

3 Quadrants TRIAC

4 Quadrants TRIAC

FEATURES

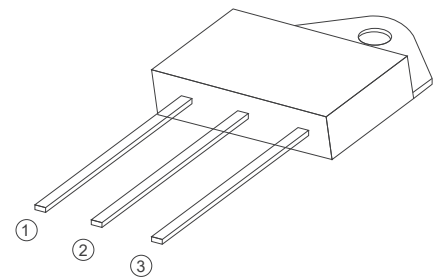
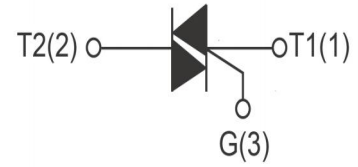
> IT(RMS): 40A > VGT: <1.5V

> VDRM VRRM:800V~1600V

APPLICATIONS

Washing machine,vacuums, massager,solid state relay,

AC Motor speed regulation and so on.



TO-3P

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

Symbol	Parameter	Conditions	Ratings	Unit
VDRM VRRM	Repetitive Peak Off-State Voltage	BTA41-800B	800	V
		BTA41-1200B	1200	
		BTA41-1600B	1600	
IT(RMS)	R.M.S On-State Current	Tc=110°C	40	A
ITSM	Surge On-State Current	tp=16.7ms/tp=10ms	400/420	
I²t	I²t for fusing	Tp=10ms	520	A²s
PG(AV)	Average Gate Power Dissipation	Tj=125°C	1	W
IGM	Peak Gate Current	Tj=125°C	8	A
Tj	Operating Junction Temperature		~40~125	°C
TSTG	Storage Temperature		~40~150	

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

Symbol	Parameter		Test Conditions	BW	B	Unit
IDRM	Repetitive Peak Off-State Current		Tj=25°C	5		uA
			Tc=125°C	5		mA
IRRM	Repetitive Peak Reverse Current		Tc=25°C	5		uA
			Tc=125°C	5		mA
VTM	Forward "on" voltage		IT=23A, tp=380us	1.55		V
VGT	Gate trigger voltage		VD=12V, RL=30Ω	≤1.5		V
di/dt	VD=2/3VDRM Gate Open, Tj=125°C I,I,II,III,IV		F=100Hz, IG=2xIGT, tr≤100ns	50		A/us
IGT	Gate trigger current	I,I,II,III	VD=12V, RL=30Ω	≤50	≤50	mA
		IV		/	≤100	
IH	Holding current		IT=0.2A	≤60	≤80	
VGD	Gate non-trigger voltage		VD=VDRM, TJ=125°C, RL=3.3KΩ	0.2		V
dv/dt	Critical-rate of rise of commutation voltage		TJ=125°C, VD=2/3VDRM, Gate open circuit	≥1500	≥1000	V/us

FIG1

Maximum power dissipation versus RMS on-state current

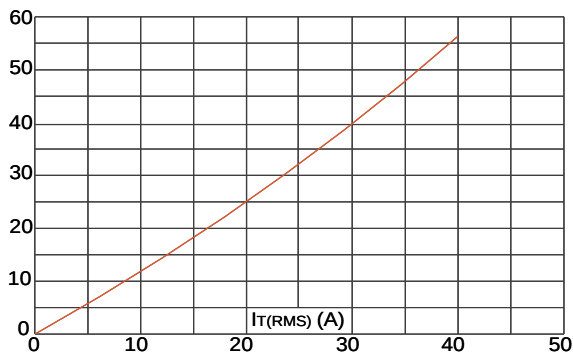


FIG2

RMS on-state current versus case temperature

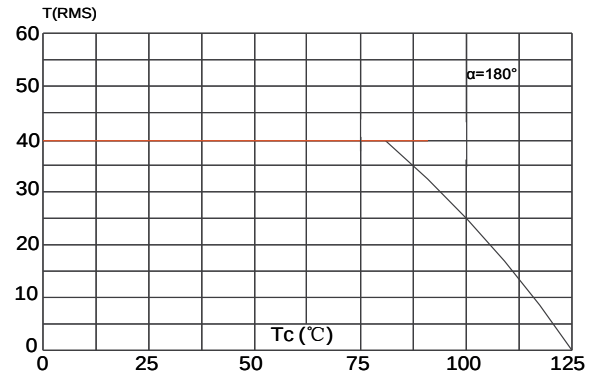


FIG3

Surge peak on-state current versus number of cycles

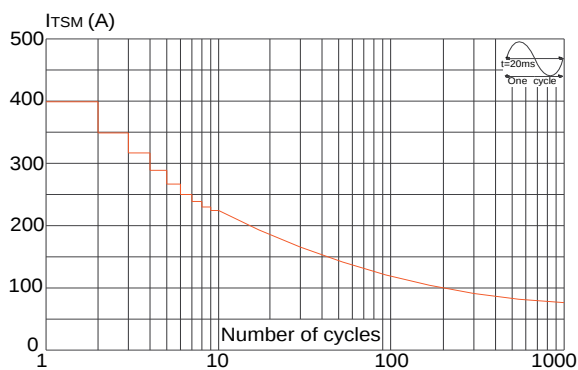


FIG4

On-state characteristics (maximum values)

