BT04F-600B TRIAC

MAIN FEATURES

Symbol	value	unit
$I_{T(RMS)}$	4	A
V_{DRM}/V_{RRM}	600	V
I_{TSM}	25	A

GENERAL DESCRIPTION

Glass passivated triacs in a plastic envelope ,
intended for use in applications requiring
high bidirectional transient andblocking
voltage capability and high thermal cycling performance.
Typical applications include motor control,
industrial and domestic lighting , heating and static switching.

TO-220F

DIM	MILLIMETERS
A	10 16 ± 0 20
B	15 87 ± 0 20
C	2 54 ± 0 20
D	0 81 ± 0 10
E	∅3 18 ± 0 20
F	3 3 typ
G	15 67 ± 0 4
H	0 53 ± 0 07
J	12 98 ± 0 20
K	3 50 MAX
L	1 39 MAX
M	1 39 MAX
N	2 54 typ
O	6 70 ± 0 20
Q	4 70 ± 0 20
R	2 70 ± 0 20
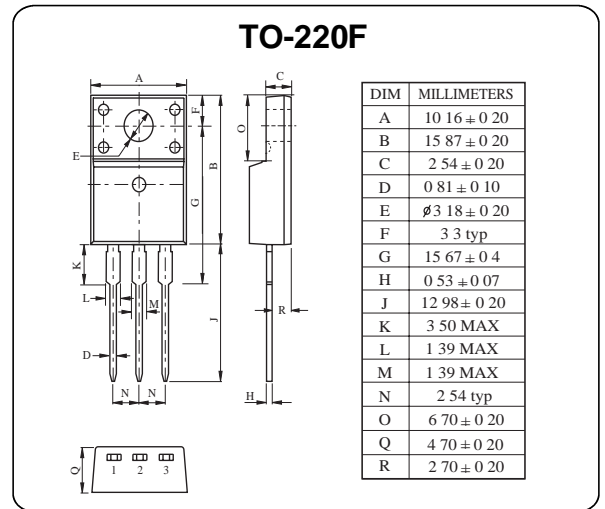
ABSOLUTE MAXIMUM RATINGS (Ta=25℃ unless otherwise noted)

symbol	parameter		value	unit
$I_{T(RMS)}$	RMS on-state current (full sine wave)	T_C=107℃	4	A
I_{TSM}	Non repetitive surge peak on-state current (full sine wave, Tj =25℃)	t=20ms	25	A
		t=16.7ms	27	
I_{GM}	Peak gate current		2	A
$P_{G(AV)}$	Average gate power dissipation	T_j=125℃	0.5	W
T_{stg}	Storage junction temperature range		-40 to +150	℃
T_j	Operating junction temperature range		-40 to +125	

ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

Parameter		Symbol	Test conditions		Min	Max	Unit
Rated repetitive peak off-state/reverse voltage		V_{DRM}, V_{RRM}	I_D=10μA		600		V
Rated repetitive peak off-state current		I_{DRM}, I_{RRM}	V_D=620V			10	μA
On-state voltage		V_{TM}	I_T=5A			1.7	V
Gate trigger current	Ⅰ	I_{GT}	T_2(+), G(+)	V_D=12V R_L=100Ω		5	mA
	Ⅱ		T_2(+), G(-)			5	mA
	Ⅲ		T_2(-), G(-)			5	mA
	Ⅳ		T_2(-), G(+)			10	mA
Gate trigger voltage	Ⅰ	V_{GT}	T_2(+), G(+)	V_D=12V R_L=100Ω		1.45	V
	Ⅱ		T_2(+), G(-)			1.45	V
	Ⅲ		T_2(-), G(-)			1.45	V
	Ⅳ		T_2(-), G(+)			1.7	V
Holding current		I_H	I_T =100mA I_G=20mA			10	mA

