

8A 3Quadrants TRIACs

Product Summary

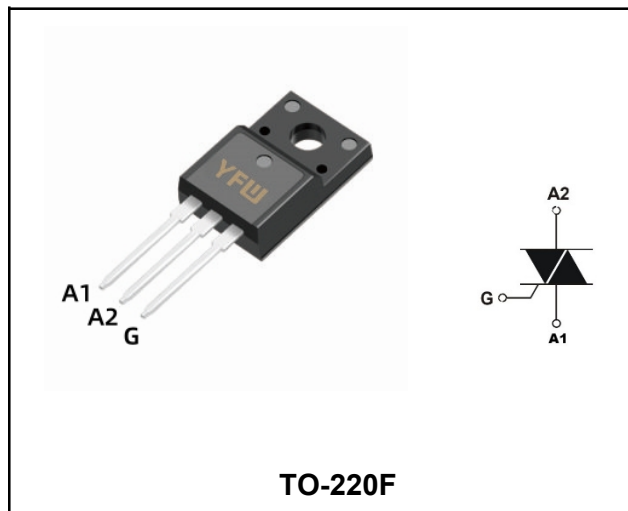
Symbol	Value	Unit
$I_{T(RMS)}$	8	A
$V_{DRM} V_{RRM}$	600/800	V
V_{TM}	1.55/1.4	V

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}	600/800	V
Repetitive peak reverse voltage	V_{RRM}	600/800	V
RMS on-state current	$I_{T(RMS)}$	8	A
Non repetitive surge peak on-state current	I_{TSM}	80	A
I^2t value for fusing (tp=10ms)	I^2t	36	A ² s
Critical rate of rise of on-state current ($I_G = 2 \times I_{GT}$)	di_T/dt	I - II -III 50	A/ μ s
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 (TA=25°C, unless otherwise noted)

Parameter	Symbol	Test Condition		Value				Unit
				TW	SW	CW	BW	
Gate trigger current	I _{GT}	V _D =12V, R _L =30Ω T _j =25℃, Fig.6	I - II -III	≤5	≤10	≤35	≤35	mA
Gate trigger voltage	V _{GT}		I - II -III	≤1.3				V
Non-triggering gate voltage	V _{GD}	V _D =V _{DRM} , R _L =3.3kΩ, T _j =150℃		≥0.2				V
Holding current	I _H	I _T =100mA, Fig.6		≤10	≤15	≤35	≤30	mA
Latching current	I _L	I _G =1.2I _{GT} , Fig.6	I - III	≤10	≤25	≤50	≤40	mA
			II	≤15	≤30	≤60	≤50	
Critical-rate of rise of commutation voltage	dV _b /dt	V _D =67%V _{DRM} , T _j =125℃		≥20	≥40	≥400	≥500	V/μs

