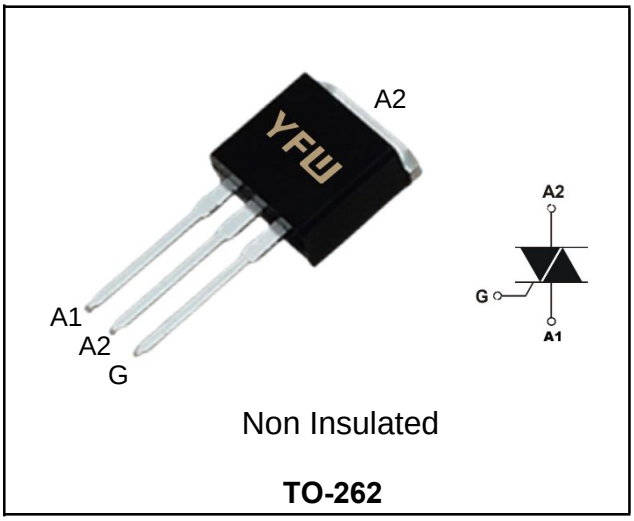
16A 4Quadrants TRIACs

Product Summary

Symbol	Value	Unit
$I_{T(RMS)}$	16	A
V_{DRM} V_{RRM}	800	V
V_{TM}	1.50	V



Features

With high ability to withstand the shock loading of large current, Provide high dv/dt rate with strong resistance to electromagnetic interference.

Application

Power charger, T-tools, massager, solid state relay, AC Motor speed regulation and so on.

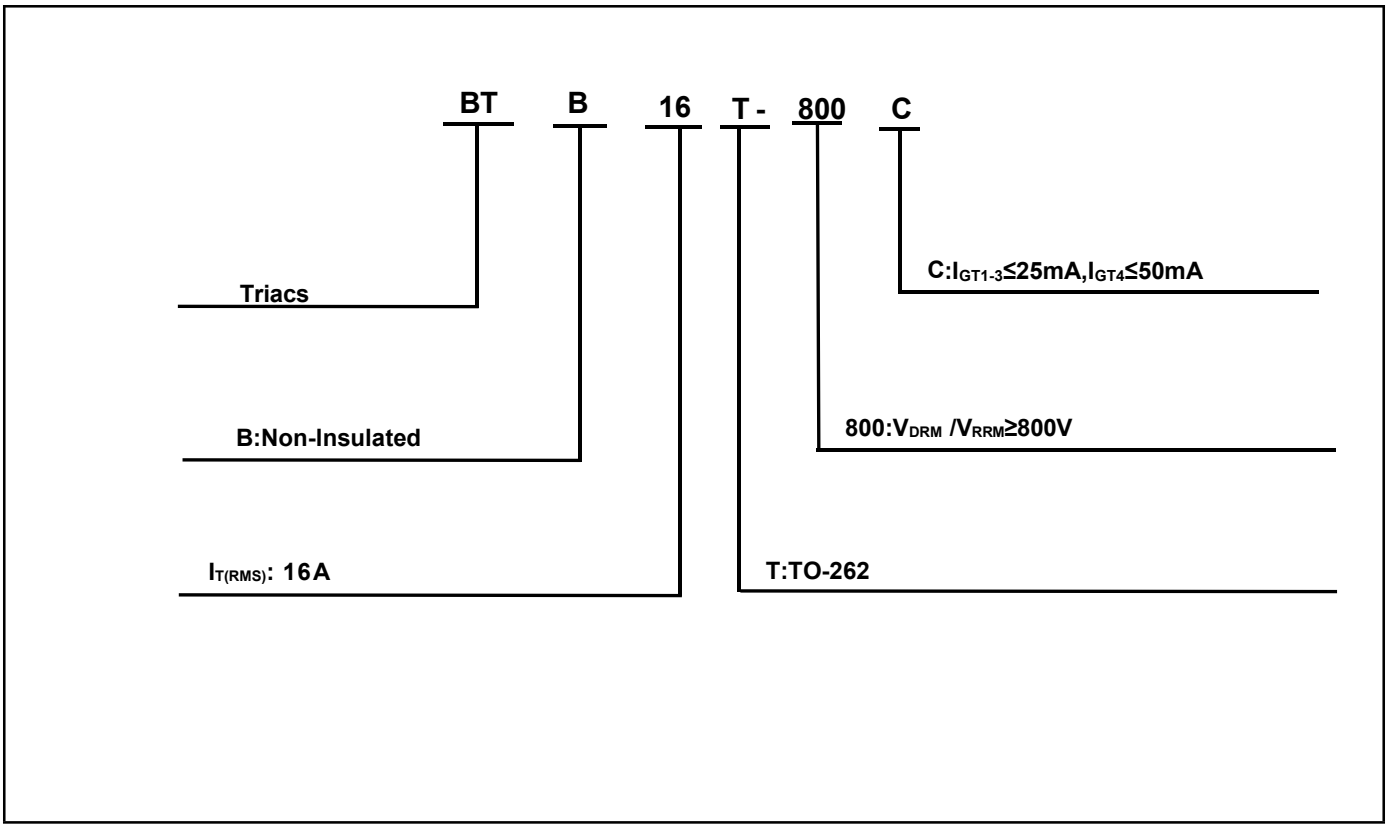
Absolute maximum ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value		Unit
Repetitive peak off-state voltage	V_{DRM}	800		V
Repetitive peak reverse voltage	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	144		A^2S
Critical rate of rise of on-state current (I_G =2 x I_{GT})	dI_T/dt	I - II -III	50	A/μs
Peak gate current	I_{GM}	4		A
Average gate power dissipation	$P_{G(AV)}$	1		W
Junction Temperature	T_J	-40~+125		°C
Storage Temperature	T_{STG}	-40 ~+150		°C

