

4A 3Quadrants TRIACs

Product Summary

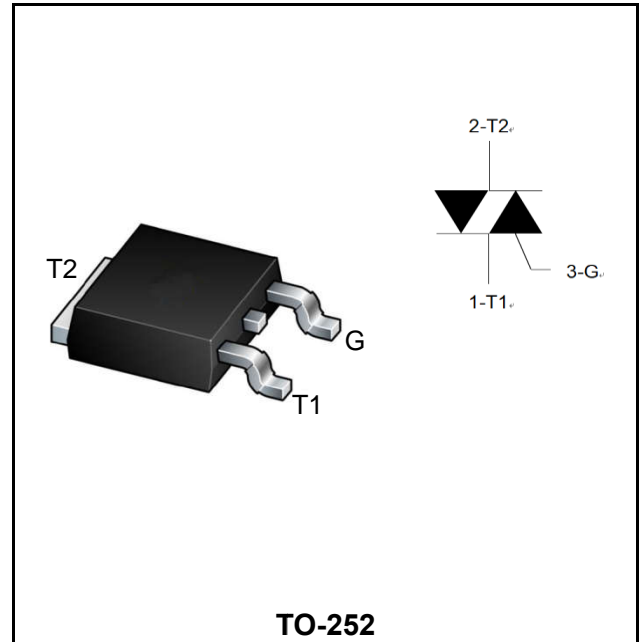
Symbol	Value	Unit
$I_{T(RMS)}$	4	A
$V_{DRM} V_{RRM}$	600/800	V
V_{TM}	1.6	V

Features

With high ability to withstand the shock loading of large current, Provide high dv/dt rate with strong resistance to electromagnetic interference.

Application

Power charger, T-tools, massager, solid state relay, AC Motor speed regulation and so on.



Order Information

Part Number	Package	Marking	packing	Delivery Quantity
BTB04D	TO-252	BTB04 600(T/S/C/B)W XXXX	BOX	3000PCS/Tape
BTB04D	TO-252	BTB04 800(T/S/C/B)W XXXX	BOX	3000PCS/Tape

Absolute maximum ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Repetitive peak off-state voltage	V_{DRM}	600/800	V
Repetitive peak reverse voltage	V_{RRM}	600/800	V
RMS on-state current	$I_{T(RMS)}$	4	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	35	A
I^2t value for fusing (tp=10ms)	I^2t	8	A ² S
Critical rate of rise of on-state current ($I_G = 2 \times I_{GT}$)	di_T/dt	I - II - III 50	A/ μ s
Peak gate current	I_{GM}	4	A
Average gate power dissipation	$P_{G(AV)}$	0.5	W
Junction Temperature	T_J	-40~+125	°C
Storage Temperature	T_{STG}	-40 ~+150	°C

Electrical characteristics (TA=25°C, unless otherwise noted)

Parameter	Symbol	Test Condition	Value				Unit	
			TW	SW	CW	BW		
Gate trigger current	I _{GT}	V _D =12V, R _L =30Ω	I - II - III	5	10	35	50	mA
Gate trigger voltage	V _{GT}		I - II - III	1.3				V
Non-triggering gate voltage	V _{GD}	V _D =V _{DRM} , R _L =3.3kΩ, T _J =125°C	0.2				V	
Holding current	I _H	I _T =100mA	I - III	10	20	45	60	mA
Latching current	I _L	I _G =1.2I _{GT} ,	I - III	10	20	50	70	mA
			II	15	35	70	80	
Critical-rate of rise of commutation voltage	dV/dt	V _D =67%V _{DRM} , T _J =125°C		20	200	500	1000	V/μs

