



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-220 Plastic-Encapsulate Thyristor

BT136 TRIAC

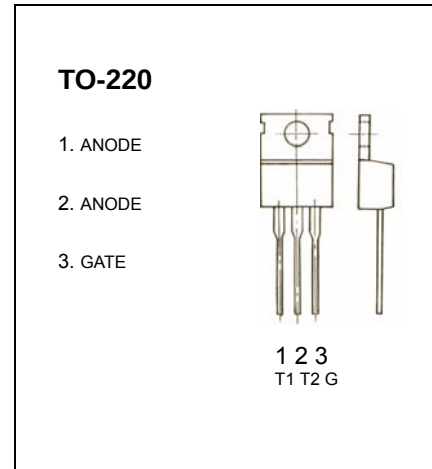
MAIN FEATURES

Symbol	value	unit
$I_{T(RMS)}$	6	A
V_{DRM}/V_{RRM}	600 and 800	V
I_{TSM}	25	A

GENERAL DESCRIPTION

. Glass passivated triacs in a plastic envelope , intended for use in applications requiring high bidirectional transient and blocking voltage capability and high thermal cycling performance.

. Typical applications include motor control, industrial and domestic lighting , heating and static switching.



ABSOLUTE MAXIMUM RATINGS

symbol	parameter			value	unit
$I_{T(RMS)}$	RMS on-state current (full sine wave)	D^2 PAK/TO-220	$T_C=107^{\circ}C$	6	A
I_{TSM}	Non repetitive surge peak on-state current (full sine wave, $T_j = 25^{\circ}C$)		$t=20ms$	25	A
			$t=16.7ms$	27	
I_{GM}	Peak gate current			2	A
$P_{G(AV)}$	Average gate power dissipation		$T_j=125^{\circ}C$	0.5	W
T_{stg}	Storage junction temperature range			-40 to +150	$^{\circ}C$
T_j	Operating junction temperature range			-40 to +125	

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter		Symbol	Test conditions		MIN	MAX	UNIT
Rated repetitive peak off-state voltage		$V_{\text{DRM}}, V_{\text{RRM}}$	$I_{\text{D}}=10\mu\text{A}$		600		V
Rated repetitive peak off-state current		$I_{\text{DRM}}, I_{\text{RRM}}$	$V_{\text{D}}=620\text{V}$			10	μA
On-state voltage		V_{TM}	$I_{\text{T}}=5\text{A}$			1.7	V
Gate trigger current	I	I_{GT}	$T_2(+), G(+)$	$V_{\text{D}}=12\text{V}$ $R_{\text{L}}=100\Omega$		10	mA
	II		$T_2(+), G(-)$			10	mA
	III		$T_2(-), G(-)$			10	mA
	IV		$T_2(-), G(+)$			-	mA
Gate trigger voltage	I	V_{GT}	$T_2(+), G(+)$	$V_{\text{D}}=12\text{V}$ $R_{\text{L}}=100\Omega$		1.45	V
	II		$T_2(+), G(-)$			1.45	V
	III		$T_2(-), G(-)$			1.45	V
	IV		$T_2(-), G(+)$			-	V
Holding current		I_{H}	$I_{\text{T}}=100\text{mA}$ $I_{\text{G}}=20\text{mA}$			20	mA

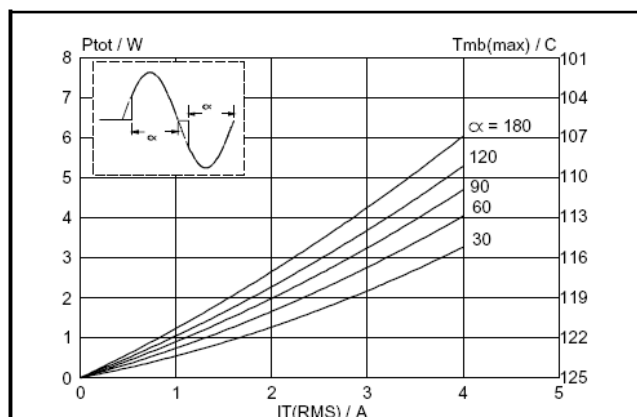


Fig.1. Maximum on-state dissipation, P_{tot} , versus rms on-state current, $I_{T(RMS)}$, where α = conduction angle.

