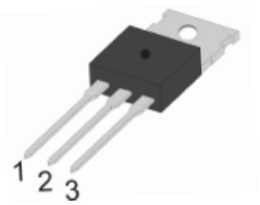
BTB25-800CWAY

Silicon Controlled Rectifier

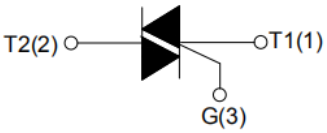
Features

- Blocking Voltage to 800 V
- Glass Passivated Surface for Reliability and Uniformity
- RoHS Compliant & HF
- High Dv/Dt Rate
- $I_{T(RMS)}$ to 25A of Triacs



TO-220

Pin Configuration



Absolute Maximum Ratings（Tc=25℃ Unless otherwise specified）

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40~150	℃
Operating junction temperature range	T_j	-40~125	℃
Repetitive peak off-state voltage (Tj=25℃)	V_{DRM}	800	V
Repetitive peak reverse voltage (Tj=25℃)	V_{RRM}	800	V
RMS on-state current	$I_{T(RMS)}$	25	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	250	A
I^2t value for fusing (tp=10ms)	I^2t	312	A^2s
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

Thermal Resistance(between Junction and Case)	$R_{\theta(J-C)}$	0.8（Typ.）	℃/W

Electronics Characteristics（Tc=25℃ Unless otherwise specified）

3 Quadrants：

Parameter	Symbol	Quadrant		Value	Unit
				CW	
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=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=125℃,Gate Open	dV/dt	-	MIN	1000	V/μs
Peak Forward On-State Voltage @ITM=35A,tp=380μs, Tj=25℃	V_{TM}	-	MAX	1.55	V
Peak Repetitive Forward @VDRM=VRRM,Tj=25℃	I_{DRM}	-	MAX	10	μA
Reverse Blocking Current @VDRM=VRRM,Tj=125℃	I_{RRM}	-	MAX	4	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)

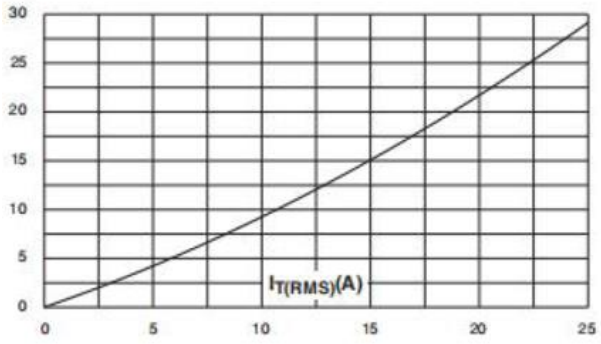


FIG.2: RMS on-state current versus case temperature

$I_{T(RMS)}$(A)

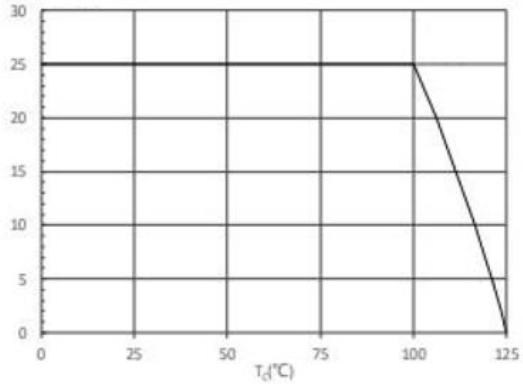


FIG.3: Surge peak on-state current versus number of cycles

$I_{TSM(A)}$

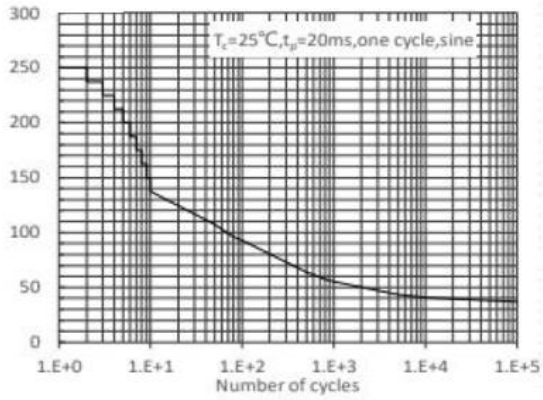


FIG.4:On-state characteristics (maximum values)

