

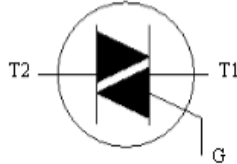
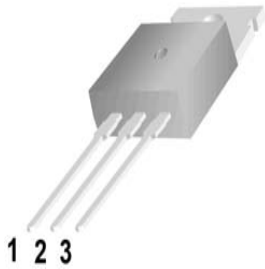
Model number: BT138  
Outline of T0-220

Shape: T0-220

Product Name: Two-way Thyrics

Polarity: T1: Main terminal 1 T2: main terminal 2 g : trigger pole

Uses: heating controller; dimming/speed controller; color light controller; automatic mahjong machine; mixer; juice machine; bread machine and other household appliances.



The limit range (ta = 25 °C unless otherwise regulations)

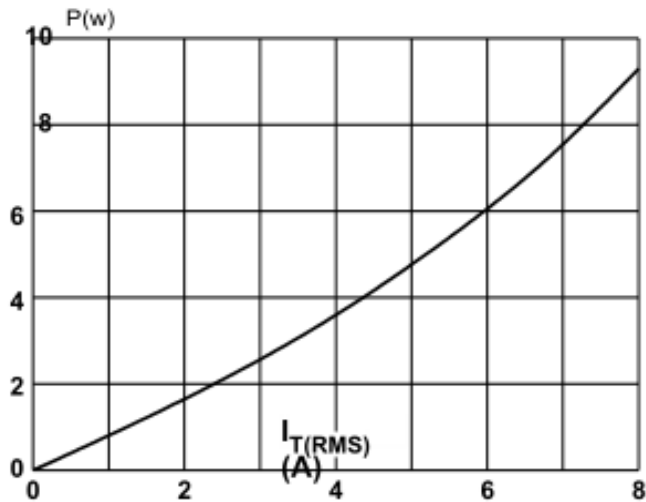
Project	Symbol	Rated value	Unit
Off-state repeat peak voltage	VDRM	600/800	V
Reverse repeat peak voltage	VRRM	600/800	V
On-state square root current	IT (RMS)	12	A
On-state no repeat surge current	ITSM	95	A
Control pole average dissipated power	PG(AV)	5	W
Storage temperature	Tstg	-40~150	°C
Knot temperature	Tj	125	°C

Electrical parameter characteristics (TA=25°C unless otherwise specified)

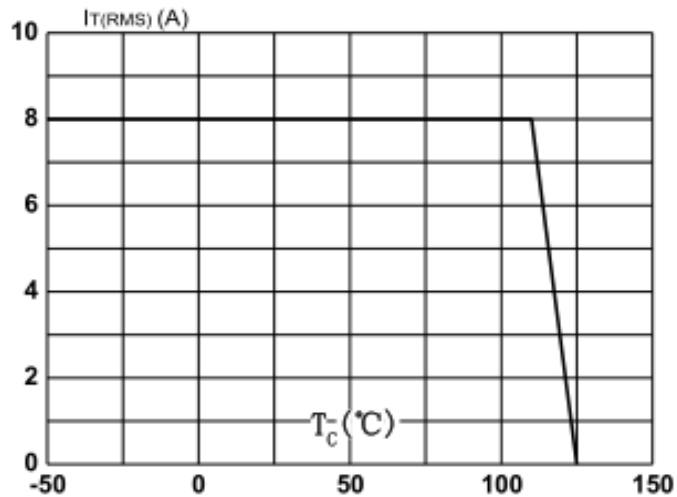
Parameter		Symbol	Test condition		Mini	Max	Unit
Gate trigger current	I	IGT	T2(+), G(+)	Vd=12v		30	mA
	II		T2(+), G(-)			30	mA
	III		T2(-), G(-)			30	mA
	IV		T2(-), G(+)			70	mA
Maintain current		IH	VD=12V			50	mA
On-state voltage		VTM	IT=15A			1.65	V
Off-state repeating peak current		IDRM	VDRM=600/800V			10	uA
Reverse repeat peak current		IRRM	VRRM=600/800V			10	uA
Gate trigger voltage		VGT	VD=12V			1.5	V
Holding current	I	IL	T2(+), G(+)	IG=1.2IGT		50	mA
	II		T2(+), G(-)			100	mA
	III		T2(-), G(-)			50	mA
	IV		T2(-), G(+)			50	mA