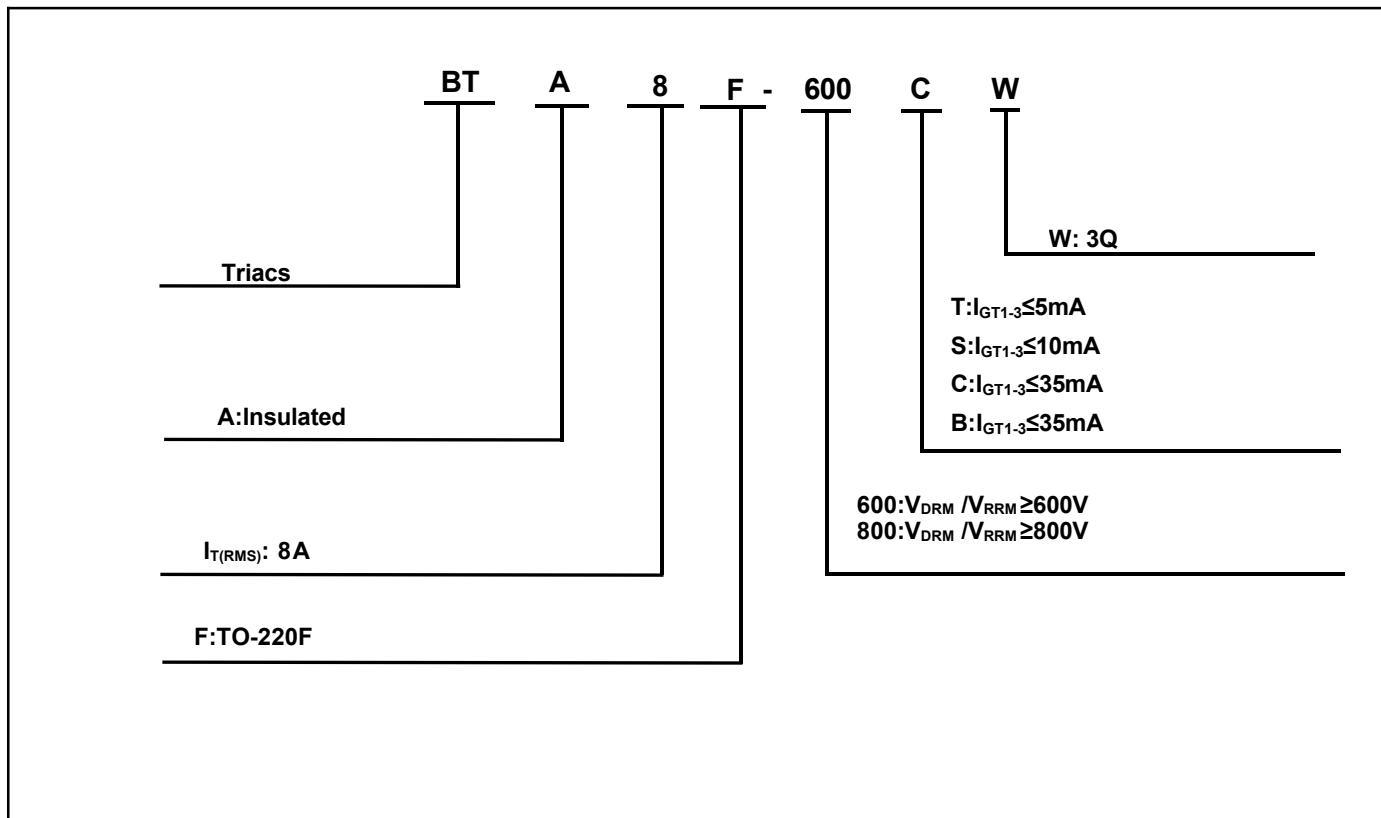
STATIC CHARACTERISTICS

On-state Voltage	V_{TM}	$I_{TM}=11A$, $t_p=380\mu s$, Fig.4		≤ 1.55			≤ 1.4	V
Repetitive Peak Off-State Current	I_{DRM}	$V_D=V_{DRM}=V_{RRM}$	$T_j=25^\circ C$	≤ 10	≤ 10	≤ 10	≤ 10	μA
Repetitive Peak Reverse Current	I_{RRM}		$T_j=125^\circ C$	≤ 1	≤ 1	≤ 1	≤ 3	mA

THERMAL RESISTANCES

Thermal resistance	$R_{th(j-c)}$	Junction to case	TYP.	2.5	$^\circ C/W$
	$R_{th(j-a)}$	Junction to ambient	TYP.	60	$^\circ C/W$

Ordering Information



Typical Characteristics

FIG.1: Maximum power dissipation versus RMS on-state current (full cycle)