Electrical characteristics (T_j=25°C, unless otherwise noted)

Parameter	Symbol	Test Condition		Value			Unit
				Min	Typ	Max	
Gate trigger current	I_{GT}	V_D=12V,R_L=100Ω	Ⅰ-Ⅱ-Ⅲ	-	-	25	mA
			Ⅳ	-	-	50	mA
Gate trigger voltage	V_{GT}		ALL	-	-	1	V
Non-triggering gate voltage	V_{GD}	V_D=V_{DRM}, R_L=100Ω,T_j=125℃	ALL	0.2	-	-	V
Latching current	I_L	I_G=1.2I_{GT}	Ⅰ-Ⅲ-Ⅳ	-	-	60	mA
			Ⅱ	-	-	100	
Holding current	I_H	I_T=500mA		-	-	60	mA
Critical-rate of rise of commutation voltage	dV_D/dt	V_D=2/3V_{DRM} Tj =125°C		500	-	-	V/μs
STATIC CHARACTERISTICS							
On-state Voltage	V_{TM}	I_{TM}=32A，	T_j=25℃	-	-	1.50	V
Repetitive Peak Off-State Current	I_{DRM}	V_D=V_{DRM}= V_{RRM}	T_j=25℃	-	-	5	μA
Repetitive Peak Reverse Current	I_{RRM}		T_j=125℃	-	-	1	mA
THERMAL RESISTANCES							
Ihermal resistance	$R_{th\ (j-c)}$	Junction to case			TYP.	1.3	℃/W

