

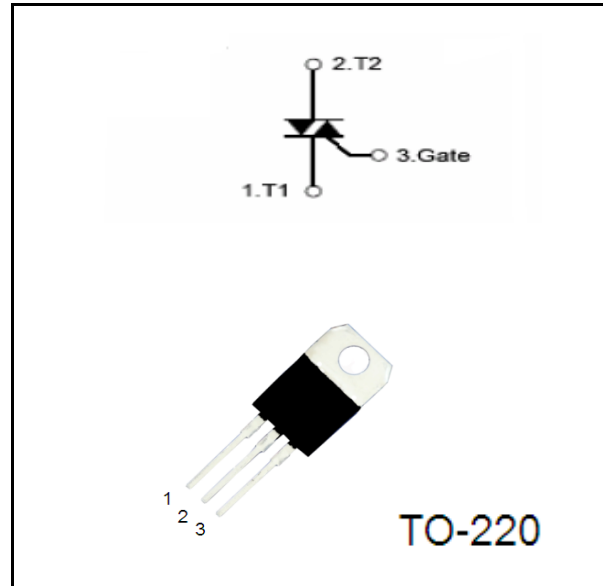
### 3 Quadrants TRIAC

## Features

- IT(RMS): 8A
- VGT: 1.3V
- VDRM VRRM: 600V and 800V

## Applications

Washing machine, vacuums, massager, solid state relay, AC Motor speed regulation, lighting control, temperature and so on.



### Absolute Maximum Ratings(Tc=25°C unless otherwise specified)

Symbol	Items	Conditions	Ratings	Unit
VDRM VRRM	Repetitive Peak Off-State Voltage	BTA08-600	600	V
		BTA08-800	800	V
IT(RMS)	R.M.S On-State Current	Tc=110°C	8	A
ITSM	Surge On-State Current	f=50/60Hz tp=16.7ms/20ms	80/84	A
I <sup>2</sup> t	I <sup>2</sup> t for fusing	Tp=10ms	36	A <sup>2</sup> s
PG(AV)	Average Gate Power Dissipation	Tj=125°C	1	W
IGM	Peak Gate Current	Tj=125°C	4	A
Tj	Operating Junction Temperature		-40~125	°C
TSTG	Storage Temperature		-40~150	°C

Electrical Characteristics( $T_c=25^{\circ}\text{C}$  unless otherwise specified)

symbol	parameter	Test Conditions	Value						Unit	
			TW	SW	CW	BW	C	B		
IDRM	Repetitive Peak Off-State Current	$T_c=25^{\circ}\text{C}$	$\leq 5$						$\mu\text{A}$	
		$T_c=125^{\circ}\text{C}$	$\leq 1$						$\text{mA}$	
IRRM	Repetitive Peak Reverse Current	$T_c=25^{\circ}\text{C}$	$\leq 5$						$\mu\text{A}$	
		$T_c=125^{\circ}\text{C}$	$\leq 1$						$\text{mA}$	
VTM	Forward "on" voltage	$I_T=12\text{A}$ $t_p=380\mu\text{s}$	1.55						V	
VGT	Gate trigger voltage	$V_D=12\text{V}$ $R_L=30\Omega$	$\leq 1.3$						V	
di/dt	Critical rate of rise of on-state current	I,II,III	$F=100\text{Hz}$ , $I_G=2 \times I_{GT}$ , $t_r \leq 100\text{ns}$						$\text{A}/\mu\text{s}$	
		IV	$\geq 10$						$\text{A}/\mu\text{s}$	
IGT	Gate trigger current	I,II,III	$V_D=12\text{V}$ , $R_L=30\Omega$	$\leq 5$	$\leq 10$	$\leq 25$	$\leq 50$	$\leq 25$	$\leq 50$	$\text{mA}$
		IV		/	/	/	/	$\leq 50$	$\leq 100$	$\text{mA}$
IH	Holding current	$I_T=0.2\text{A}$	$\leq 10$	$\leq 15$	$\leq 35$	$\leq 60$	$\leq 25$	$\leq 50$	$\text{mA}$	
VGD	Gate non-trigger voltage	ALL	$V_D=V_{DRM}$ , $T_J=125^{\circ}\text{C}$ , $R_L=3.3\text{K}\Omega$	$\geq 0.2$						V
dv/dt	Critical-rate of rise of commutation voltage	$T_J=125^{\circ}\text{C}$ , $V_D=2/3V_{DRM}$ , Gate open circuit	$\geq 40$	$\geq 100$	$\geq 400$	$\geq 1000$	$\geq 200$	$\geq 400$	$\text{V}/\mu\text{s}$	
Rth(j-c)	Thermal resistance	Junction to case	2.5						$^{\circ}\text{C}/\text{W}$	
Rth(j-a)	Thermal resistance	Junction to ambient	60						$^{\circ}\text{C}/\text{W}$	

