

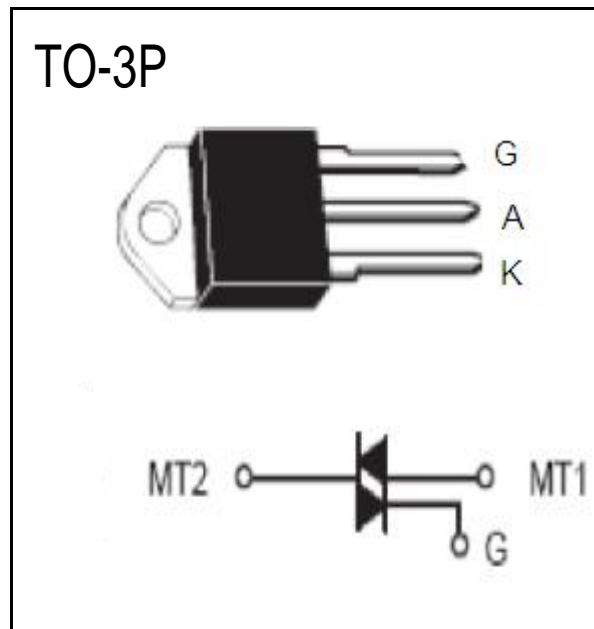
## 4 Quadrants TRIAC

### Features

- IT(RMS): 40A
- VGT: 1.5V
- VDRM VRRM: 800/1000/1200/1600

### Applications

Washing machine, vacuums,  
massager, solid state relay, AC  
Motor speed regulation and so on.



### Absolute Maximum Ratings( $T_j=25^{\circ}\text{C}$ unless otherwise specified)

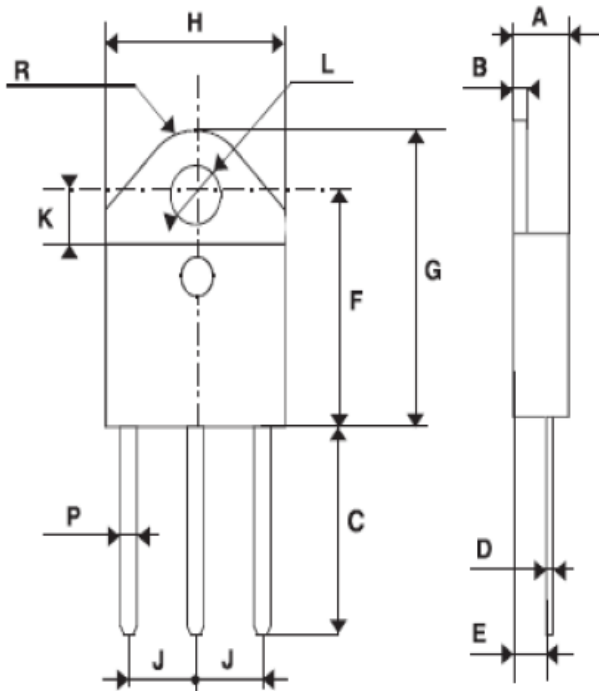
Symbol	parameter	Conditions	Ratings	Unit
VDRM VRRM	Repetitive Peak Off-State Voltage	BTA41-800	800	V
		BTA41-1000	1000	V
		BTA41-1200	1200	V
		BTA41-1600	1600	V
IT(RMS)	R.M.S On-State Current	$T_c=110^{\circ}\text{C}$	40	A
ITSM	Surge On-State Current	$f=50/60\text{Hz}$ $t_p=16.7\text{ms}/20\text{ms}$	400/420	A
$I^2t$	$I^2t$ for fusing	$T_p=10\text{ms}$	880	$\text{A}^2\text{s}$
PG(AV)	Average Gate Power Dissipation	$T_j=125^{\circ}\text{C}$	1	W
IGM	Peak Gate Current	$T_j=125^{\circ}\text{C}$	4	A
$T_j$	Operating Junction Temperature		$-40\sim 125$	$^{\circ}\text{C}$
TSTG	Storage Temperature		$-40\sim 150$	$^{\circ}\text{C}$

**Electrical Characteristics(T<sub>j</sub>=25°C unless otherwise specified)**

symbol	parameter		Test Conditions	Value	Unit
IDRM	Repetitive Peak Off-State Current		T <sub>c</sub> =25°C	5	uA
			T <sub>c</sub> =125°C	5	mA
IRRM	Repetitive Peak Reverse Current		T <sub>c</sub> =25°C	5	uA
			T <sub>c</sub> =125°C	5	mA
V <sub>TM</sub>	Forward "on" voltage		I <sub>T</sub> =60A, t <sub>p</sub> =380us	1.55	V
V <sub>GT</sub>	Gate trigger voltage		V <sub>D</sub> =12V ,R <sub>L</sub> =30Ω	≤1.5	V
di/dt	Critical rate of rise of on-state current	I,II,III	F=120Hz,T <sub>j</sub> =125°C , I <sub>G</sub> =2xI <sub>GT</sub> ,t <sub>r</sub> ≤100ns	≥ 20	A/ms
		IV			
I <sub>GT</sub>	Gate trigger current	I,II,III	V <sub>D</sub> =12V, R <sub>L</sub> =30Ω	≤50	mA
		IV			
I <sub>H</sub>	Holding current		I <sub>T</sub> =0.2A	≤80	mA
V <sub>DG</sub>	Gate non-trigger voltage	ALL	V <sub>D</sub> =V <sub>DRM</sub> , T <sub>J</sub> =125°C	≥0.2	V
dv/dt	Critical-rate of rise of commutation voltage		T <sub>J</sub> =125°C , V <sub>D</sub> =2/3V <sub>DRM</sub> ,Gate open circuit	≥800	V/us
R <sub>th(j-c)</sub>	Thermal resistance		Junction to case	0.9	°C/W
R <sub>th(j-a)</sub>	Thermal resistance		Junction to ambient	50	°C/W

# PACKAGE MECHANICAL DATA

## TO-3P Package Dimension



REF.	DIMENSIONS					
	Unit: mm			Unit: Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.4		4.6	0.173		0.181
B	1.45		1.55	0.057		0.061
C	14.35		15.60	0.565		0.614
D	0.5		0.7	0.020		0.028
E	2.7		2.9	0.106		0.114
F	15.8		16.5	0.622		0.650
G	20.4		21.1	0.815		0.831
H	15.1		15.5	0.594		0.610
J	5.4		5.65	0.213		0.222
K	3.4		3.65	0.134		0.144
L	4.08		4.17	0.161		0.164
P	1.20		1.40	0.047		0.055
R		4.60			0.181	