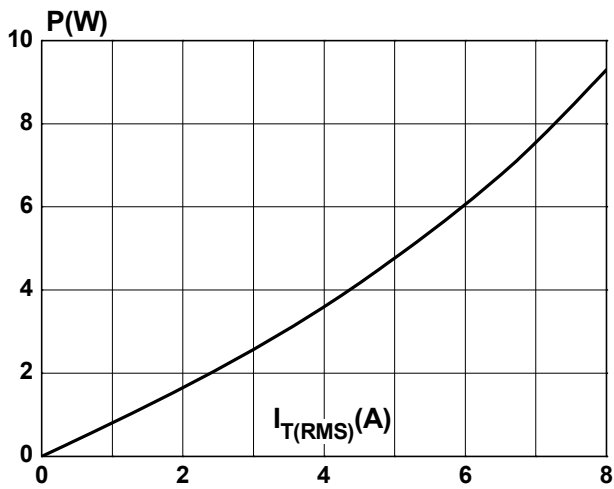


FIG.3: Surge peak on-state current versus number of cycles

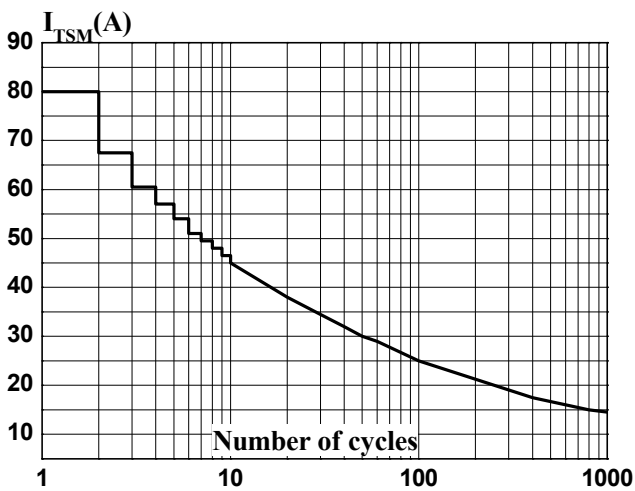


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10ms$

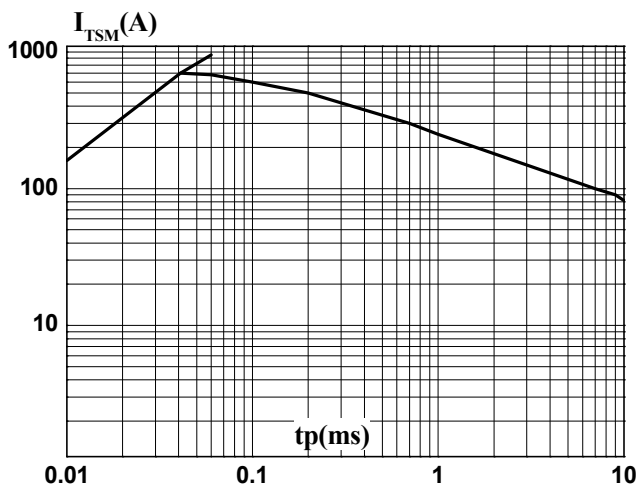


FIG.2: RMS on-state current versus case temperature (full cycle)

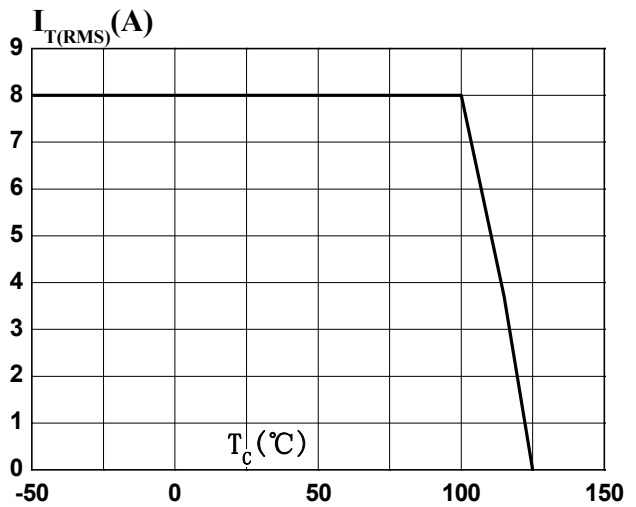


FIG.4: On-state characteristics (maximum values)