$I_{TM(A)}$

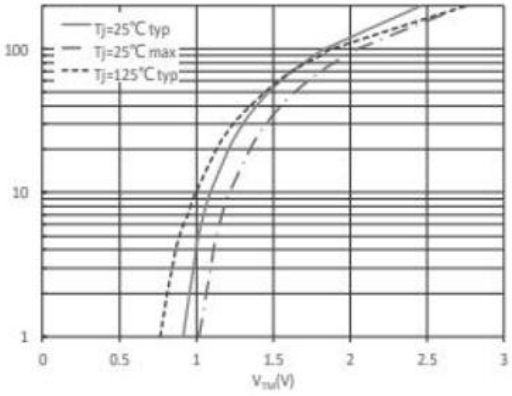


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp<20ms, and corresponging value of I^2t

I_{TSM}(A),I^2t（A^2s）

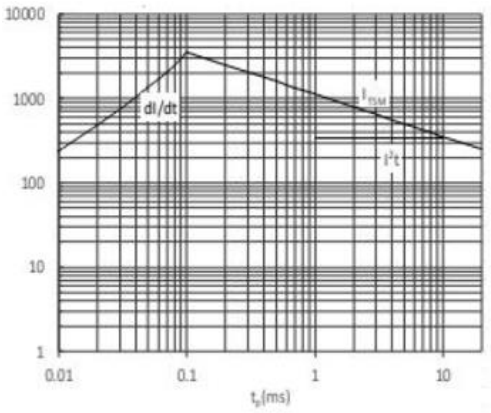
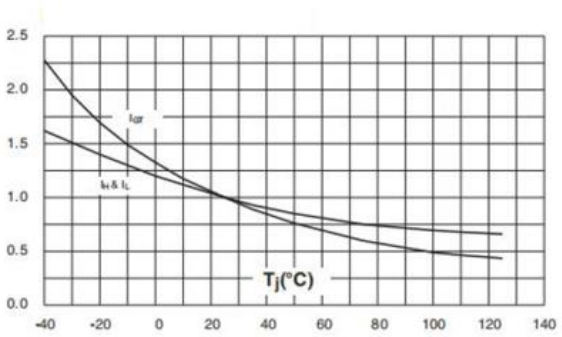


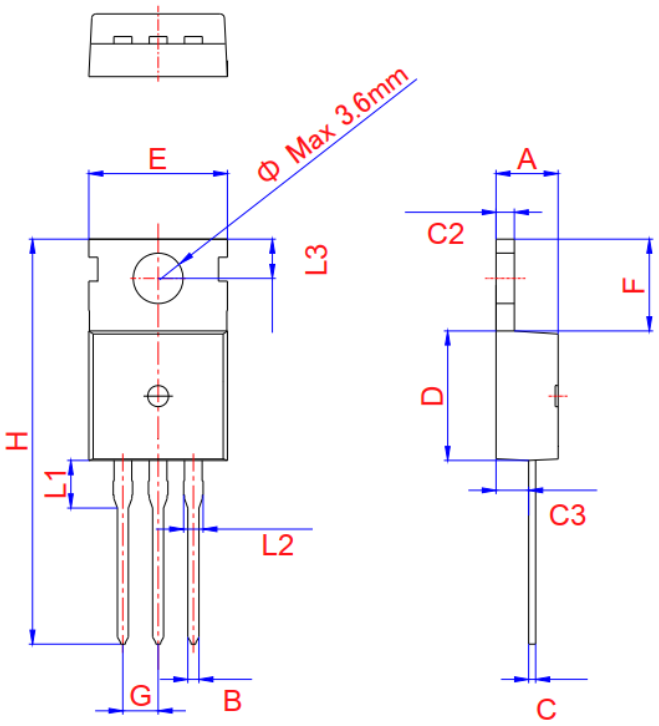
FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

I_{GT},I_H,I_L(Tj)/I_{GT},I_H,I_L(Tj=25℃)

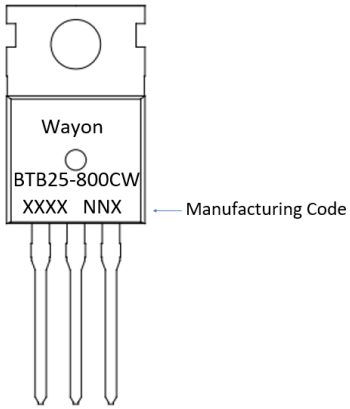


Outline Drawing

SYMBOL	MM		
	MIN	NOM	MAX
A	4.30	4.50	4.70
B	0.70	-	0.90
C	0.40	-	0.60
C2	1.20	1.30	1.48
C3	2.20	-	2.60
D	8.90	-	9.90
E	9.70	10.1	10.3
F	6.30	-	7.15
G	-	2.54	-
H	28	-	29.8
L1	2.80	-	3.59
L2	1.14	-	1.7
L3	2.65	-	3.35



Marking Code



Package Information

Package	Base qty.	Delivery mode
TO-220	50	Tube

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