■ Performance Curves

Fig 1. Gate Characteristics
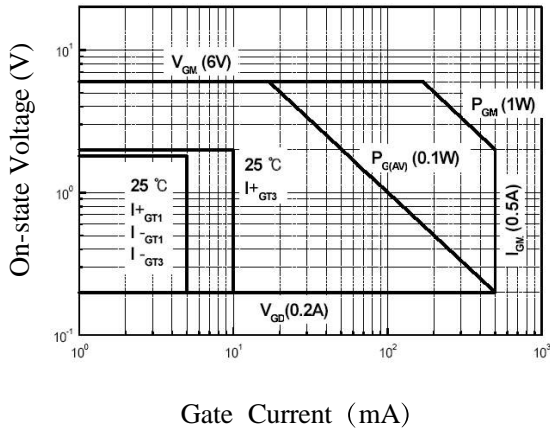
Gate Current（mA）

Fig 2. On-State Voltage
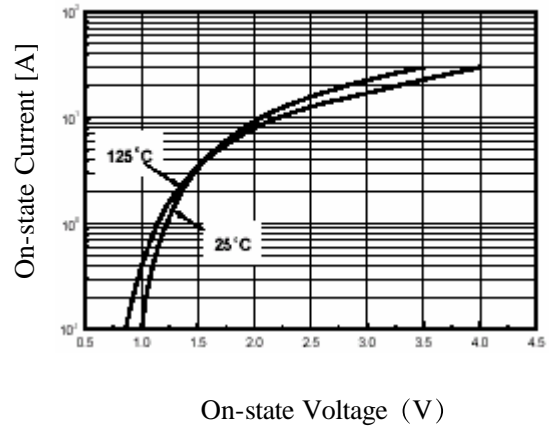
On-state Voltage（V）

Fig 3. Gate Trigger Voltage vs. Junction Temperature

Junction Temperature[℃]
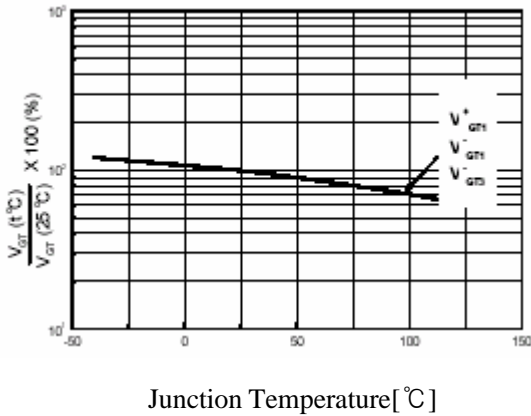
Fig 4. On State Current vs. Maximum Power Dissipation

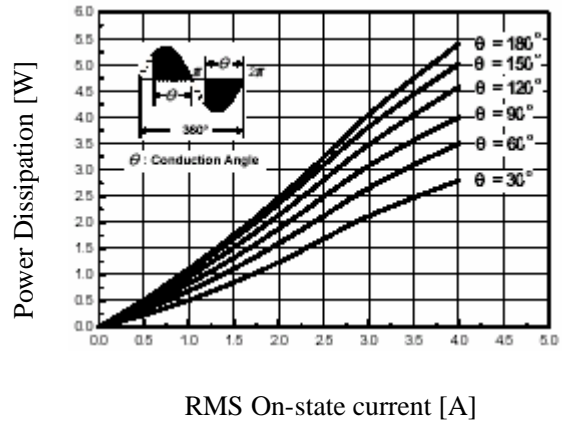RMS On-state current [A]