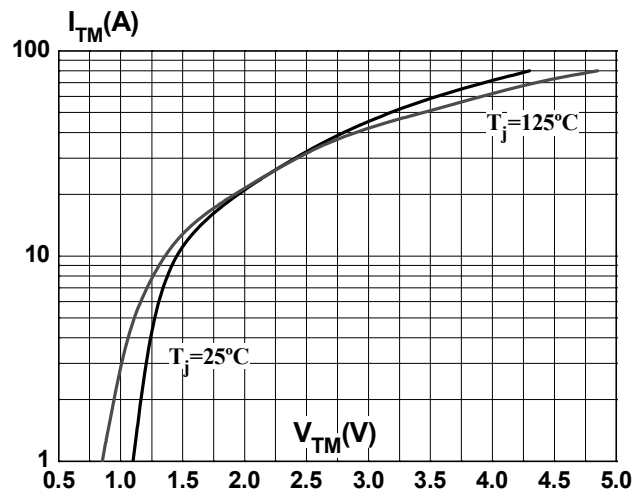
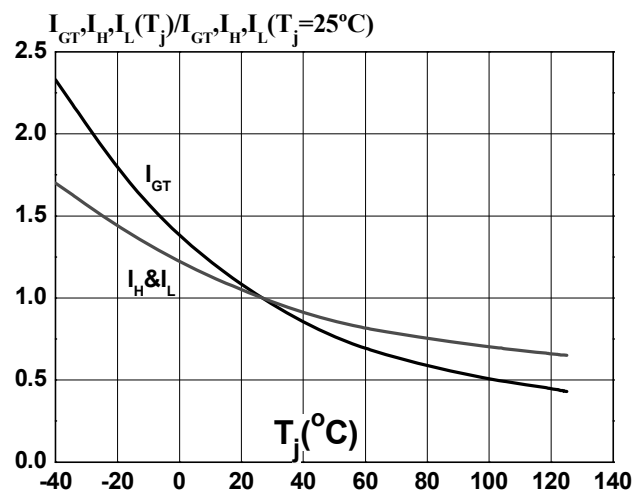
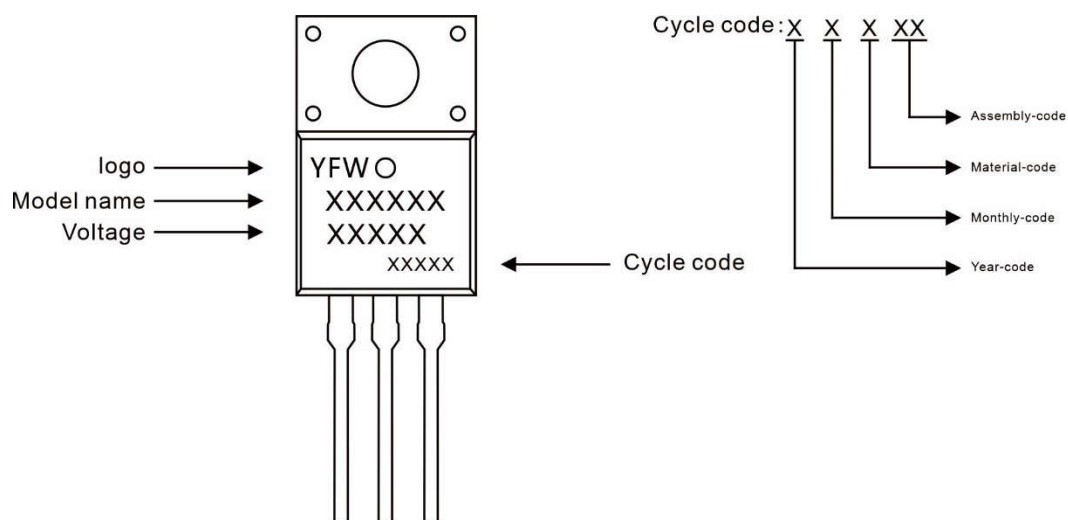


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction



Marking Diagram



Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
BTA08F	TO-220F	0.06oz(1.74g)	50pcs/tube	1000PCS/Box 5000PCS/Carton

Package Dimensions

TO-220F

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.50	4.90	0.177	0.193
A1	2.34	2.74	0.092	0.108
A2	2.66	2.86	0.105	0.113
b	0.75	0.85	0.030	0.033
b1	1.24	1.44	0.049	0.057
c	0.40	0.60	0.016	0.024
D	10.00	10.32	0.394	0.406
E	15.75	16.05	0.620	0.632
e	2.44	2.64	0.096	0.104
e1	4.88	5.28	0.192	0.208
F	3.10	3.5	0.122	0.138
L	13.50	13.90	0.531	0.547
L1	2.90	3.30	0.114	0.130
Φ	3.10	3.30	0.122	0.130

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