



BTA41 TRIACs

●Product features

Double mesa structure (Double Mesa),

Table glass passivation process,

High voltage stability

The ability of strong current shock resistance

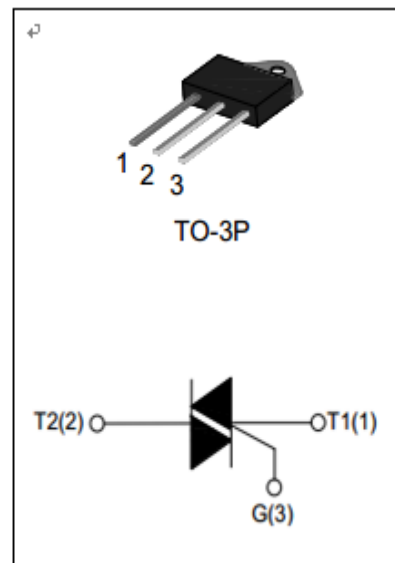
The applicable model : BTA41。

●The main purpose

Washing machine, Vacuum cleaner

Solid state relay, AC motor speed control

AC contactless switch, Welding equipment



●Package

TO-3P

●Main Feature (Tj=25℃)

Symbol	Value	Unit
$I_T(\text{RMS})$	40	A
$V_{\text{DRM}} / V_{\text{RRM}}$	800	V
V_{TM}	1.55	V

●Absolute ratings (Limiting Values)

Symbol	Parameter	Value	Unit
I_{TSM}	Non repetitive surge peak on-state Current (tp=10ms)	400	A
I^2t	(tp=10ms)	800	A ² S
di/dt	$I_G=2I_{GT}$, $tr \leq 100\text{ns}$, $T_j=150^\circ\text{C}$	50	A/ μs
I_{GM}	Peak gate current(tp=20us)	8	A
$P_{G(AV)}$	Average gate power	1	W
Tstg	Storage temperature	-40---+150	℃
Tj	Operating junction temperature	-40---+150	℃



●Thermai Resistances

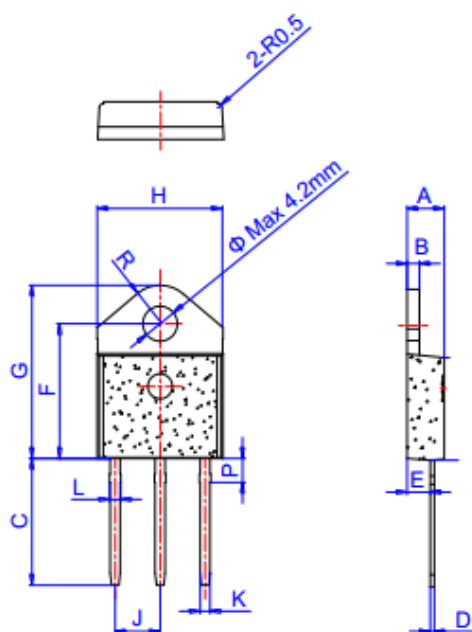
Symbol	Parameter		Value	Unit
Rth (j-c)	Junction to case	TO-3P	0.9	°C/W

●Electrical characteristics (T_j=25°C unless otherwise stated)

Symbol	Test Conditions		Value	Unit
I _{GT}	V _D =12V, R _L =30 Ω	I II III	≤50	mA
		IV	-----	
I _{DRM}	V _D =V _{DRM}	T _j =25°C	≤5	μ A
		T _j =150°C	≤5	mA
I _{RRM}	V _D =V _{RRM}	T _j =25°C	≤5	μ A
		T _j =150°C	≤5	mA
I _L	I _G =1.2I _{GT}	I III	≤70	mA
		II	≤160	
V _{GT}	V _D =12V, R _L =30 Ω		≤1.5	V
V _{GD}	V _D =V _{DRM} , T _j =150°C R _L =3.3K Ω		≥0.2	V
V _{TM}	I _{TM} =60A, tp=380 μ s		1.55	V
I _H	V _D =12V, I _T =500mA		≤80	mA
dV/dt	V _D =67%V _{DRM} , GateOpen, T _j =150°C		≥800	v/ μ s