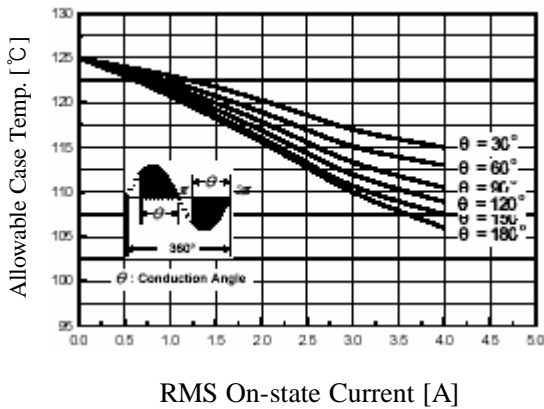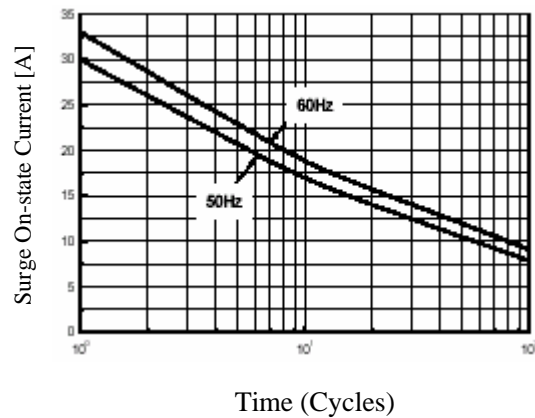**Fig 5. On State Current vs. Allowable Case Temperature**

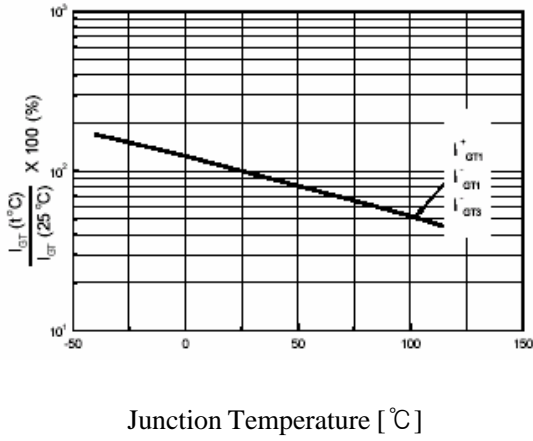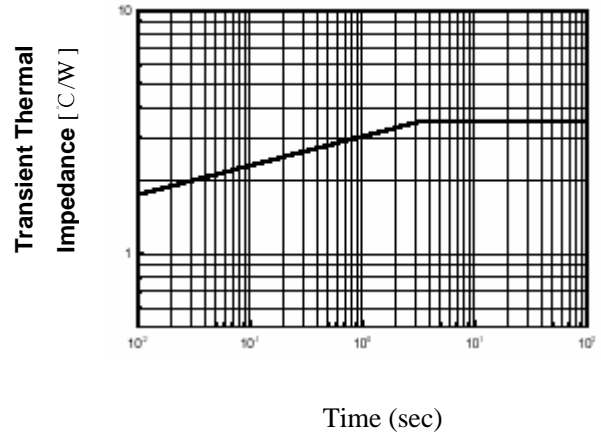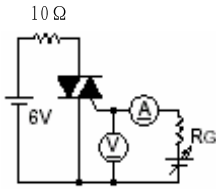RMS On-state Current [A]

Fig 6. Surge On-State Current Rating (Non-Repetitive)

Time (Cycles)

Fig 7. Gate Trigger Current vs. Junction Temperature

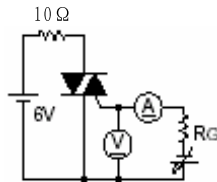Junction Temperature [℃]

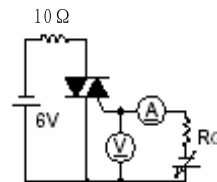**Fig 8. Transient Thermal Impedance**

Time (sec)

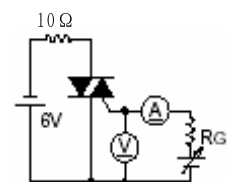**Fig 9. Gate Trigger Characteristics Test Circuit**

Test Procedure Ⅰ

Test Procedure Ⅱ

Test Procedure Ⅲ

Test Procedure Ⅳ