Typical characteristic graph

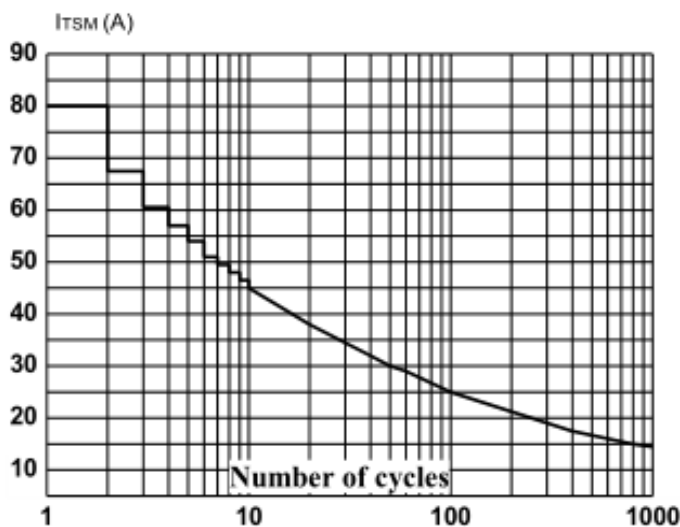
**FIG.1** Maximum power dissipation versus RMS on-state current



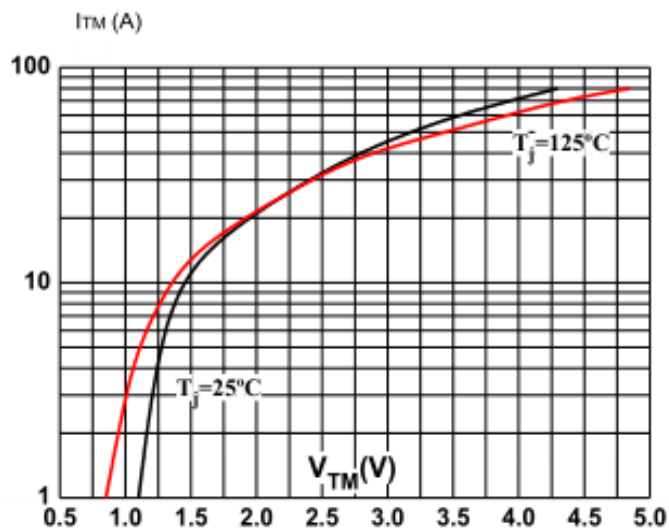
**FIG.2:** RMS on-state current versus case temperature



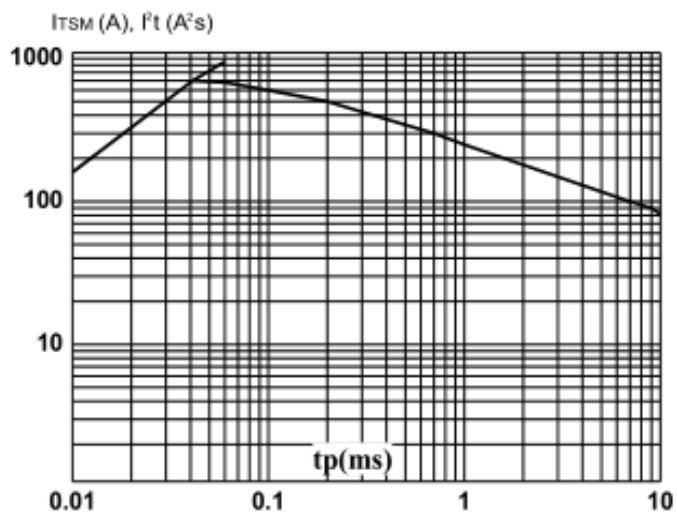
**FIG.3:** Surge peak on-state current versus number of cycles



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



**FIG.5:** Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 20\text{ms}$ , and corresponding value of  $I^2 t$  ( $dI/dt < 50\text{A}/\mu\text{s}$ )



**FIG.6:** Relative variations of gate trigger current, holding current and latching current versus junction temperature

