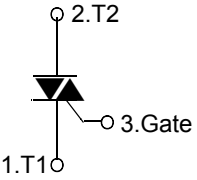
APOLLO ELECTRON™

TF8A80

Standard Triac

Symbol

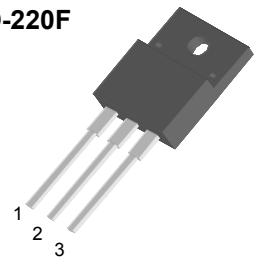


V_{DRM} = 800V

$I_{T(RMS)}$ = 8 A

I_{TSM} = 84A

TO-220F



Features

- Repetitive Peak Off-State Voltage : 800V
- R.M.S On-State Current ($I_{T(RMS)}$=8 A)
- High Commutation dv/dt

General Description

This device is fully isolated package suitable for AC switching application, phase control application such as fan speed and temperature modulation control, lighting control and static switching relay.

This device may substitute for BTA08-600, BTB08-600, BT137-600, BCR8PM-12, TM861M/S-L series.

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

Symbol	Parameter	Condition	Ratings	Units
V_{DRM}	Repetitive Peak Off-State Voltage	Since wave, 50 to 60Hz	800	V
$I_{T(RMS)}$	R.M.S On-State Current	Tj = 125°C , Full Sine wave	8.0	A
I_{TSM}	Surge On-State Current	One Cycle, 50Hz/60Hz, Peak, Non-Repetitive	80/84	A
I^2t	I^2t	tp=10ms	32	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

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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 T_j = 125 °C	—	—	2	mA
V_{TM}	Peak On-State Voltage		I_{TM} = 11 A, T_P=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		Tj= 125 °C, V_D = V_{DRM}, R_L=3.3K Ω	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

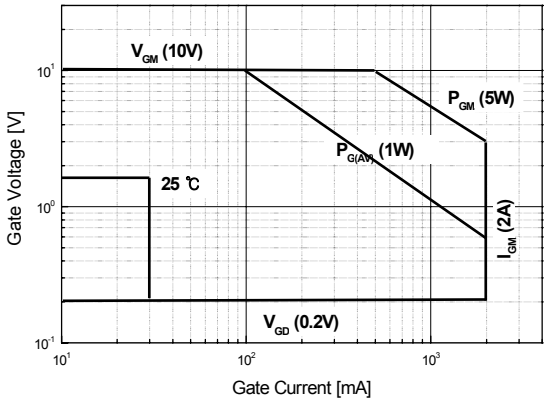


Fig 2. On-State Voltage

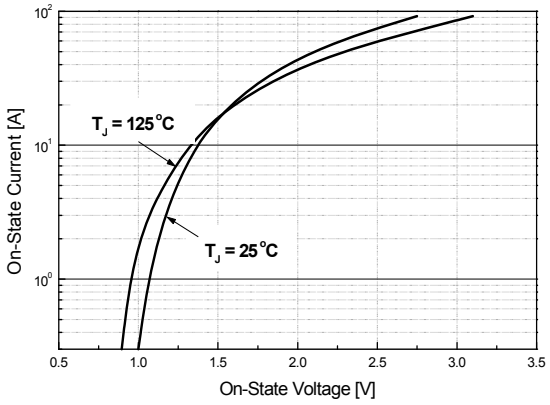


Fig 3. On State Current vs. Maximum Power Dissipation

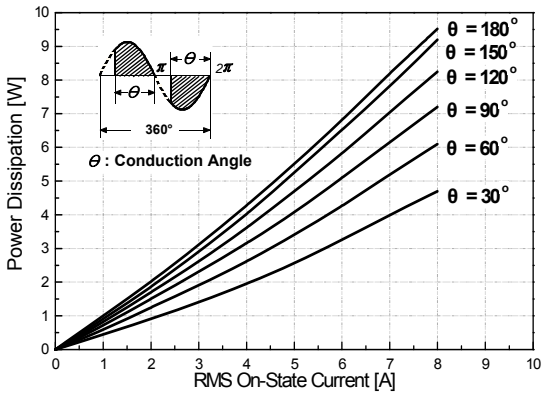


Fig 4. On State Current vs. Allowable Case Temperature

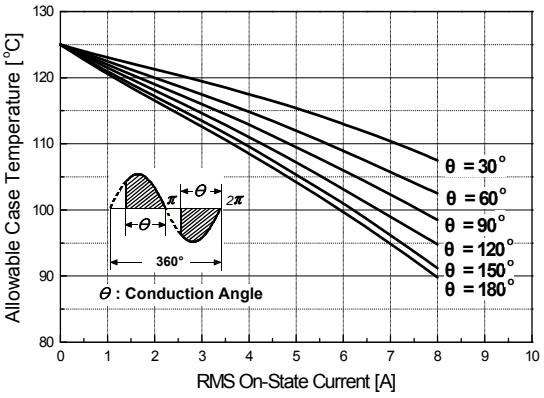


Fig 5. Surge On-State Current Rating (Non-Repetitive)

