BTA16-600

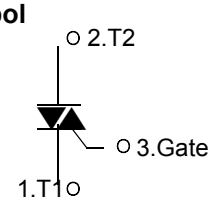
Standard Triac

V_{DRM} = 600V

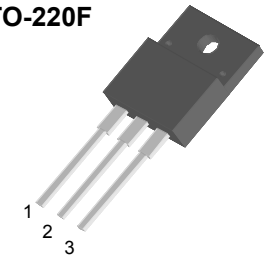
$I_{T(RMS)}$ = 16 A

I_{TSM} = 168A

Symbol



TO-220F



Features

- Repetitive Peakk Off-State Voltage : 600V
- R.M.S On-State Current ($I_{T(RMS)}$= 16 A)
- High Commutation dv/dt

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

Symbol	Parameter	Condition	Ratings	Units
V_{DRM}	Repetitive Peak Off-State Voltage	Sine wave, 50 to 60 Hz	600	V
$I_{T(RMS)}$	R.M.S On-State Current	Tj = 125 °C, Full Sine wave	16	A
I_{TSM}	Surge On-State Current	One Cycle, 50Hz/60Hz, Peak, Non-Repetitive	160/168	A
I^2t	I^2t	tp =10ms	128	A^2s
$P_{G(AV)}$	Average Gate Power Dissipation	Tj=125°C	1	W
I_{GM}	Peak Gate Current	Tj=125°C	2	A
T_J	Operating Junction Temperature		- 40 ~ 125	°C
T_{STG}	Storage Temperature		- 40 ~ 150	°C..

Electrical Characteristics (Tj=25 °C unless otherwise specified)

Symbol	Items		Conditions	Ratings			Unit
				Min.	Typ.	Max.	
I_{DRM}	Repetitive Peak Off-State Current		$V_D = V_{DRM}$, Single Phase, Half Wave Tj = 125 °C	----	----	2.0	mA
V_{TM}	Peak On-State Voltage		I_{TM} = 22.5 A, tp=380μs	—	—	1.55	V
I^+_{GT1}	Ⅰ	Gate Trigger Current	V_D = 12 V, R_L=30 Ω	—	—	30	mA
I^-_{GT1}	Ⅱ			—	—	30	
I^-_{GT3}	Ⅲ			—	—	30	
V^+_{GT1}	Ⅰ	Gate Trigger Voltage	V_D = 12 V, R_L=30 Ω	—	—	1.5	V
V^-_{GT1}	Ⅱ			—	—	1.5	
V^-_{GT3}	Ⅲ			—	—	1.5	
V_{GD}	Non-Trigger Gate Voltage		T_J = 125 °C, V_D=V_{DRM}, RL=3.3kΩ	0.2	----	-----	V
dv/dt	Critical Rate of Rise Off-State Voltage		T_J = 125 °C, V_D=2/3 V_{DRM}	200	----	----	V/μs
I_H	Holding Current		I_T=0.2A	---	---	50	mA

