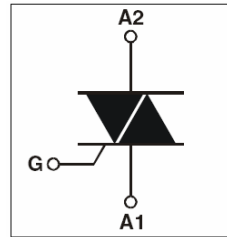


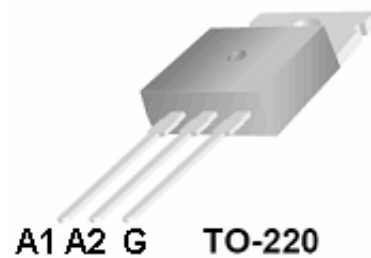
- High Reverse Voltage
- Low On-state Voltage
- High Ruggedness and Reliability



$I_{T(RMS)}$	12A
V_{DRM} / V_{RRM}	600V
$I_{GT(Q1)}$	2 to 10 mA

Description

This advanced Triacs is produced using BingXian's proprietary technology. Designed for motor control, industrial lighting, heating and static switching.



Absolute Maximum Ratings ($T_c=25^{\circ}C$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{DRM}	Repetitive peak off-state voltage	600	V
V_{RRM}	Repetitive peak reverse voltage	600	V
$I_{T(AV)}$	Average on-stage current	12	A
I_{TSM}	Non-repetitive peak on-state current	95	A
V_{GM}	Peak gate voltage	5	V
I_{GM}	Peak gate current	2	A
P_{GM}	Peak gate power dissipation	5	W
$P_{G(AV)}$	Average gate power dissipation	0.5	W
T_j	Operating Junction Temperature Range	-40 to +125	$^{\circ}C$
T_{STG}	Storage Temperature Range	-40 to +125	$^{\circ}C$

Thermal Characteristics

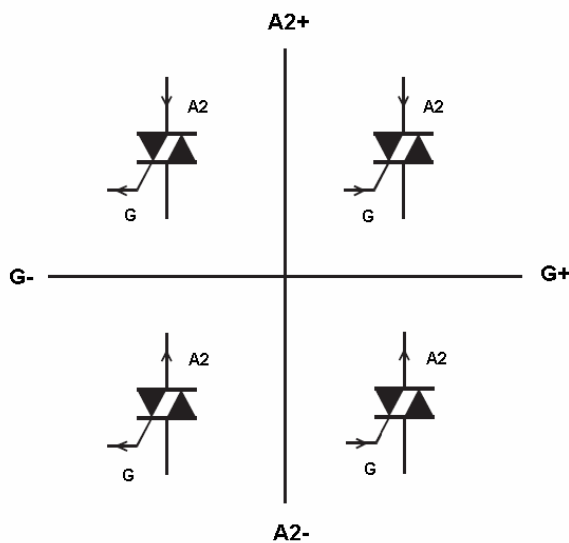
Symbol	Parameter	Value	Units
$R_{th\ j-c}$	Thermal Resistance, Junction to case Max.	1.6	$^{\circ}C / W$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient Max.	60	$^{\circ}C / W$

Electrical Characteristics ($T_C=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units		
I_{DRM}	Repetitive Peak Off-state Current	V_{DRM} applied, Gate open $T_C=125^\circ\text{C}$	-	0.1	0.5	mA		
V_{TM}	On-State Voltage	$I_{\text{TM}}=15\text{A}$	-	1.4	1.65	V		
V_{GT}	Gate Trigger Voltage Note 1	$V_{\text{D}}=12\text{V}, R_{\text{L}}=100\ \Omega$	I	A2+ Gate+	-	-	1.5	V
			II	A2+ Gate-	-	-	1.5	V
			III	A2- Gate-	-	-	1.5	V
			IV	A2- Gate+	-	-	1.5	V
I_{GT}	Gate Trigger Current Note 1	$V_{\text{D}}=12\text{V}, R_{\text{L}}=100\ \Omega$	I	A2+ Gate+	-	2.5	10	mA
			II	A2+ Gate-	-	4.0	10	mA
			III	A2- Gate-	-	5.0	10	mA
			IV	A2- Gate+	-	11	25	mA
I_{H}	Holding Current	$V_{\text{D}}=12\text{V}, I_{\text{GT}}=0.1\text{A}$	-	4.0	30	mA		
I_{L}	Latching Current	$V_{\text{D}}=12\text{V}, I_{\text{GT}}=0.1\text{A}$	A2+ Gate+	-	3.2	25	mA	
			A2+ Gate-	-	16	35	mA	
			A2- Gate-	-	4.0	25	mA	
			A2- Gate+	-	5.5	35	mA	
dv/dt	Critical Rate of Rise of Off-State Voltage	$T_C=25^\circ\text{C}$ Gate Open Linear Slope to 67% V_{DRM}	-	50	-	V/us		

