

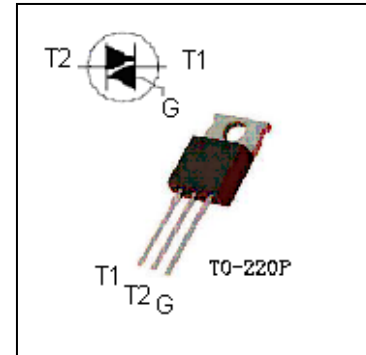
BT136-600E

- **Package**

TO-220P

- **Main Feature** ($T_j=25^{\circ}\text{C}$)

Symbol	Value	Unit
$I_{T(RMS)}$	4	A
V_{DRM} / V_{RRM}	≥ 600	V
I_{TSM}	25	A



- **Absolute ratings (Limiting Values)**

Symbol	Parameter	Value	Unit
$I_T(RMS)$	Rms on-state current(full sine wave)	4	A
I_{TSM}	Non- repetitive Peak on-state Current ($T_j=25^{\circ}\text{C}, t_p=20\text{ms}$)	25	A
I^2t	I^2t for fusing($t_p=10\text{ms}$)	3.1	A^2S
I_{GM}	Peak gate current	2	A
V_{GM}	Peak gate voltage	5	V
P_{GM}	Peak gate power	5	W
$P_{G(AV)}$	Average gate power	0.5	W
di/dt	Repetitive rate of rise of on-state current after triggering ($I_T=6\text{A}, I_G=0.2\text{A}, di_G/dt=0.2\text{A}/\mu\text{s}$)	100	$\text{A}/\mu\text{s}$
T_{stg}	Storage temperature	-40--+150	$^{\circ}\text{C}$
T_j	Operating junction temperature	-40--+110	

- **Thermal Resistances**

Symbol	Parameter	Condition	Min	Type	Max	Unit
$R_{th j-mb}$	Thermal Resistance, Junction to mb	One cycle	---	---	3.0	K/W
		Half cycle	---	---	3.7	K/W
$R_{th j-a}$	Thermal Resisatance, Junction to ambient	in free air	---	60	---	K/W

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

Symbol	Conditions	Min	Type	Max	Unit
I _{GT}	BT136-600E V _D =12V I _T =0.1A T2+ G+	---		6	mA
	T2+ G-	---		10	mA
	T2- G-	---		10	mA
I _H	V _D =12V I _{GT} =0.1A		2	12	mA
I _L	I _G =2×I _{GT}	I -III		6	mA
		II		9	
V _{TM}	I _T =8A	---	1.25	1.7	V
I _{DRM}	V _{DRM} =600V			10	μA
I _{RRM}	V _{RRM} =600V			10	μA
V _{GT}	V _D =12V I _T =0.1A	---	0.7	1.65	V
	V _D =400V I _T =0.1A T _j =125°C	0.25	0.4	1.5	V
I _D	V _D =V _{DRM (MAX)} T _j =125°C	---	0.1	0.5	mA

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

Symbol	Conditions	Min	Type	Max	Unit
dV _D /dt	V _{DM} =67%V _{Dm (MAX)} T _j =125°C	30			V/μs
t _{gt}	I _{Tm} =12A V _D =V _{DRM (MAX)} I _G =0.1A dl _G /dt=5A/ms		2	---	μs

● Measure of package TO-220P:

