

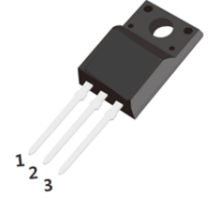


T1235H-800L

Silicon Controlled Rectifier

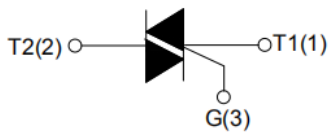
Features

- Blocking Voltage to 800V
- Glass Passivated Surface for Reliability and Uniformity
- RoHS Compliant & HF
- High Dv/Dt Rate
- $I_{T(RMS)}$ to 12A of Triacs
- High Junction Temperature and High Environment Temperature Condition



TO-220F(Ins)

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	$I_{T(RMS)}$	12	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	120	A
I^2t value for fusing (tp=10ms)	I^2t	72	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)	$R_{\theta(J-C)}$	2.5 (Typ.)	°C/W

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

3 Quadrants:

Parameter	Symbol	Quadrant		Value	Unit
				T1235	
Gate Trigger Current (Continuous dc) @VD=12V, RL=33Ω	I_{GT}	I - II - III	MAX	35	mA
Gate Trigger Voltage (Continuous dc) @VD=12V, RL=33Ω	V_{GT}			1.3	V
Gate non-trigger voltage@VD=VDRM	V_{GD}	I - II - III	MIN	0.2	V
Holding Current@IT=100mA	I_H	-	MAX	50	mA
Latching Current@IG=1.2IGT	I_L	I - III	MAX	90	mA
		II		100	
Critical Rate-of-Rise of Off State Voltage @VD=0.66×VDRM, Tj=125°C, Gate Open	dV/dt	-	MIN	1000	V/μs
Peak Forward On-State Voltage @ITM=17A, tp=380μs, Tj=25°C	V_{TM}	-	MAX	1.5	V
Peak Repetitive Forward @VDRM=VRRM, Tj=25°C	I_{DRM}	-	MAX	5	μA
Reverse Blocking Current @VDRM=VRRM, Tj=125°C	I_{RRM}	-	MAX	1.5	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

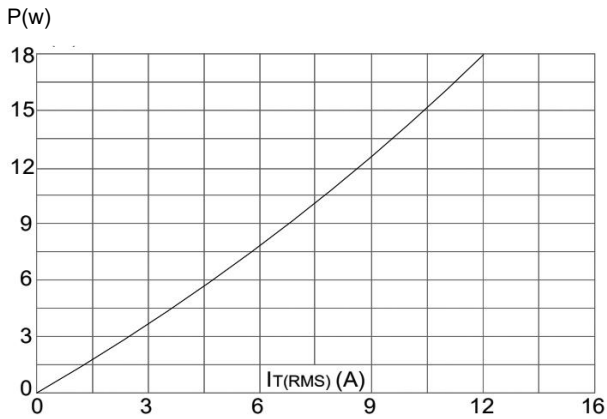


FIG.3: Surge peak on-state current versus number of cycles

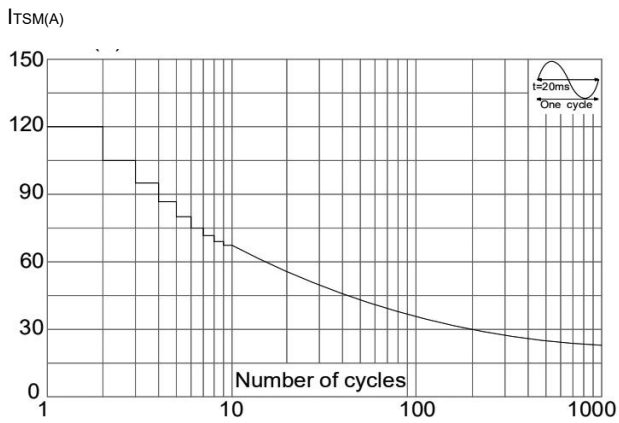


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$, and corresponding value of $I^2 t$ (I - II - III: $dI/dt < 50\text{A}/\mu\text{s}$; IV: $dI/dt < 10\text{A}/\mu\text{s}$)