Note:

- (1) For both polarities of A2 referenced to A1

Quadrant Definitions for a Triac


Typical Characteristics

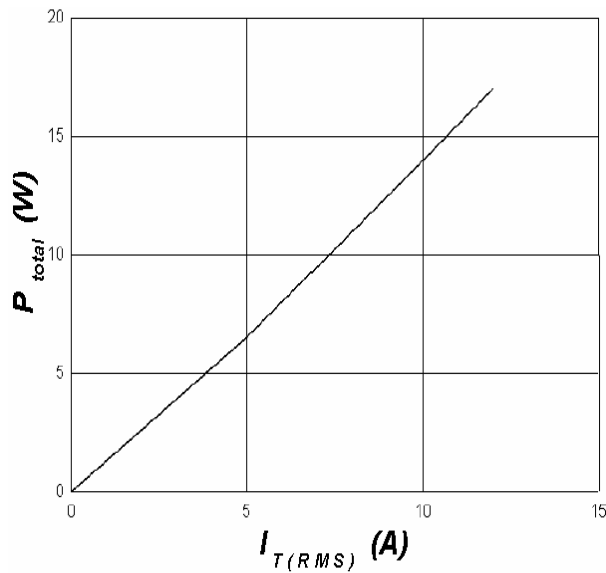


Fig 1. Maximum power dissipation vs. RMS on-state current

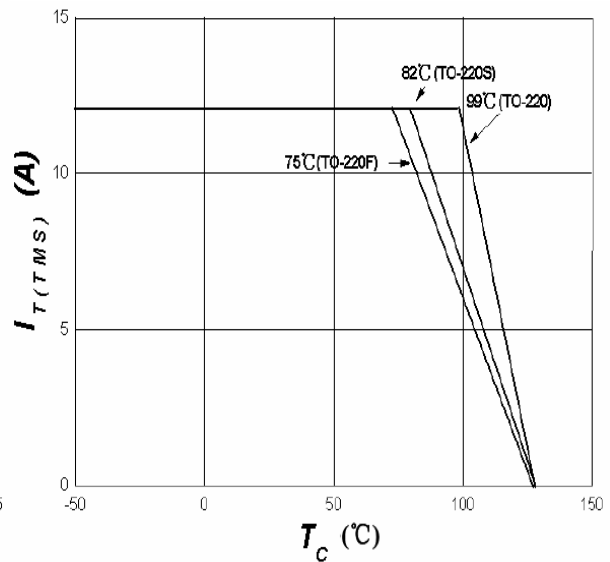


Fig 2. RMS on-state current vs. Case temperature

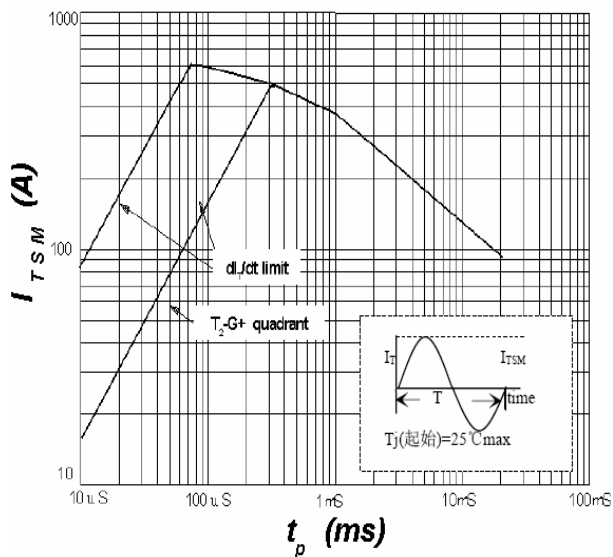


Fig 3. Non-repetitive peak on-state current for a sinusoidal pulse with width $t_p < 10\mu s$