**characteristic curve**

FIG.1: Gate characteristics

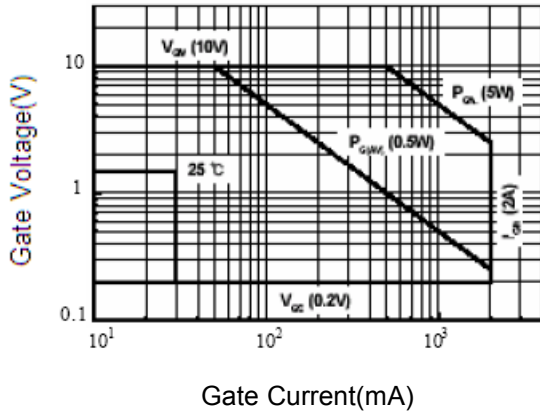


FIG.2: On-state characteristics(max)

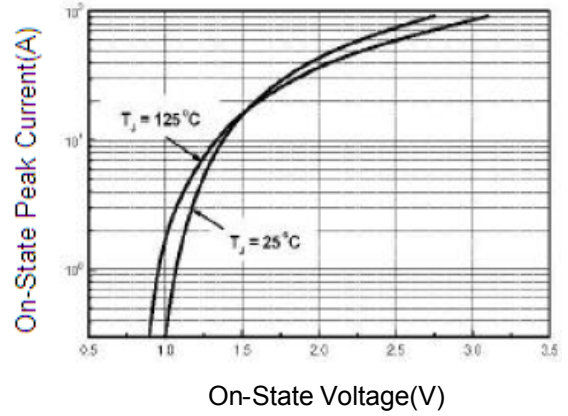


FIG.3: Gate trigger voltage vs junction temperature

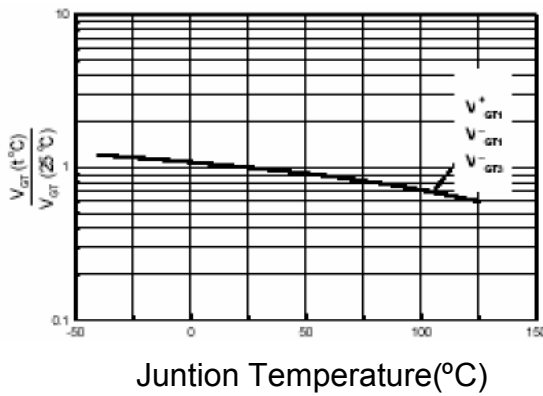


FIG.4: on-state current vs max power Dissipation

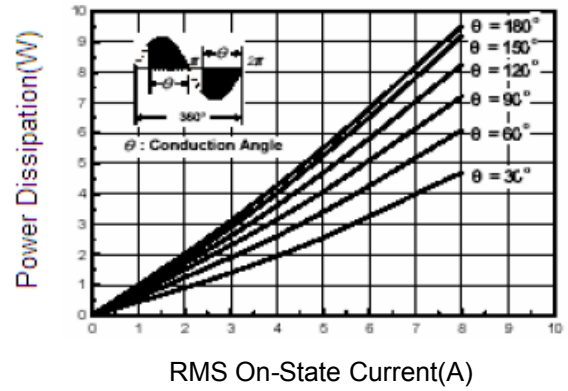


FIG.5: RMS On-state vs Allowable Case Temperature

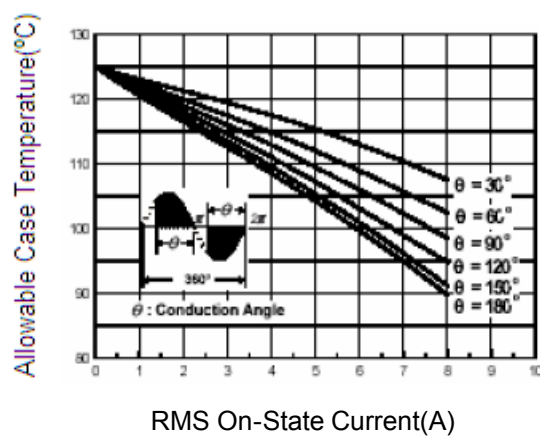
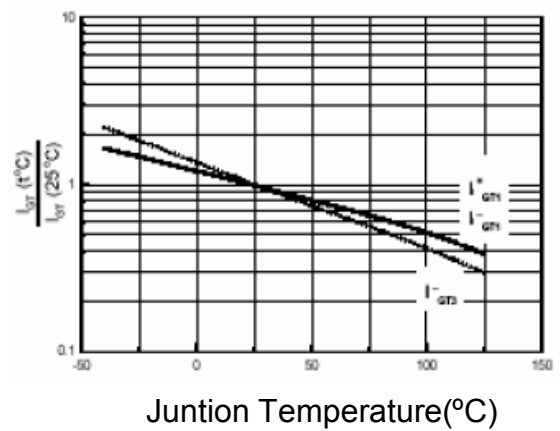