Ordering Information



Typical Characteristics

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

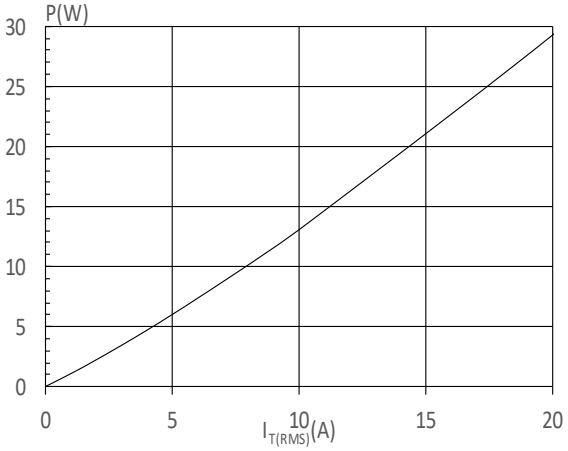


FIG.2: RMS on-state current versus case temperature

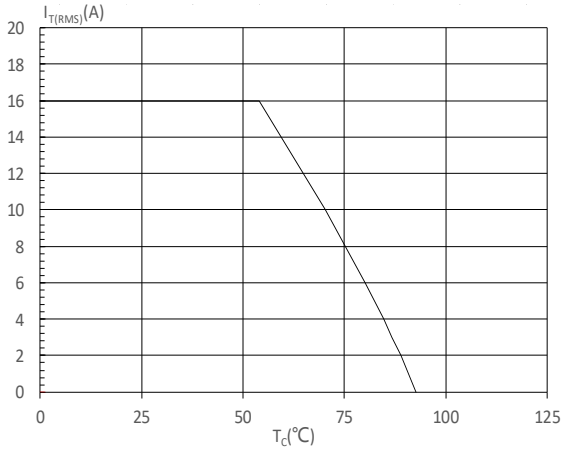


FIG.3: Surge peak on-state current versus number of cycles

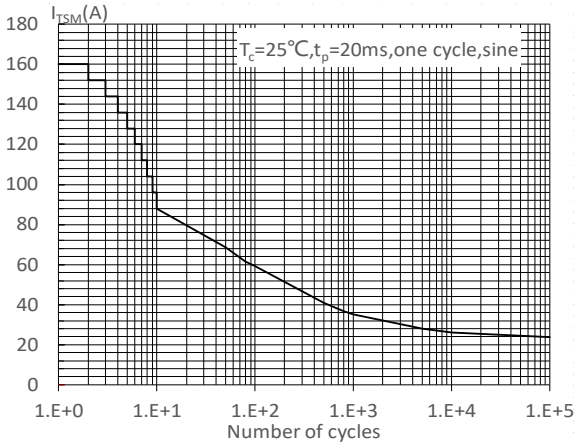


FIG.4: On-state characteristics

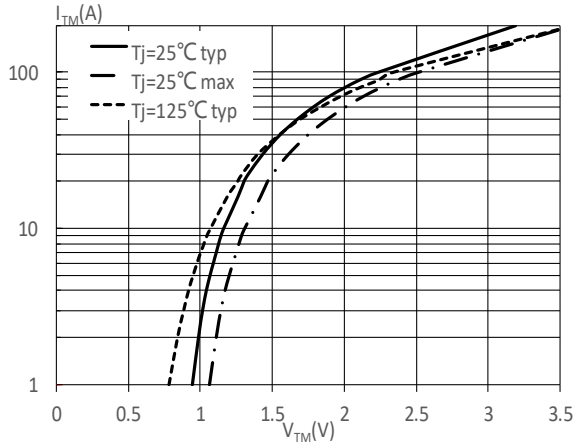


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width t_P<20ms, and corresponding value of I^2t
(Ⅰ-Ⅱ: dI/dt<80A/μs;Ⅲ-Ⅳ: dI/dt<40A/μs)

