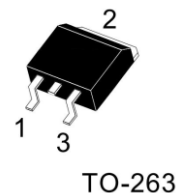


T820H-800NB

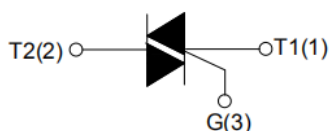
Silicon Controlled Rectifier

Features

- Blocking Voltage to 800V
- Glass Passivated Surface for Reliability and Uniformity
- RoHS Compliant & HF
- High dV/dt Rate
- $I_{T(RMS)}$ to 8A of Triacs
- High Junction Temperature and High Environment Temperature Condition



Pin Configuration



Absolute Maximum Ratings (Tc=25°C Unless otherwise specified)

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40~150	°C
Operating junction temperature range	T_j	-40~150	°C
Repetitive peak off-state voltage (Tj=25°C)	V_{DRM}	800	V
Repetitive peak reverse voltage (Tj=25°C)	V_{RRM}	800	V
RMS on-state current	$I_{T(RMS)}$	8	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	80	A
I^2t value for fusing (tp=10ms)	I^2t	32	A ² s
Critical rate of rise of on-state current (IG=2×IGT)	dI/dt	50	A/μs
Peak gate current	I_{GM}	4	A
Average gate power dissipation	$P_{G(AV)}$	1	W

Peak gate power	P_{GM}	5	W
Thermal Resistance(between Junction and Case)	$R_{\theta(J-C)}$	1.6 (Typ.)	°C/W

Electronics Characteristics (Tc=25°C Unless otherwise specified)

3 Quadrants:

Parameter	Symbol	Quadrant		Value	Unit
				T820	
Gate Trigger Current (Continuous dc) @VD=12V, RL=33Ω	I_{GT}	I - II - III	MAX	20	mA
Gate Trigger Voltage (Continuous dc) @VD=12V, RL=33Ω	V_{GT}			1.5	V
Gate non-trigger voltage@VD=VDRM	V_{GD}	I - II - III	MIN	0.2	V
Holding Current@IT=500mA	I_H	-	MAX	50	mA
Latching Current@IG=1.2IGT	I_L	I - III	MAX	80	mA
		II		100	
Critical Rate-of-Rise of Off State Voltage @VD=0.66×VDRM, Tj=150°C, Gate Open	dV/dt	-	MIN	800	V/μs
Peak Forward On-State Voltage @ITM=11A, tp=380μs, Tj=25°C	V_{TM}	-	MAX	1.55	V
Peak Repetitive Forward @VDRM=VRRM, Tj=25°C	I_{DRM}	-	MAX	5	μA
Reverse Blocking Current @VDRM=VRRM, Tj=150°C	I_{RRM}	-	MAX	2	mA

Note: The above typical parameters or typical characteristics are only indicative and do not make specific guarantees. If detailed values are required, additional communication and provision are required.

FIG.1: Maximum power dissipation versus RMS on-state current

P(W)

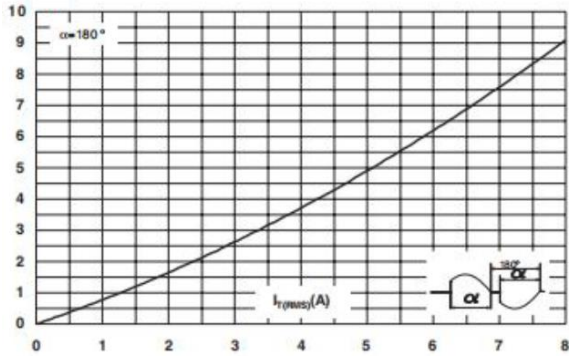


FIG.3: Surge peak on-state current versus number of cycles

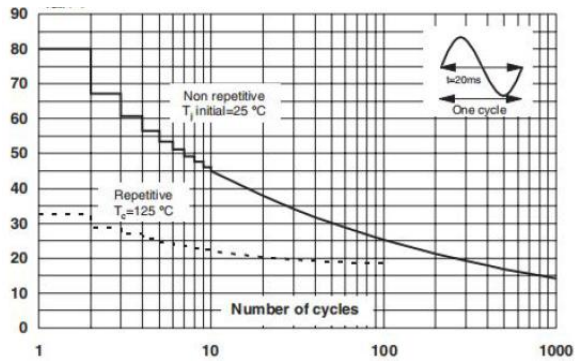
I_{TSM}(A)

FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$, and corresponding value of $I^2 t$ (I - II - III: $di/dt < 50\text{A}/\mu\text{s}$; IV: $di/dt < 10\text{A}/\mu\text{s}$)

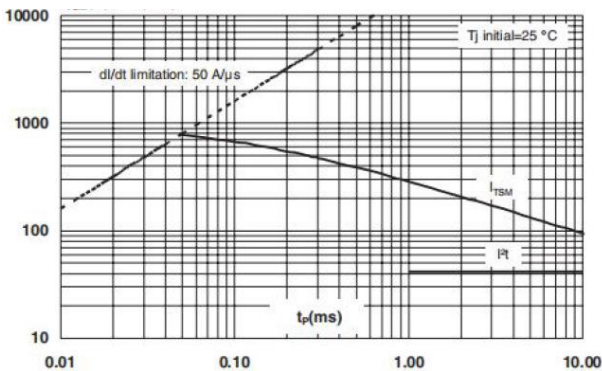
I_{TSM}(A), $I^2 t$ (A²s)