Fig 1. Gate Characteristics

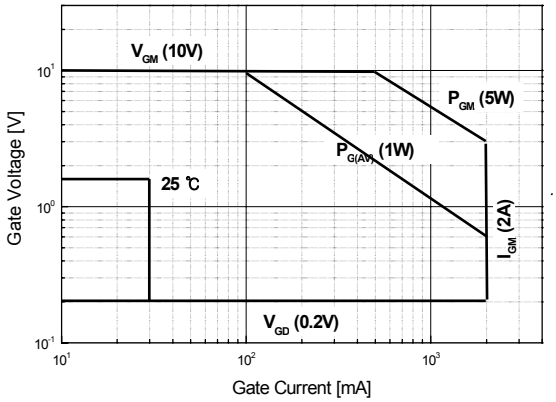


Fig 2. On-State Voltage

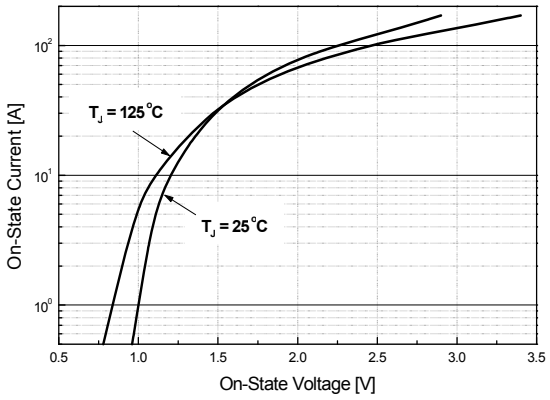


Fig 3. On State Current vs. Maximum Power Dissipation

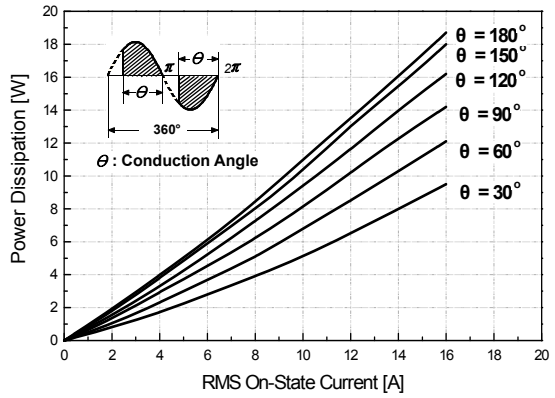


Fig 4. On State Current vs. Allowable Case Temperature

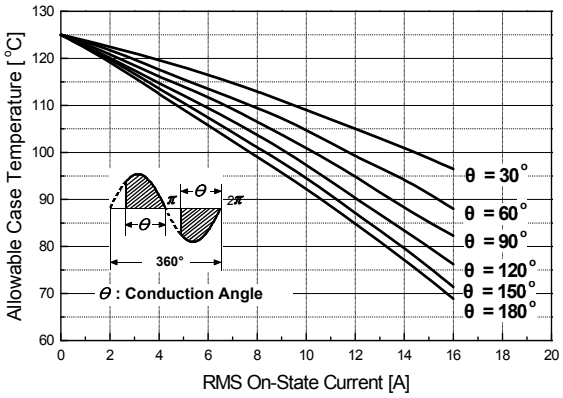


Fig 5. Surge On-State Current Rating (Non-Repetitive)