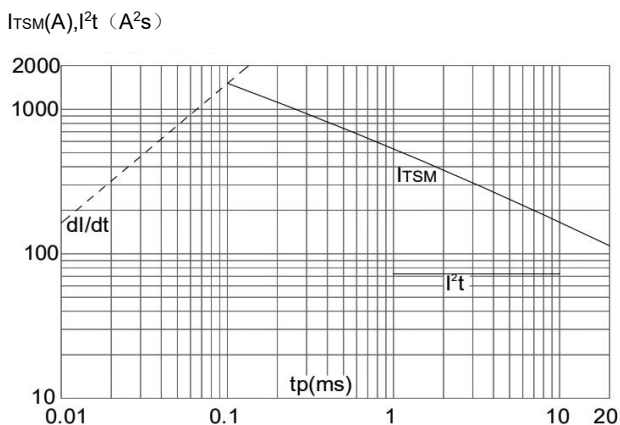


FIG.2: RMS on-state current versus case temperature in different packaging

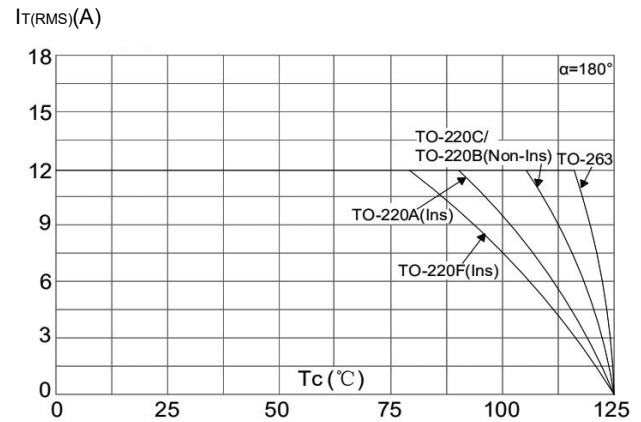


FIG.4: On-state characteristics (maximum values)

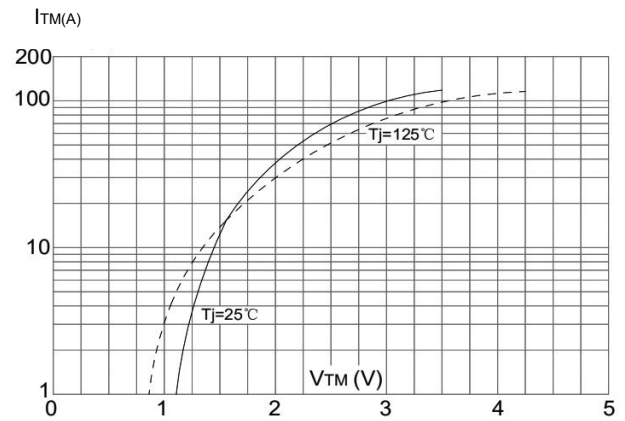
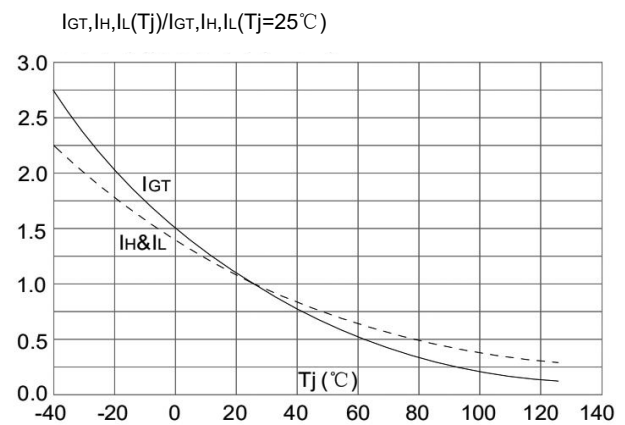
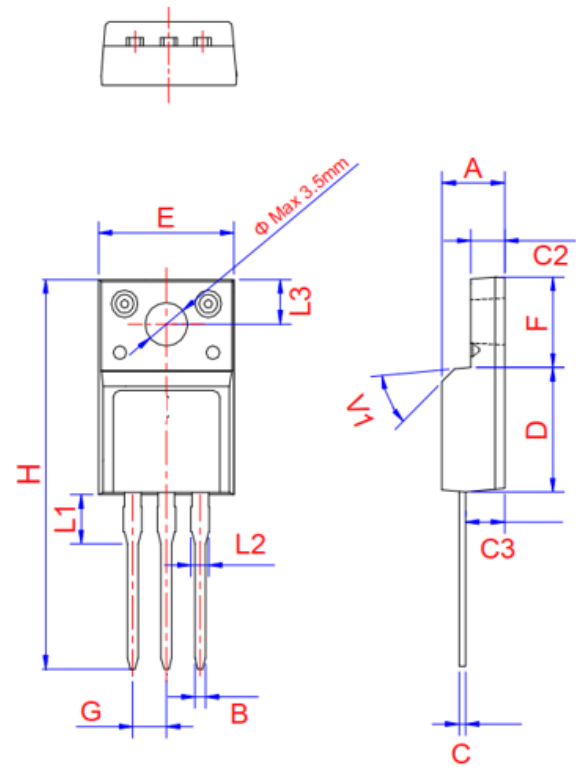