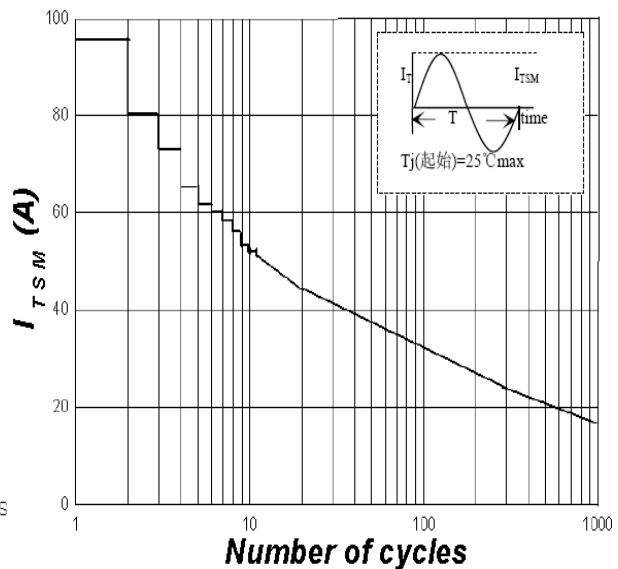


Fig 4. Peak on-state current vs. number of cycles

Typical Characteristics (continued)

