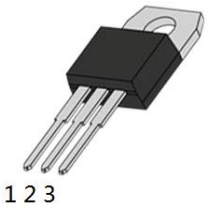
BTB16-800BK

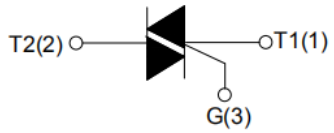
Features

- Blocking Voltage to 800 V
- Glass Passivated Surface for Reliability and Uniformity
- RoHS Compliant
- High Dv/Dt Rate
- $I_{T(RMS)}$ to 16A of Triacs



TO-220B(No-Ins)

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	$I_{T(RMS)}$	16	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	160	A
I^2t value for fusing (tp=10ms)	I^2t	128	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
Peak gate power	P_{GM}	5	W

Thermal Resistance(between Junction and Case) @TO-220B(Non-Ins）	$R_{\theta(J-C)}$	1.3（Typ.）	℃/W

Electronics Characteristics（Tc=25℃ Unless otherwise specified）

4 Quadrants：

Parameter	Symbol	Quadrant		Value	Unit
				B	
Gate Trigger Current (Continuous dc)@VD=12V, RL=33Ω	I_{GT}	Ⅰ-Ⅱ-Ⅲ	MAX	50	mA
		Ⅳ		70	mA
Gate Trigger Voltage (Continuous dc) @VD=12V, RL=33Ω	V_{GT}	ALL		1.5	V
Gate non-trigger voltage@VD=VDRM	V_{GD}	ALL	MIN	0.2	V
Holding Current@IT=100mA	I_H	-	MAX	60	mA
Latching Current@IG=1.2IGT	I_L	Ⅰ-Ⅲ-Ⅳ	MAX	70	mA
		Ⅱ		90	mA
Critical Rate-of-Rise of Off State Voltage @VD=0.66×VDRM, Tj=125℃,Gate Open	dV/dt	-	MIN	500	V/μs
Peak Forward On-State Voltage@ITM=22.5A,tp=380μs, Tj=25℃	V_{TM}	-	MAX	1.5	V
Peak Repetitive Forward@VDRM=VRRM,Tj=25℃	I_{DRM}	-	MAX	5	μA
Reverse Blocking Current@VDRM=VRRM,Tj=125℃	I_{RRM}	-	MAX	1	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