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

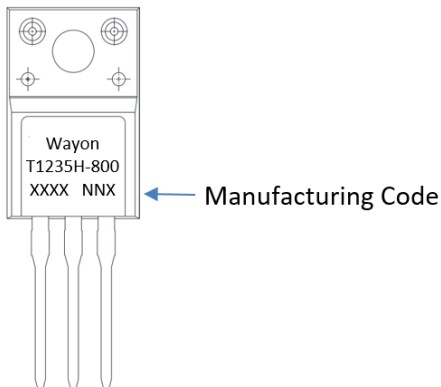


Outline Drawing

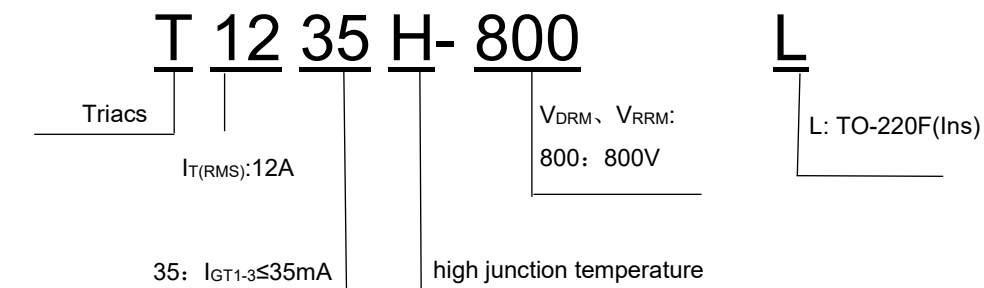
SYMBOL	MM		
	MIN	NOM	MAX
A	4.40	-	4.90
B	0.58	0.8	0.90
C	0.40	-	0.75
C2	2.34	-	3.10
C3	2.00	2.30	2.60
D	8.60	-	9.80
E	9.70	-	10.5
F	6.40	-	7.50
G	-	2.54	-
H	28.0	-	29.8
L1	2.80	-	3.93
L2	1.14	-	1.70
L3	2.65	3.30	3.85
V1	-	45°	-



Marking Code



Part Number System



Package Information

Package	Base qty.	Delivery mode
TO-220F(Ins)	50	Tube

Contact Information

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