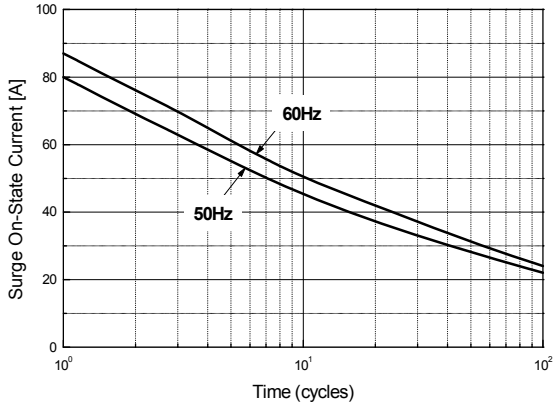


Fig 6. Gate Trigger Voltage vs. Junction Temperature

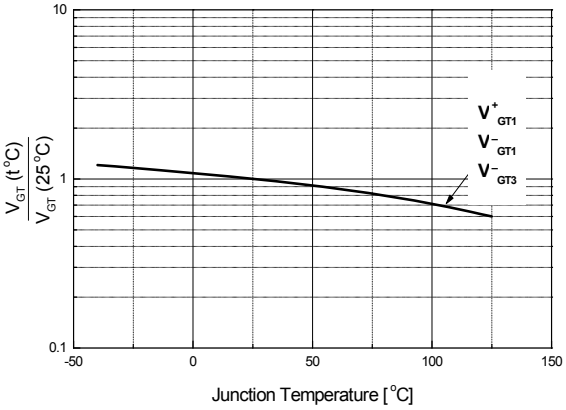


Fig 7. Gate Trigger Current vs. Junction Temperature

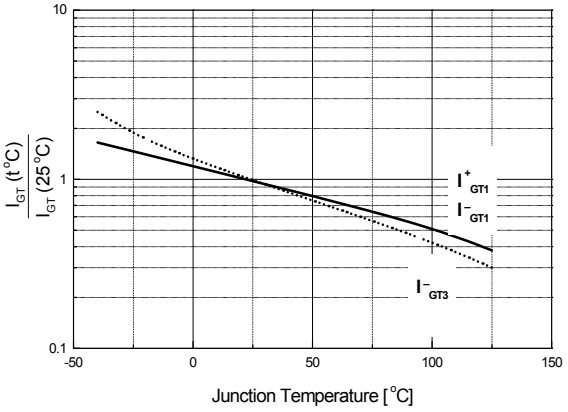
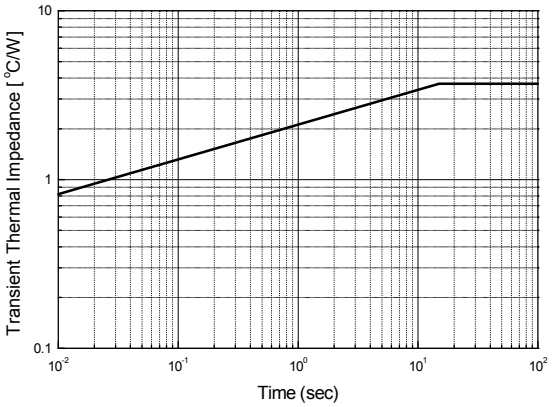
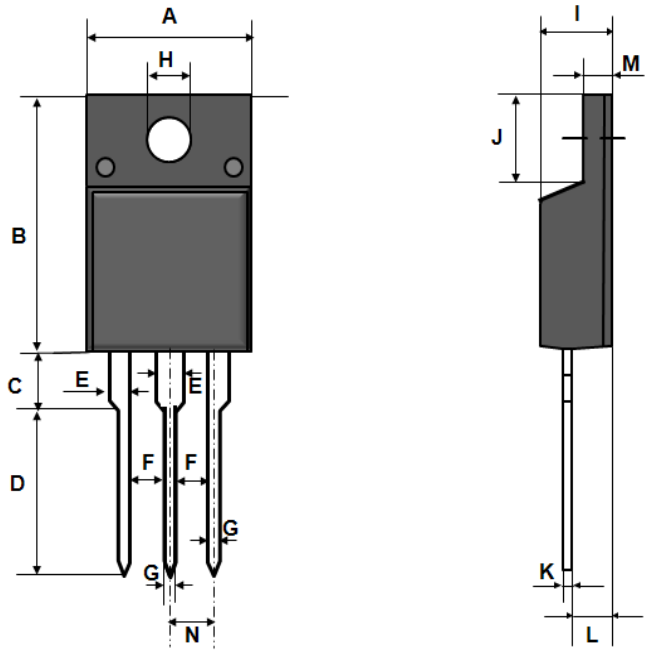


Fig 8. Transient Thermal Impedance



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	