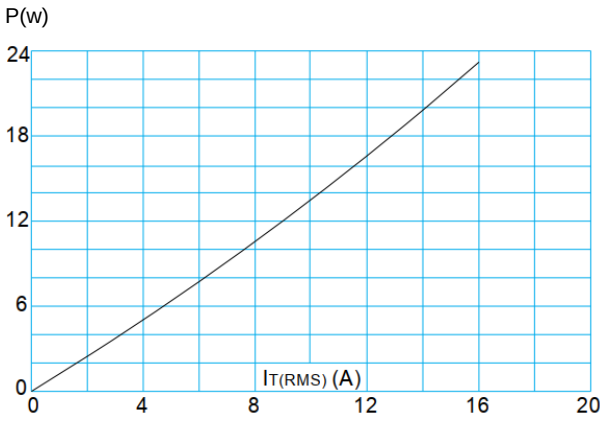


FIG.2: RMS on-state current versus case temperature in different packaging

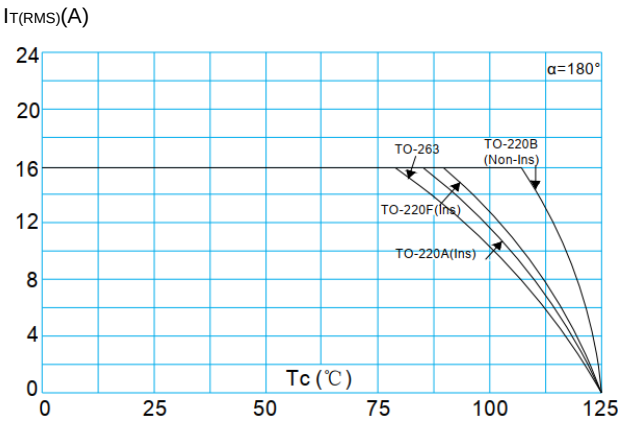


FIG.3: Surge peak on-state current versus number of cycles

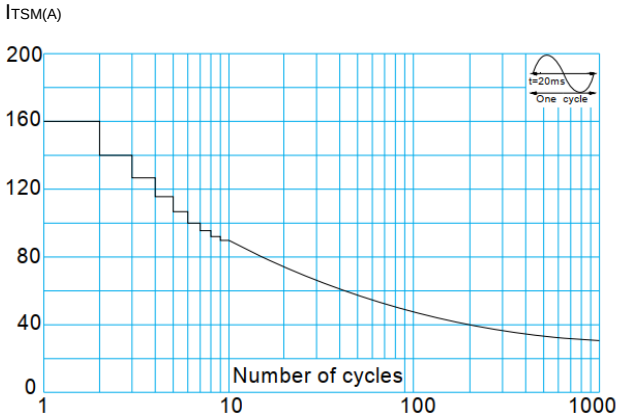


FIG.4:On-state characteristics (maximum values)

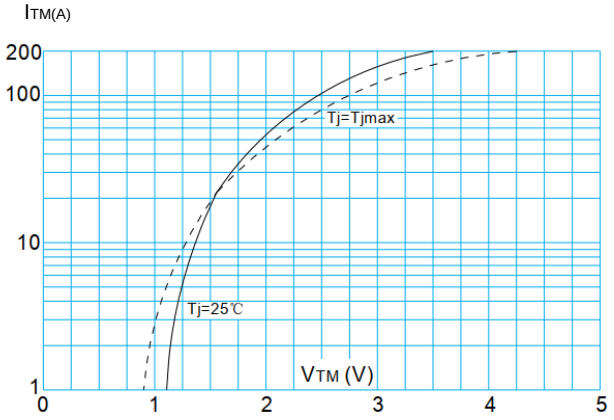


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp<20ms, and corresponging value of I^2t (Ⅰ-Ⅱ-Ⅲ:dI/dt < 50A/μs;Ⅳ:dI/dt < 10A/μs)

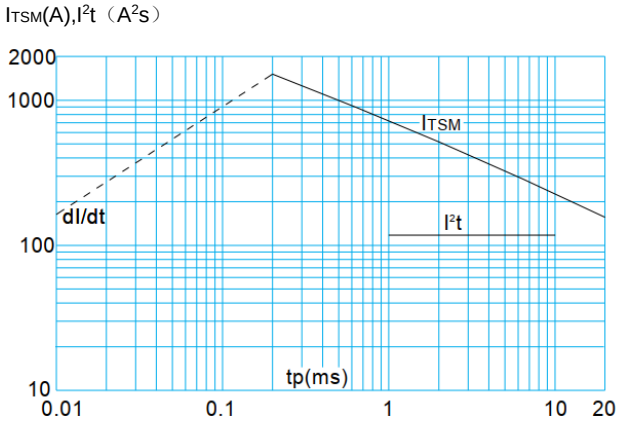
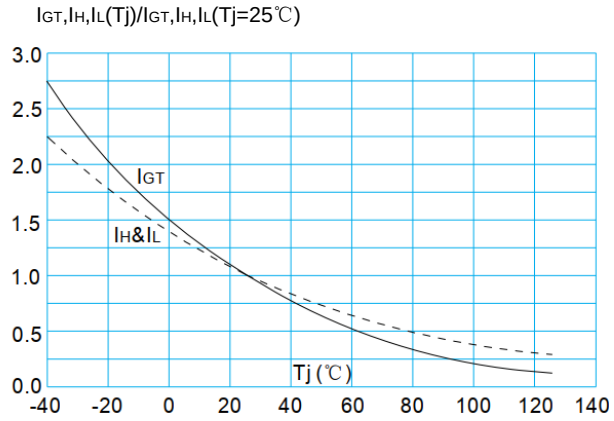
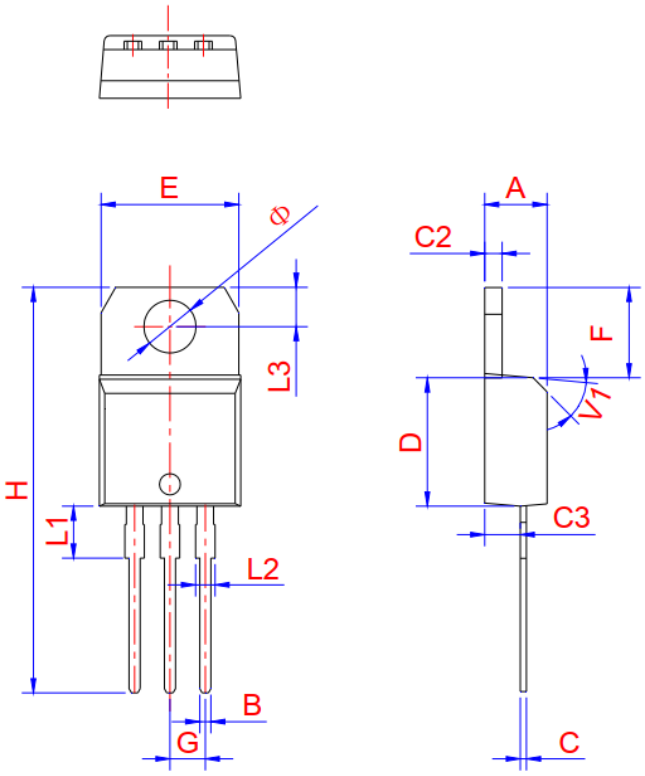