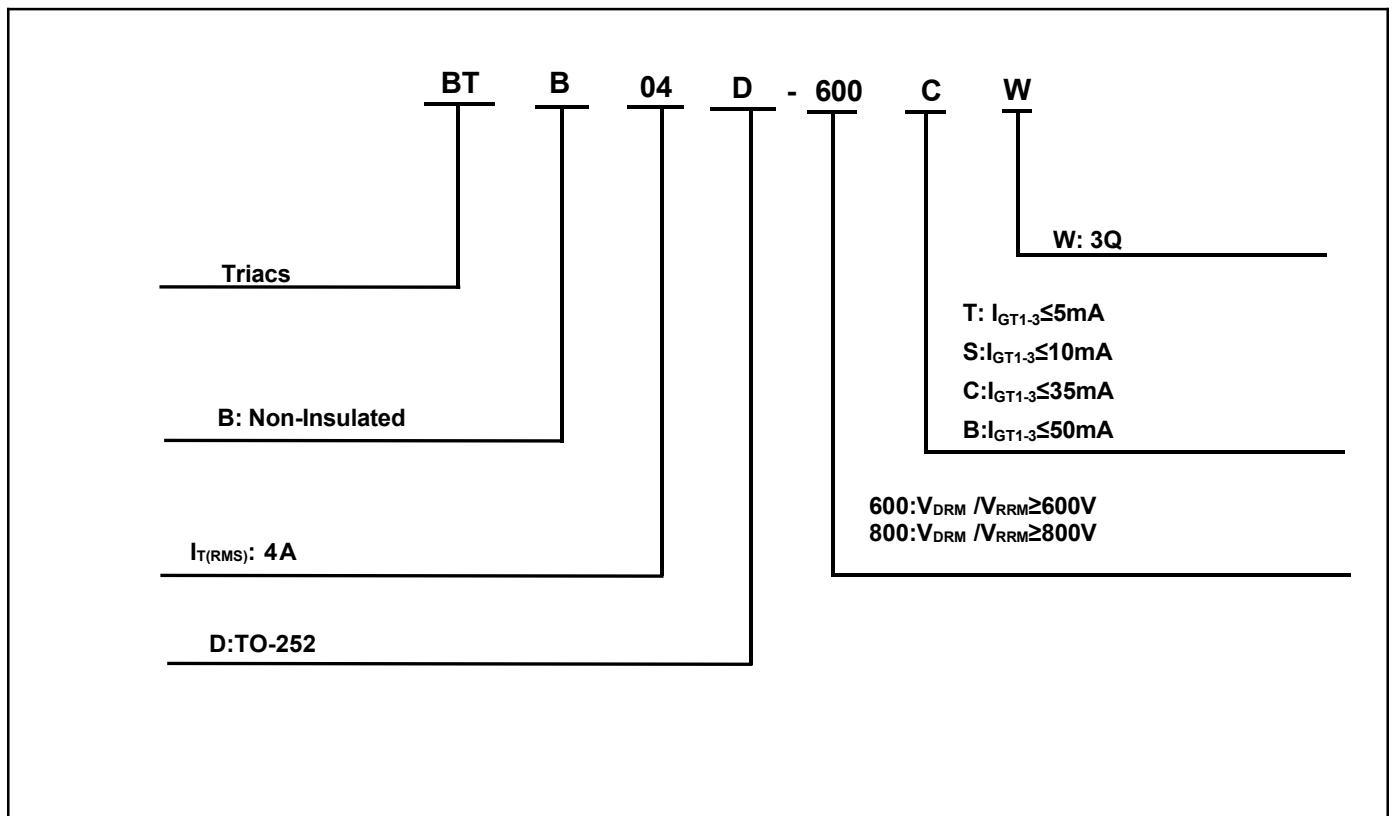
STATIC CHARACTERISTICS

On-state Voltage	V _{TM}	I _{TM} =5.5A, t _p =380μs	1.6				V
Repetitive Peak Off-State Current	I _{DRM}	V _D =V _{DRM} = V _{RRM}	T _J =25°C	10	10	10	μA
Repetitive Peak Reverse Current	I _{RRM}		T _J =125°C	1	1	1	mA

THERMAL RESISTANCES

Thermal resistance	R _{th(j-c)}	Junction to case	TYP.	6.0	°C/W
	R _{th(j-a)}	Junction to ambient	TYP.	70	°C/W

Ordering Information



Typical Characteristics

FIG.1: Maximum power dissipation versus RMS on-state current (full cycle)

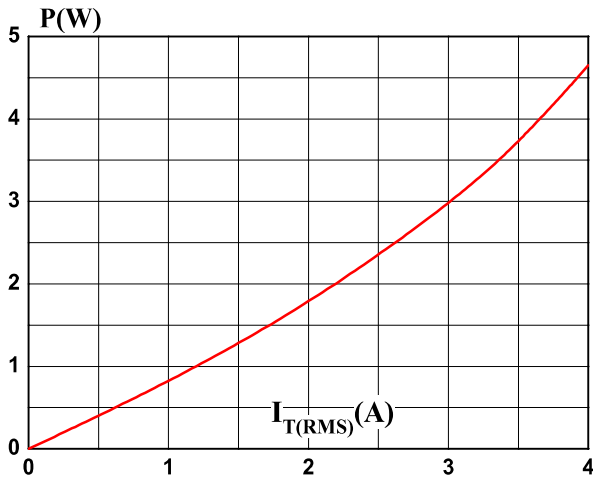


FIG.2: RMS on-state current versus case temperature (full cycle)