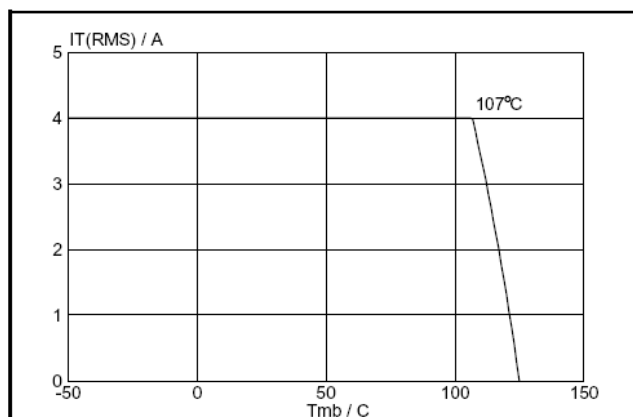


Fig.4. Maximum permissible rms current $I_{T(RMS)}$, versus mounting base temperature T_{mb} .

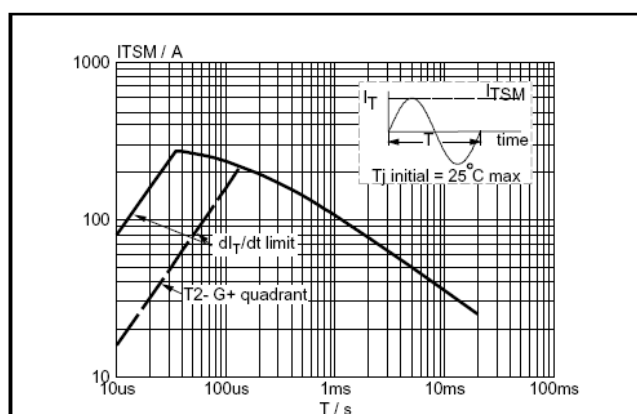


Fig.2. Maximum permissible non-repetitive peak on-state current I_{TSM} , versus pulse width t_p , for sinusoidal currents, $t_p \leq 20$ ms.

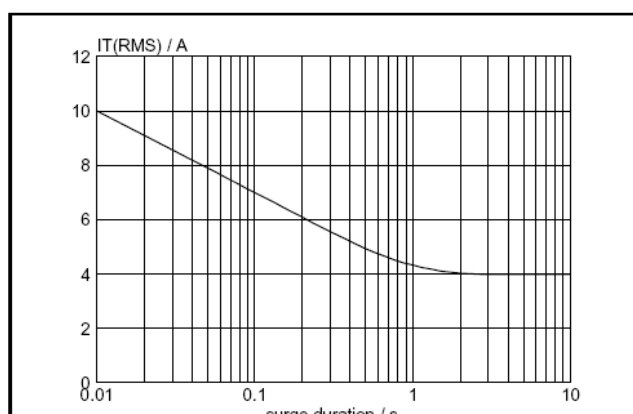


Fig.5. Maximum permissible repetitive rms on-state current $I_{T(RMS)}$, versus surge duration, for sinusoidal currents, $f = 50$ Hz; $T_{mb} \leq 107^\circ\text{C}$.

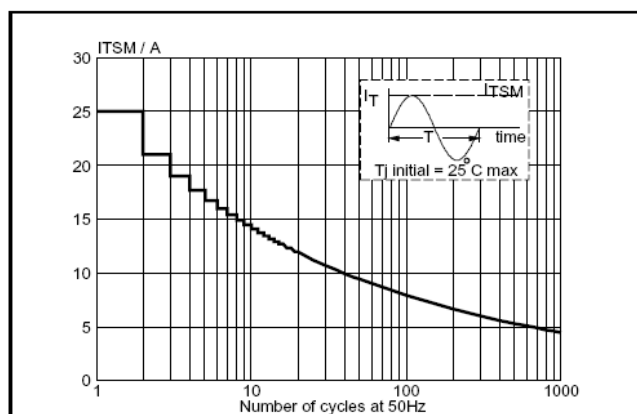


Fig.3. Maximum permissible non-repetitive peak on-state current I_{TSM} , versus number of cycles, for sinusoidal currents, $f = 50$ Hz.

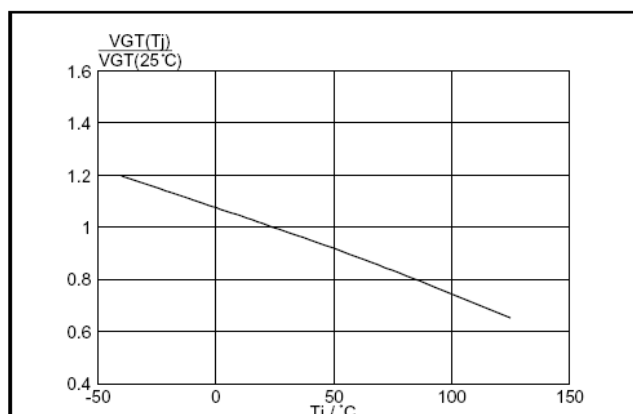


Fig.6. Normalised gate trigger voltage $V_{GT}(T_j)/V_{GT}(25^\circ\text{C})$, versus junction temperature T_j .