FIG.2: RMS on-state current versus case temperature in different packaging

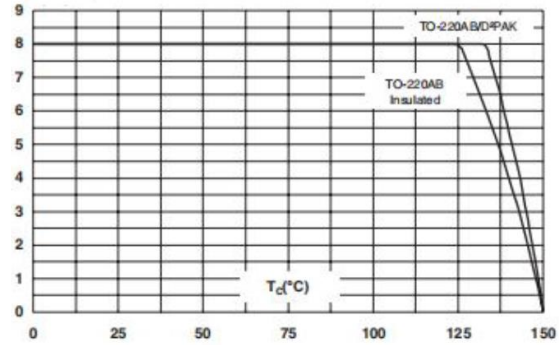
I_{T(RMS)}(A)

FIG.4: On-state characteristics (maximum values)

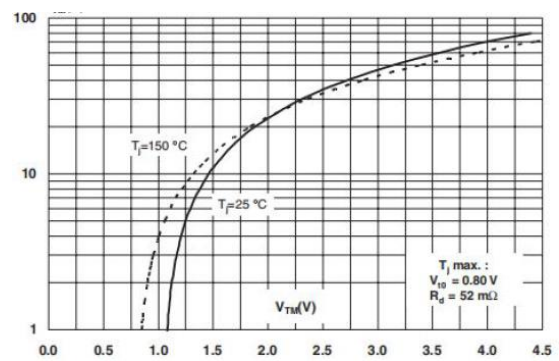
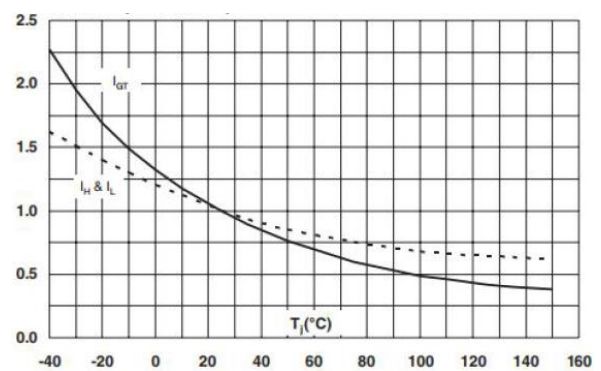
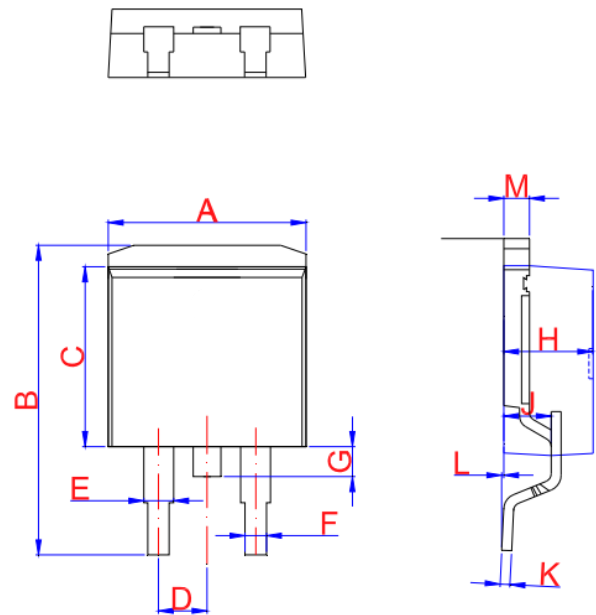
I_{TM}(A)

FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

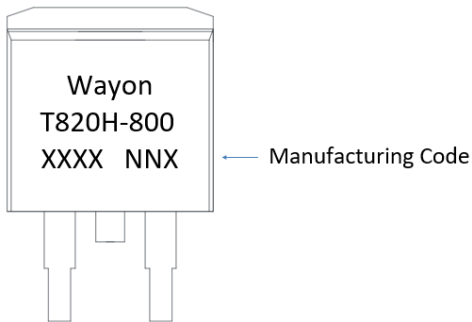
I_{GT}, I_H, I_L(T_J)/I_{GT}, I_H, I_L(T_J=25°C)

Outline Drawing

SYMBOL	MM		
	MIN	NOM	MAX
A	9.86	-	10.50
B	14.61	-	15.88
C	8.45	-	9.60
D	-	2.54	-
E	1.17	-	1.75
F	0.70	-	0.96
G	-	-	1.75
H	4.24	4.60	4.89
J	2.20	2.60	2.90
L	0	0.10	0.25
M	1.17	1.27	1.42
K	0.30	-	0.55



Marking Code



Package Information

Package	Base qty.	Delivery mode
TO-263	800	Reel

Contact Information

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