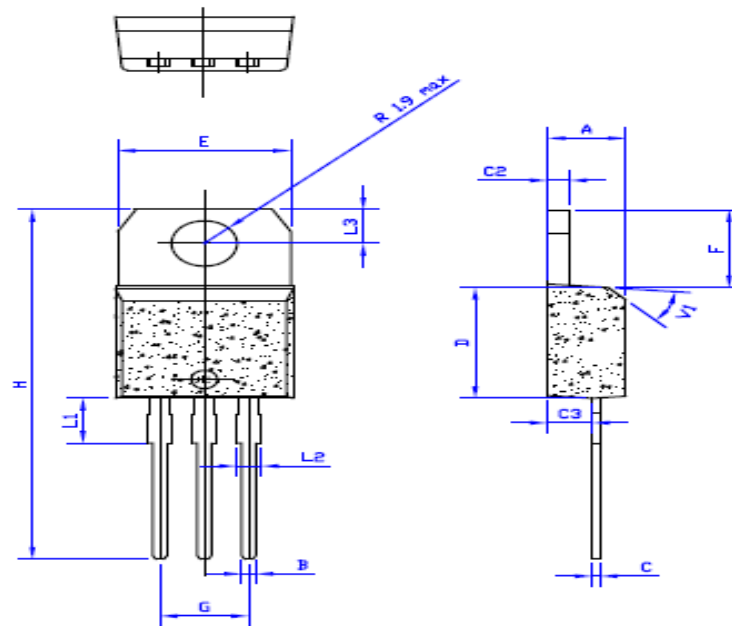


FIG.6: Gate trigger current vs junction temperature



# PACKAGE MECHANICAL DATA

## TO-220 Package Dimension



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.4		4.6	0.173		1.181
B	0.61		0.88	0.024		0.034
C	0.46		0.70	0.018		0.027
C2	1.23		1.32	0.048		0.051
C3	2.4		2.72	0.094		0.107
D	8.6		9.7	0.338		0.382
E	9.8		10.4	0.386		0.409
F	6.2		6.6	0.244		0.259
G	4.8		5.4	0.189		0.213
H	28.0		29.8	11.0		11.7
L1		3.75			0.147	
L2	1.14		1.7	0.044		0.066
L3	2.65		2.95	0.104		0.116
V1		40°			40°	