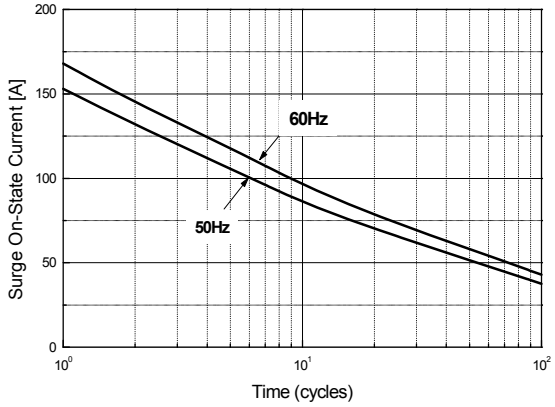


Fig 6. Gate Trigger Voltage vs. Junction Temperature

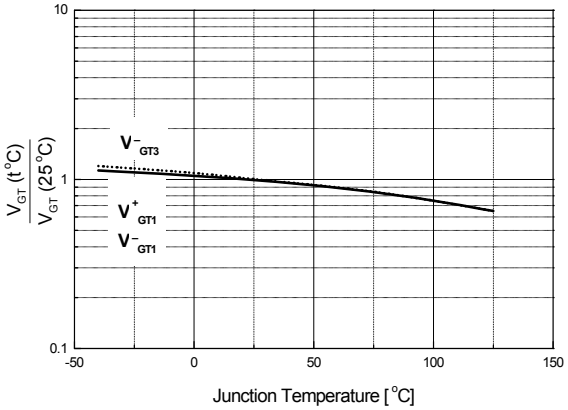


Fig 7. Gate Trigger Current vs. Junction Temperature

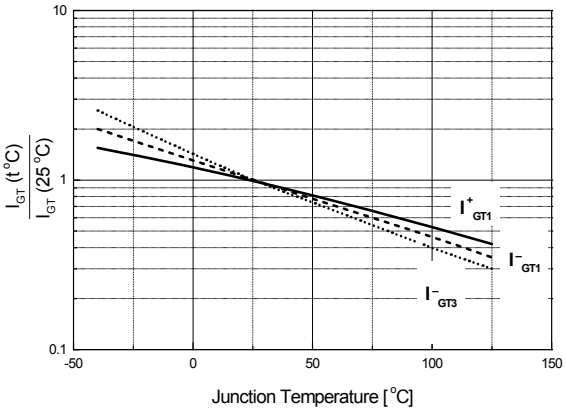
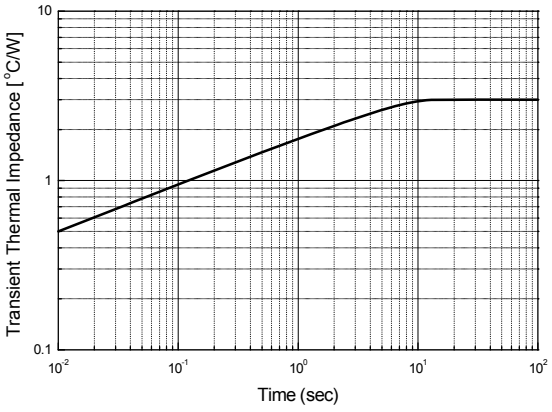
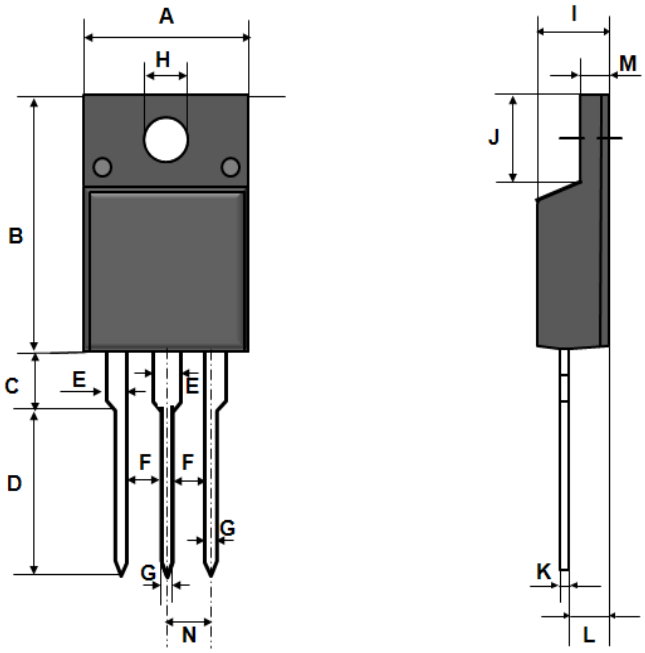


Fig 8. Transient Thermal Impedance



TO-220F Package Dimension



Symbol	INCHES			MILLIMETERS		
	MIN	TYP	MAX		MIN	TYP
A	9.88	10.08	10.28	25.10	25.60	26.11
B	15.30	15.50	15.70	38.86	39.37	39.88
C	2.95	3.00	3.05	7.49	7.62	7.75
D	10.30	10.50	10.70	26.16	26.67	27.18
E	0.95	1.08	1.20	2.41	2.74	3.05
F	1.81	1.84	1.87	4.60	4.67	4.75
G	0.50	0.70	0.90	1.27	1.78	2.29
H	3.00	3.20	3.40	7.62	8.13	8.64
I	4.35	4.45	4.55	11.05	11.30	11.56
J	6.20	6.40	6.60	15.75	16.26	16.76
K	0.41	0.51	0.61	1.03	1.28	1.54
L	2.30	2.50	2.70	5.84	6.35	6.86
M	2.53	2.73	2.93	6.43	6.93	7.44
N	2.34	2.54	2.74	5.94	6.45	6.96

TO-220F Package Dimension, Forming

Dim.	mm			Inch		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	10.4		10.6	0.409		0.417
B	6.18		6.44	0.243		0.254
C	9.55		9.81	0.376		0.386
D	8.4		8.66	0.331		0.341
E	6.05		6.15	0.238		0.242
F	1.26		1.36	0.050		0.054
G	3.17		3.43	0.125		0.135
H	1.87		2.13	0.074		0.084
I	2.57		2.83	0.101		0.111
J		2.54			0.100	
K		5.08			0.200	
L	2.51		2.62	0.099		0.103
M	1.23		1.36	0.048		0.054
N	0.45		0.63	0.018		0.025
O	0.65		0.78	0.0025		0.031
P		5.0			0.197	
ϕ		3.7			0.146	
ϕ 1		3.2			0.126	
ϕ 2		1.5			0.059