

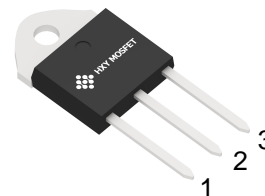


Description

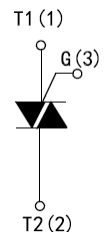
High current density due to double mess technology, SIPOS and Glass passivation.

BTA41-800BRG series triacs is suitable for general purpose AC switching. They can be used as an ON/OFF function is applications such as static relays, heating regulation, induction motor stator circuits or phase control operation light dimmers, motor speed controllers.

BTA41-800BRG series are 3 Quadrants triacs, They are specially recommended for use on inductive loads.



TOP-3



Absolute Maximum Ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Test condition	Value	Unit
$V_{\text{DRM}}/V_{\text{RRM}}$	Repetitive peak off-state voltage	$T_j=25^{\circ}\text{C}$	800	V
V_{DSM}	Non repetitive surge peak off-state voltage	$T_P=10\text{ms}, T_j=25^{\circ}\text{C}$	900	V
V_{RSM}	Non repetitive peak reverse voltage	$T_P=10\text{ms}, T_j=25^{\circ}\text{C}$	900	V
$I_{\text{T(RMS)}}$	RMS on-state current	$T_c=90^{\circ}\text{C}$ $T_c=70^{\circ}\text{C}$	41	A
I_{TSM}	Non repetitive surge peak on-state current	$F=60\text{Hz}, t=16.7\text{ms}$	430	A
		$F=50\text{Hz}, t=20\text{ms}$	410	
I^2t	I^2t value	$t_p=10\text{ms}$	410	A^2s
di/dt	Critical rate of rise of on-state current	$I_G=2 \cdot I_{GT}, tr \leq 100\text{ns},$ $F=120\text{Hz}, T_j=125^{\circ}\text{C}$	100	$\text{A}/\mu\text{s}$
I_{GM}	Peak gate current	$t_p=20\mu\text{s}, T_j=125^{\circ}\text{C}$	4	A
P_{GM}	Peak gate power dissipation	$t_p=20\mu\text{s}, T_j=125^{\circ}\text{C}$	10	W
$P_{G(AV)}$	Average gate power	$T_j=125^{\circ}\text{C}$	1	W
T_{STG}	Storage temperature		-40~+150	$^{\circ}\text{C}$
T_j	Operating junction temperature		-40~+125	



Electrical Characteristics ($T_j = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Test condition			Value	Unit
I_{GT}	Gate trigger current	$V_D = 12\text{V}$, $R_L = 33\Omega$,	I - II - III	Max	50	mA
V_{GT}	Gate trigger voltage		I - II - III	Max	1.5	V
V_{GD}	Non-triggering gate voltage	$V_D = V_{DRW}$, $T_j = 125^\circ\text{C}$ $R_L = 3.3\text{K}$		Min	0.2	V
I_H	Holding current	$I_T = 100\text{mA}$,		Max	60	mA
I_L	Latching current	$I_G = 1.2I_{GT}$,	I - III	Max	70	
			II	Max	80	
D_V/dt	Critical rate of rise of off-state	$V_D = 67\%V_{DRM}$, Gate Open $T_j = 125^\circ\text{C}$		Min	500	V/ μs
$(D_V/dt)_c$	Critical rate of rise of off-state	$(dI/dt)_c = 8.8\text{A/ms}$ $T_j = 125^\circ\text{C}$		Min	12.5	V/ μs
V_{TM}	On-state Voltage	$I_{TM} = 28\text{A}$, $t_p = 380\mu\text{s}$, $T_j = 25^\circ\text{C}$			1.55	V
I_{DRM} / I_{RRM}	Repetitive peak off-state current	$V_D = V_{DRM}/V_{RRM}$, $T_j = 25^\circ\text{C}$			5	μA
		$V_D = V_{DRM}/V_{RRM}$, $T_j = 125^\circ\text{C}$			2.5	mA

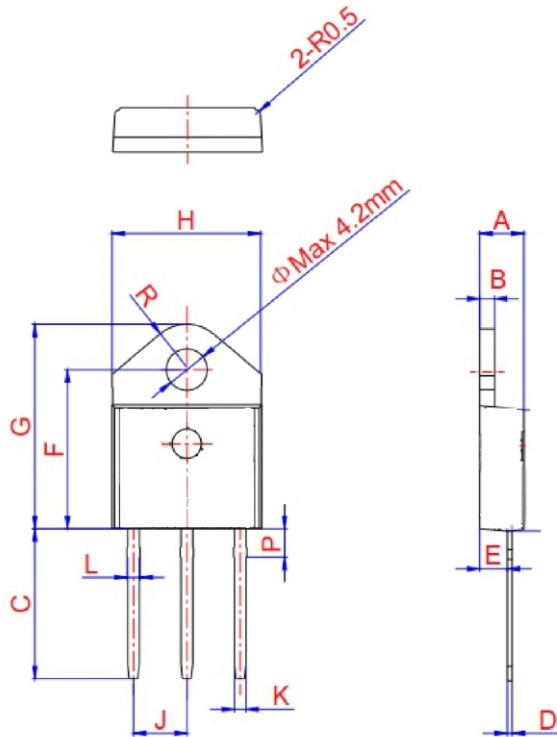
Static Characteristics

Symbol	Parameter	Value	Unit
$R_{th} (j-c)$	Junction to case (AC)	2.1	$^\circ\text{C/W}$



Package Information

TOP-3



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	



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