

TRIAC

BTB08

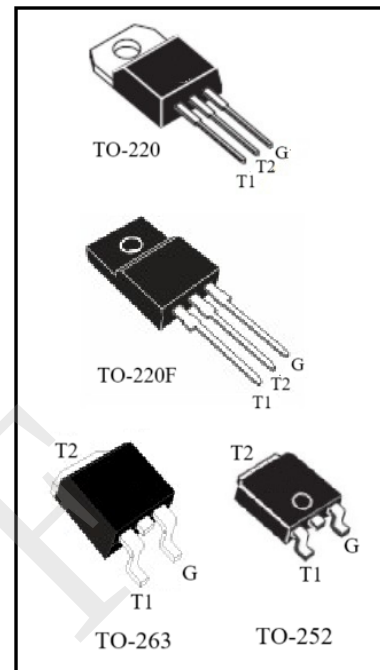
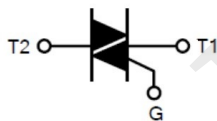
FEATURES

- Planar passivated for voltage ruggedness and reliability
- Low gate trigger current
- Low holding current
- High thermal cycling performance
- High voltage capability
- High current surge capability

APPLICATIONS

- Mains power AC switching
- Static relays
- Light dimmers
- Heater Control
- Motor Speed Controller

● SYMBOL:



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL		VALUE		UNIT
Repetitive Peak Off-State Voltages	V_{DRM} , V_{RRM}	4Q	BTB08-600(C/B)	600	V
			BTB08-800(C/B)	800	
		3Q	BTB08-600(TW/SW/CW/BW)	600	
			BTB08-800(TW/SW/CW/BW)	800	
RMS on-State Current	$I_{T(RMS)}$		8		A
Non-Repetitive Peak On-State Current	I_{TSM}		80		A
I^2t for fusing	I^2t		36		A ² s
Repetitive rate of rise of on-state current after triggering	di/dt		I	50	A/uS
			II	50	
			III	50	
			IV	10	
Peak gate current	I_{GM}		4		A
Average Gate Power	$P_{G(AV)}$		1		W
Operating junction temperature	T_J		-40~+125		℃
Storage Temperature	T_{STG}		-40 ~ +150		℃

ELECTRICAL CHARACTERISTICS (T_J=25°C) (4Q) Standard

Parameter	Symbol	Test Conditions			C	B	Units
Peak Repetitive Forward or Reverse Blocking Current	I_{DRM} I_{RRM}	$V_{\text{AK}} = \text{Rated } V_{\text{DRM}}$ or V_{RRM} ;		MAX	5		uA
Gate Trigger Current	I_{GT}	$V_{\text{D}}=12\text{V},$ $R_{\text{L}}=33\Omega$	I-II-III	MAX	25	50	mA
			IV	MAX	50	100	
Gate Trigger Voltage	V_{GT}	$V_{\text{D}}=12\text{V}, R_{\text{L}}=33\Omega$		MAX	1.3		V
Gate Non-Trigger Voltage	V_{GD}	$V_{\text{D}} = V_{\text{DRM}}, R_{\text{L}} = 3.3 \text{ k}\Omega,$ $T_{\text{j}} = 125 \text{ }^{\circ}\text{C}$		MIN	0.2		V
Peak Forward On-State Voltage	V_{TM}	$I_{\text{T}}=11\text{A},$		MAX	1.55		V
Latch Current	I_{L}	$I_{\text{G}}=1.2I_{\text{GT}}$	I-III-IV	MAX	40	50	mA
			II	MAX	80	100	
Holding Current	I_{H}	$I_{\text{T}}=0.1\text{A}$		MAX	25	50	mA
Critical Rate of Rise of Off-State Voltage	dV/dt	$V_{\text{D}}=67\%V_{\text{DRM}}, T_{\text{J}}=25^{\circ}\text{C},$ Gate open		MIN	200	400	V/ μs

ELECTRICAL CHARACTERISTICS (T_J=25°C)

(3Q) Triggering in three quadran

Parameter	Symbol	Test Conditions			TW	SW	CW	BW	Units
Peak Repetitive Forward or Reverse Blocking Current	I_{DRM} I_{RRM}	$V_{\text{AK}} = \text{Rated } V_{\text{DRM}} \text{ or } V_{\text{RRM}};$		MAX	5				uA
Gate Trigger Current	I_{GT}	$V_{\text{D}}=12\text{V},$ $R_{\text{L}}=33\Omega$	I-II-III	MAX	5	10	35	50	mA
Gate Trigger Voltage	V_{GT}	$V_{\text{D}}=12\text{V}, R_{\text{L}}=33\Omega$		MAX	1.3				V
Gate Non-Trigger Voltage	V_{GD}	$V_{\text{D}} = V_{\text{DRM}}, R_{\text{L}} = 3.3 \text{ k}\Omega,$ $T_{\text{J}} = 125\text{ }^{\circ}\text{C}$		MIN	0.2				V
Peak Forward On-State Voltage	V_{TM}	$I_{\text{T}}=11\text{A},$		MAX	1.55				V
Latch Current	I_{L}	$I_{\text{G}}=1.2I_{\text{GT}}$	I-III	MAX	10	25	50	70	mA
			II	MAX	10	30	60	80	
Holding Current	I_{H}	$I_{\text{T}}=0.1\text{A}$		MAX	10	15	35	50	mA
Critical Rate of Rise of Off-State Voltage	dV/dt	$V_{\text{D}}=67\%V_{\text{DRM}},$ $T_{\text{J}}=25^{\circ}\text{C}, \text{ Gate open}$		MIN	20	40	400	1000	V/ μs