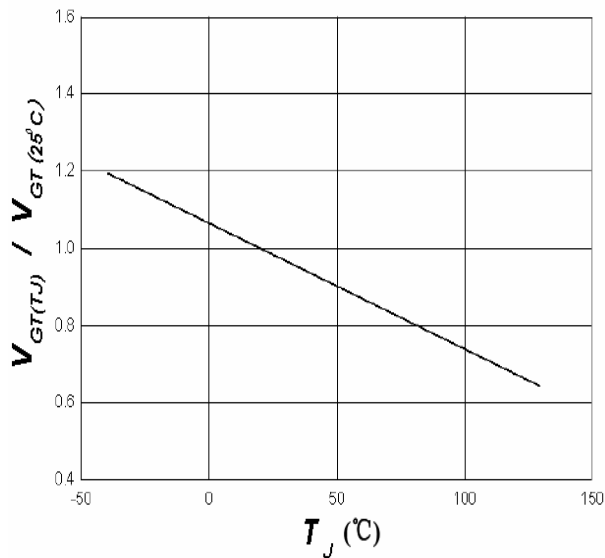


Fig 5. Relative variation of gate voltage vs. junction temperature

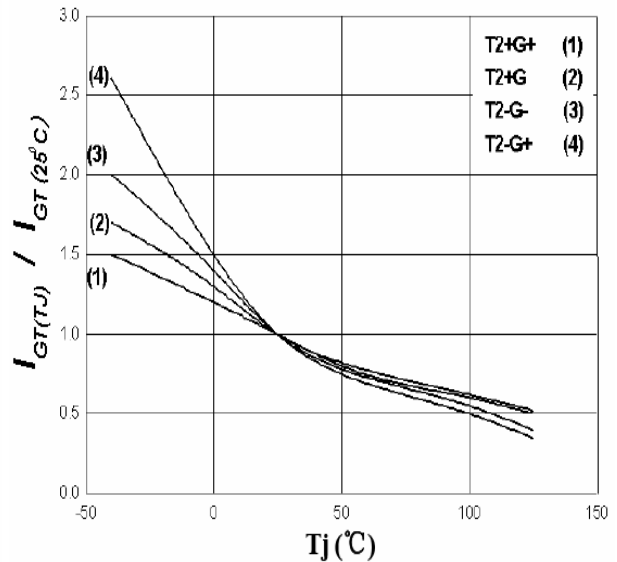


Fig 6. Relative variation of gate current vs. junction temperature

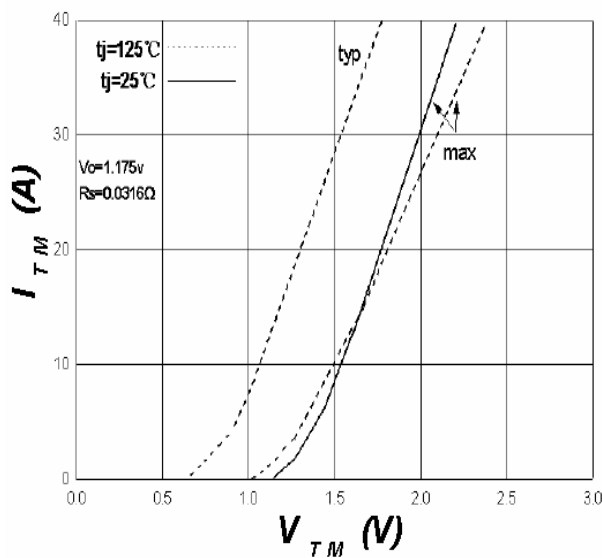


Fig 7. On-state characteristics

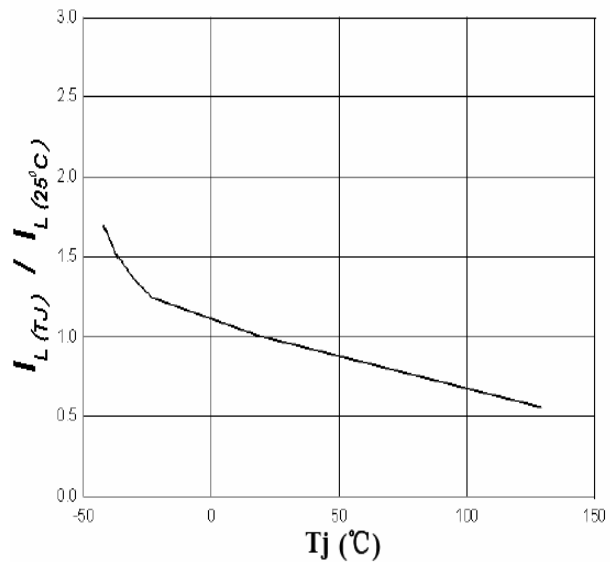


Fig 8. Relative variation of latching current vs. junction temperature

Typical Characteristics (continued)

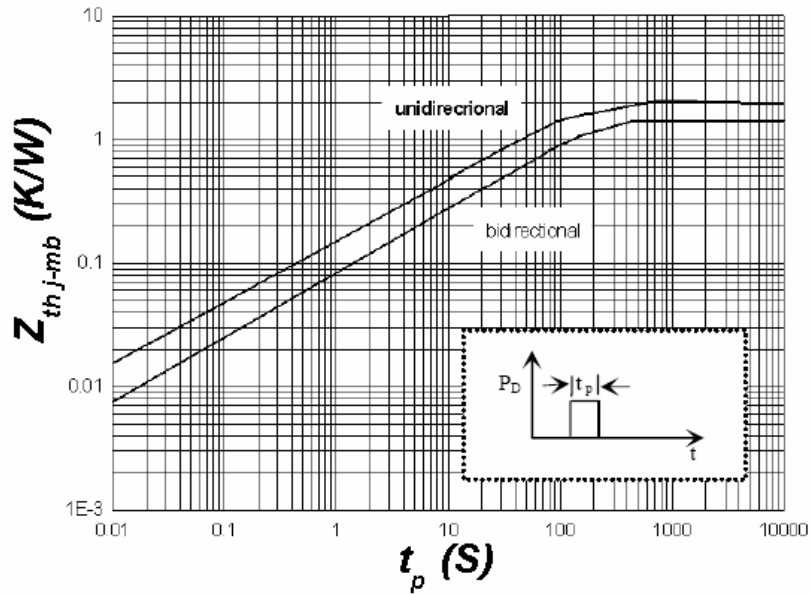


Fig 9. Thermal impedance vs. pulse duration