

BTA12

●Product features

Single mesa structure (Single Mesa),

Table glass passivation process,

Voltage stability

The ability of strong current shock resistance

The applicable model: BTA12

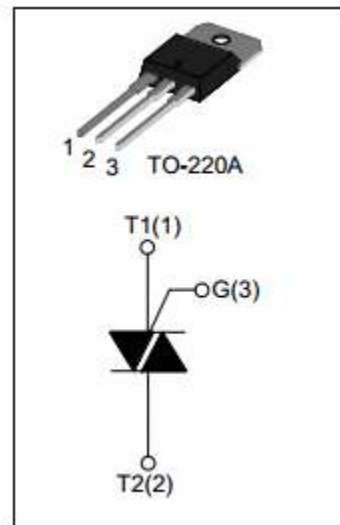
●The main purpose

Washing machine, the hair straightened

Solid state relay, AC motor speed control

●Package

TO-220A



●Main Feature (Tj=25℃)

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	°C

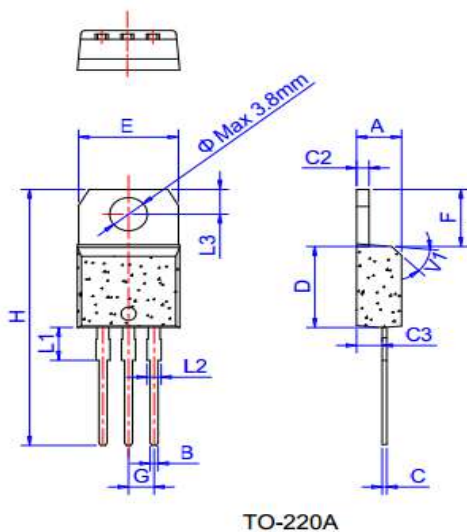
●Thermai Resistances

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 II 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 _{RRM}	V _D =V _{RRM}	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



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.80		10.4	0.386		0.409
F	6.55		6.95	0.258		0.274
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.75			0.148	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
V1		45°			45°	