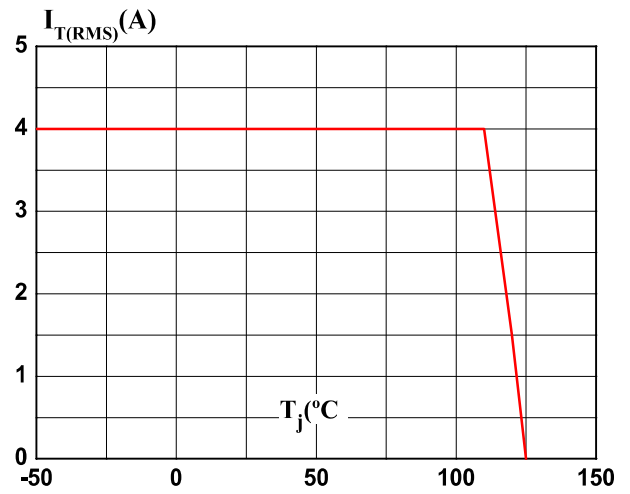


FIG.3: Surge peak on-state current versus number of cycles

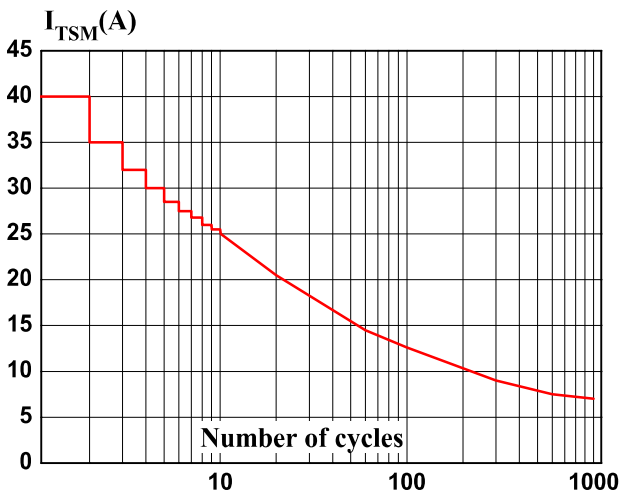


FIG.4: On-state characteristics (maximum values)

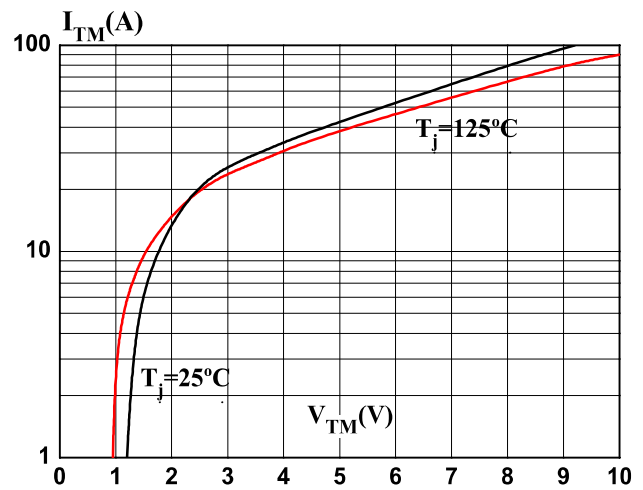


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$

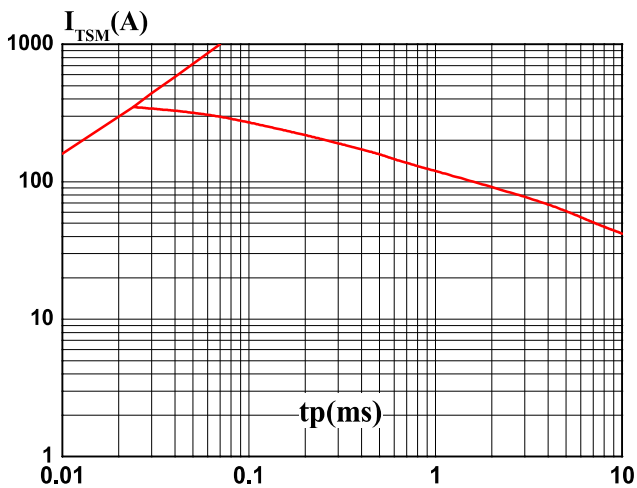
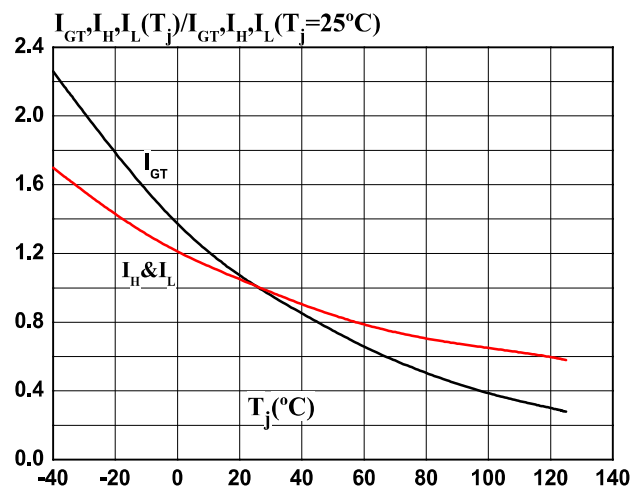


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature (typical values)



TO-252