●Measure of package
TO-3P



TO-3P

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	



FIG. 1 Maximum power dissipation
versus RMS on-state current

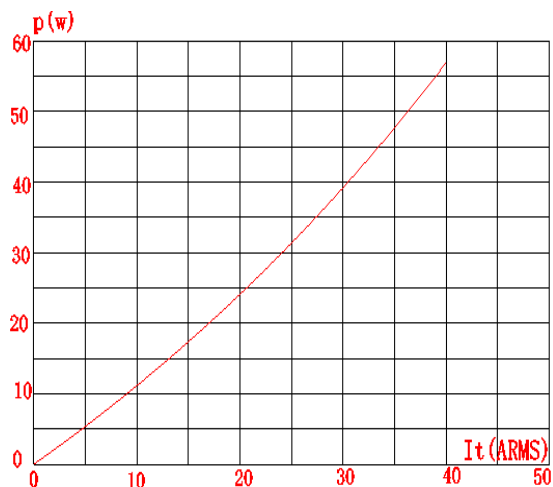


FIG. 3: Surge peak on-state current
versus number of cycles

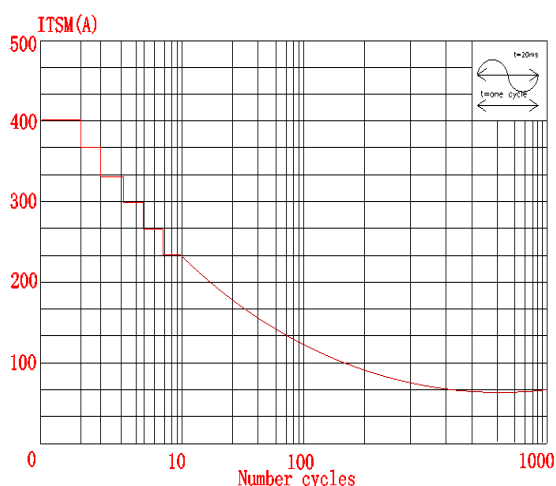


FIG. 5: Non-repetitive surge peak on-state
current for a sinusoidal pulse with width
 $t_p < 20\text{ms}$, and corresponding value of
 $I^2 t$ ($dI/dt < 50\text{A}/\mu\text{s}$)

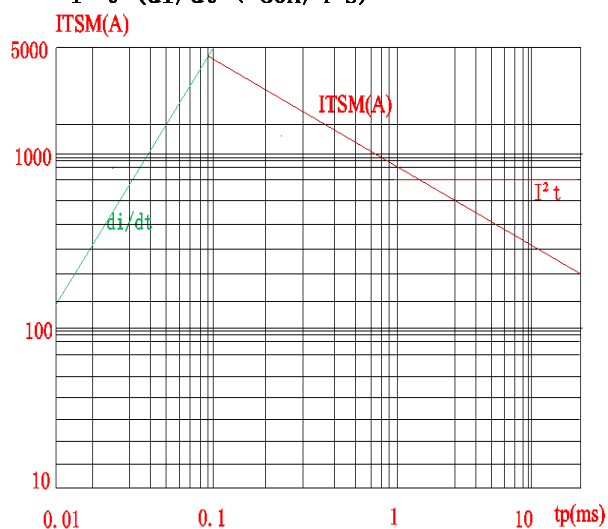


FIG. 2: RMS on-state current versus
case temperature

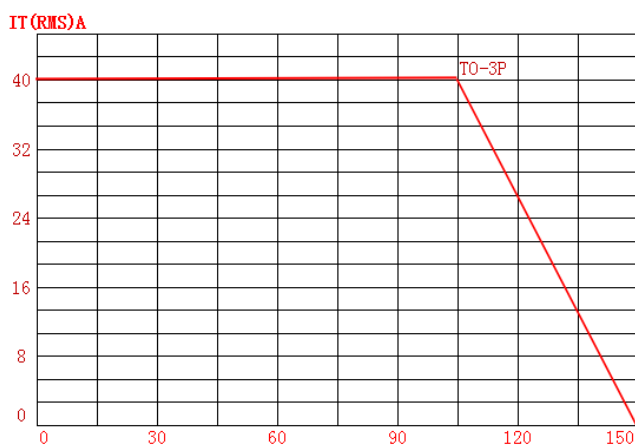


FIG. 4: On-state characteristics
(maximum values)

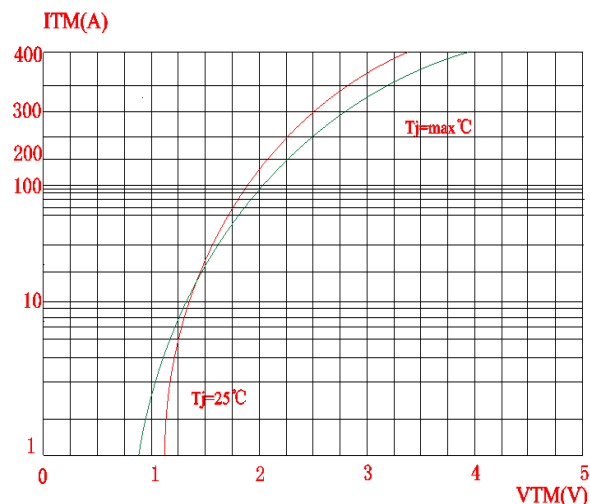


FIG. 6: Relative variations of gate
trigger current holding current and
latching current versus junction
temperature

