

TRIAC

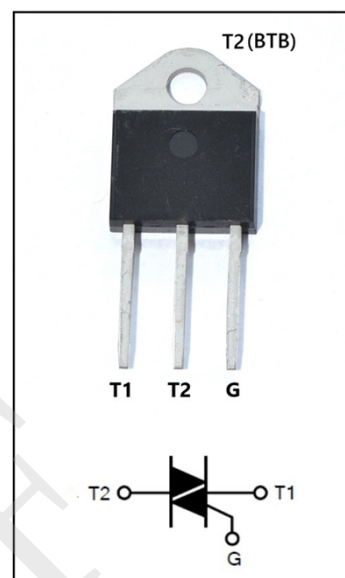
BTA41/BTB41

FEATURES

- Glass Passivated Junctions
- High voltage and surge capability
- Low Thermal Resistance and Durability
- Low thermal resistance insulation ceramic for insulated BTA
- BTA :Insulating Voltage2500V(RMS)

APPLICATIONS

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



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Repetitive Peak Off-State Voltages	4Q	BTA41/BTB41-600B	600
		BTA41/BTB41-800B	800
		BTA41/BTB41-1000	1000
	3Q	BTA41/BTB41-600(CW/BW)	600
		BTA41/BTB41-800(CW/BW)	800
		BTA41/BTB41-1000(CW/BW)	1000
RMS on-State Current	$I_{T(RMS)}$	40	A
Non-Repetitive Peak On-State Current	I_{TSM}	400	A
I^2t for fusing	I^2t	880	A ² s
Repetitive rate of rise of on-state current after triggering	di/dt	50	A/uS
Peak gate current	I_{GM}	8	A
Average Gate Power	$P_{G(AV)}$	1	W
Operating junction temperature	T_J	-40~+125	°C
Storage Temperature	T_{STG}	-40 ~ +150	°C

TRIAC

BTA41/BTB41

ELECTRICAL CHARACTERISTICS (T_J=25°C) 4 Quadrants

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
				B	
Peak Repetitive Forward or Reverse Blocking Current	I_{DRM} I_{RRM}	$V_{AK} = \text{Rated } V_{DRM} \text{ or } V_{RRM};$		5	uA
Gate Trigger Current	I_{GT}	$V_D=12V,$ $R_L=33\Omega$	I-II-III	50	mA
			IV	100	
Gate Trigger Voltage	V_{GT}	$V_D=12V, R_L=33\Omega$		1.3	V
Non-triggering gate voltage	V_{GD}	$V_D = V_{DRM}, T_J = 125^\circ C$	0.2		V
Peak Forward On-State Voltage	V_{TM}	$I_T=60A,$		1.55	V
Latch Current	I_L	$I_G=1.2I_{GT}$	I-III-IV	80	mA
			II	100	
Holding Current	I_H	$I_T=0.5A$		70	mA
Critical Rate of Rise of Off-State Voltage	dV/dt	$V_D=67\%V_{DRM}, \text{ Gate open}$	500		V/ μs

ELECTRICAL CHARACTERISTICS (T_J=25°C)
(3Q) Triggering in three quadran

Parameter	Symbol	Test Conditions			CW	BW	Units
Peak Repetitive Forward or Reverse Blocking Current	I_{DRM} I_{RRM}	$V_{AK} = \text{Rated } V_{DRM} \text{ or } V_{RRM};$		MAX	5		uA
Gate Trigger Current	I_{GT}	$V_D=12V,$ $R_L=33\Omega$	I-II-III	MAX	35	50	mA
Gate Trigger Voltage	V_{GT}			MAX	1.3		V
Non-triggering gate voltage	V_{GD}	$V_D = V_{DRM}, T_j = 125^{\circ}C$		MIN	0.2		V
Peak Forward On-State Voltage	V_{TM}	$I_T=60A,$		MAX	1.55		V
Latch Current	I_L	$I_G=1.2I_{GT}$	I-III	MAX	70	80	mA
			II	MAX	80	100	
Holding Current	I_H	$I_T=0.5A$		MAX	60	70	mA
Critical Rate of Rise of Off-State Voltage	dV/dt	$V_D=67\%V_{DRM}, T_J=25^{\circ}C,$ Gate open		MIN	500	1000	V/μs