

BTA12 SERIES TRIACs

● Product features

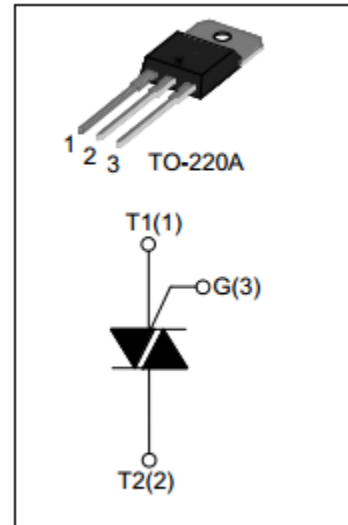
Single mesa structure (Single Mesa),
 Table glass passivation process,
 Voltage stability
 The ability of strong current shock resistance
 The applicable model: BTA12

● The main purpose

Washing machine, the hair straightened
 Solid state relay, AC motor speed control

● Package

TO-220A



● Main Feature (Tj=25°C)

Symbol	Value	Unit
I_T (RMS)	12	A
V_{DRM} / V_{RRM}	600/800	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)	115	A
I^2t	(tp=10ms)	70	A ² S
di/dt	$I_G=2I_{GT}$, $t_r \leq 100ns, T_j=125^\circ C$	50	A/ μs
I_{GM}	Peak gate current(tp=20us)	4	A
$P_{G(AV)}$	Average gate power	1	W
Tstg	Storage temperature	-40--+150	°C
Tj	Operating junction temperature	-40--+125	

● **Thermal Resistances**

Symbol	Parameter		Value	Unit
Rth (j-c)	Junction to case	TO-220A	2.3	°C/W
		TO-220B/TO-220C	1.4	
		TO-220F	3.9	

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

Symbol	Test Conditions	Value						Unit	
		TW	SW	CW	BW	C	B		
I _{GT}	V _D =12V, R _L =30 Ω	I III	≤5	≤10	≤25	≤50	≤25	≤50	mA
		IV	----	----	----	----	≤50	≤100	
I _{DRM}	V _D =V _{DRM}	T _j =25°C	≤5						μ A
		T _j =125°C	≤1						mA
I _{RPM}	V _D =V _{RPM}	T _j =25°C	≤5						μ A
		T _j =125°C	≤1						mA
I _L	I _G =1.2I _{GT}	I III	≤10	≤25	≤50	≤70	≤40	≤50	mA
		IV	----	----	----	----	≤40	≤50	
		II	≤15	≤30	≤60	≤80	≤80	≤100	
V _{GT}	V _D =12V, R _L =30 Ω	≤1.3						V	
V _{GD}	V _D =V _{DRM} , T _j =125°C R _L =3.3K Ω	≥0.2						V	
V _{TM}	I _{TM} =17A, tp=380 μ s	1.55						V	
I _H	V _D =12V, I _T =200mA	≤20	≤25	≤35	≤50	≤25	≤50	mA	
dV/dt	V _D =67%V _{DRM} , GateOpen, T _j =125°C	≥40	≥100	≥400	≥1000	≥200	≥400	v/ μ s	



● Measure of package
TO-220A