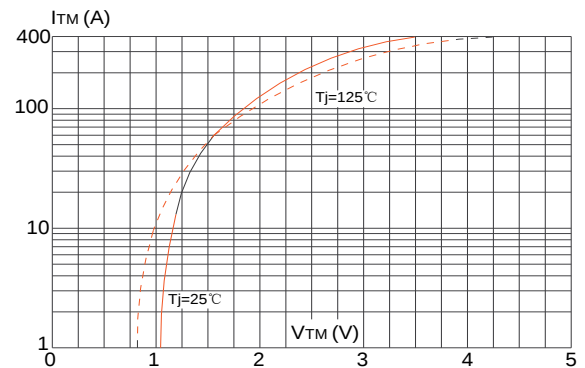


FIG5

Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$, and corresponding value of I^2t ($di/dt < 100\text{A}/\mu\text{s}$)

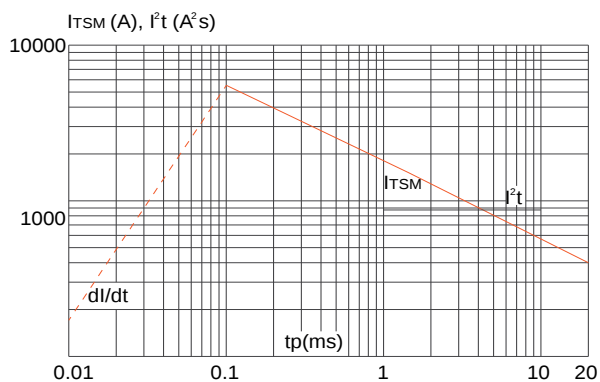
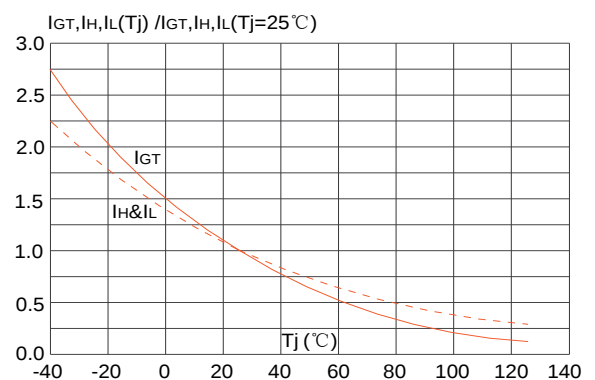


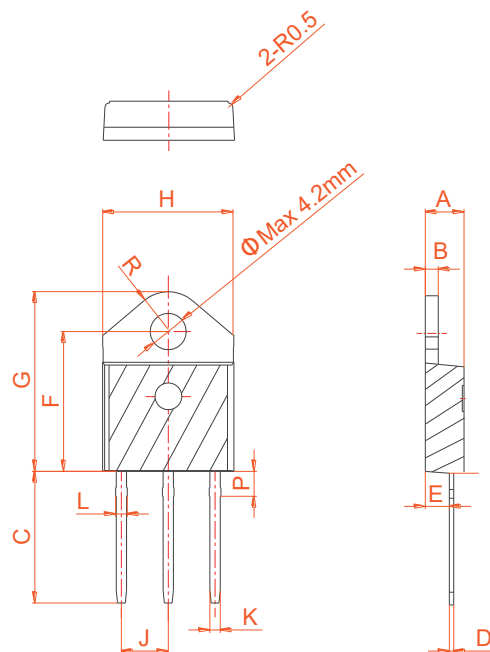
FIG6

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



PACKAGE MECHANICAL DATA

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	1.45		1.55	0.057		0.061
C	14.35		15.60	0.565		0.614
D	0.50		0.70	0.020		0.028
E	2.70		2.90	0.106		0.114
F	15.80		16.50	0.622		0.650
G	20.40		21.10	0.803		0.831
H	15.10		15.50	0.594		0.610
J	5.40		5.65	0.213		0.222
K	1.10		1.40	0.043		0.055
L	1.35		1.50	0.053		0.059
P	2.80		3.00	0.110		0.118
R		4.35			0.171	



TO-3P