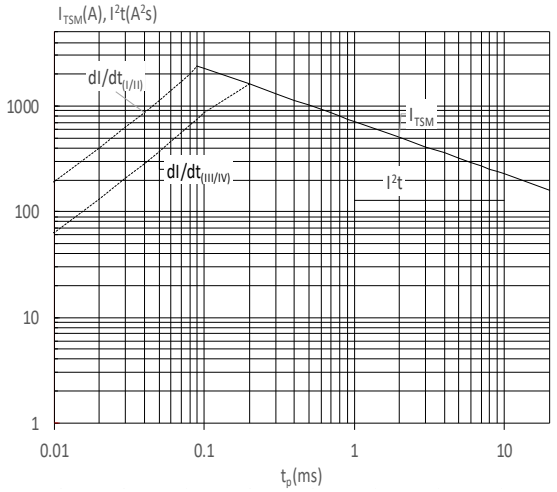
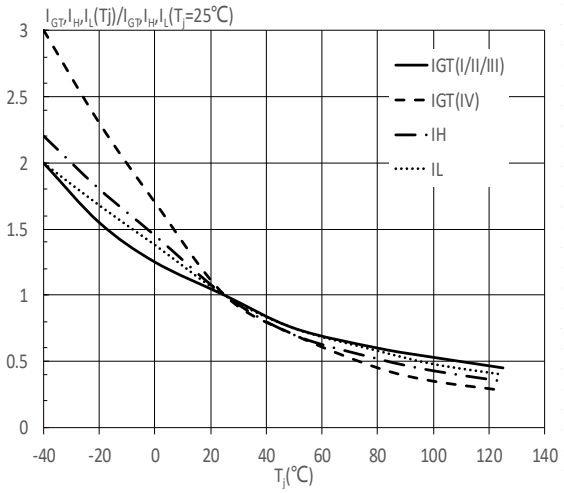
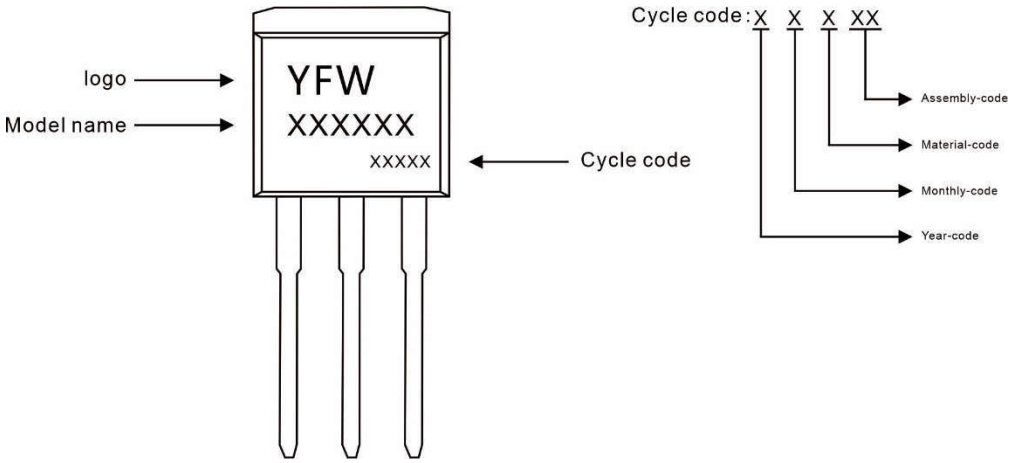


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



Marking Diagram

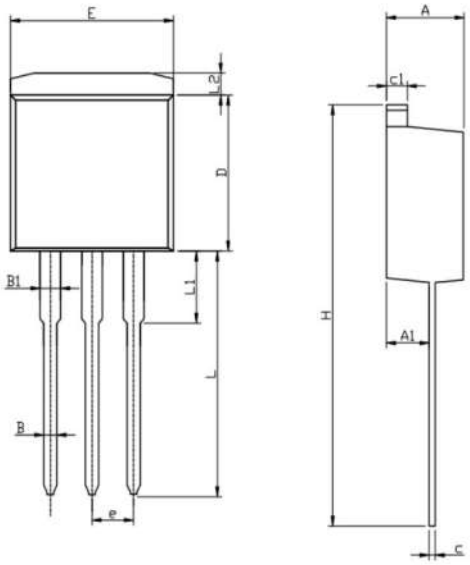


Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
BTB16T	TO-262	0.07oz(1.96g)	50pcs/tube	1000PCS/Box 5000PCS/Carton

Package Dimensions

TO-262



Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.40	4.60	0.173	0.181
A1	2.40	2.60	0.095	0.102
B	0.75	0.85	0.030	0.034
B1	1.20	1.40	0.047	0.055
C	0.35	0.42	0.014	0.017
C1	1.25	1.35	0.049	0.053
D	8.50	9.50	0.335	0.374
E	10.15	10.35	0.400	0.407
H	23.00	25.00	0.906	0.984
L	13.00	14.00	0.512	0.551
L1	2.80	3.50	0.110	0.138
L2	1.20	1.50	0.047	0.060

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