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

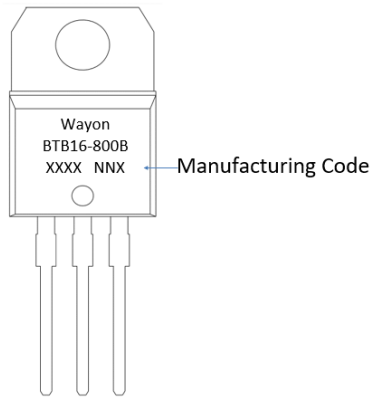


Outline Drawing- TO-220B Non-Ins

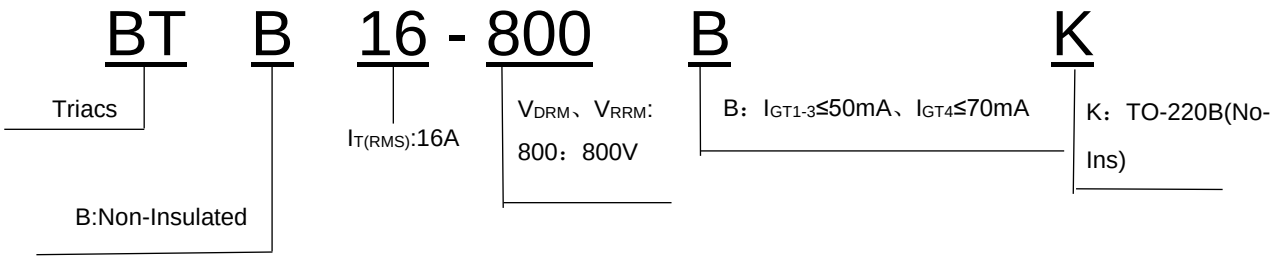
SYMBOL	MM		
	MIN	NOM	MAX
A	4.20	4.47	4.60
B	0.61	-	0.93
C	0.41	0.50	0.70
C2	1.20	1.27	1.42
C3	2.40	-	2.72
D	8.60	-	9.70
E	9.70	-	10.60
F	6.15	-	7.15
G	-	2.54	-
H	28	-	29.8
L1	-	3.75	-
L2	1.10	-	1.70
L3	2.55	-	2.95
V1	-	45°	-
Φ	3.65	3.75	3.85



Marking Code



Part Number System



Package Information

Package	Base qty.	Delivery mode
TO-220B(No-Ins)	50	Tube

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