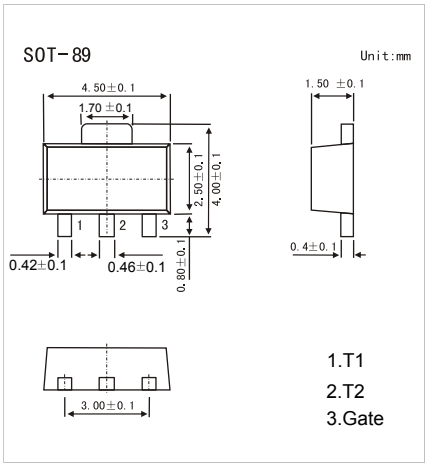
TIGER ELECTRONIC CO.,LTD

SMD Type Thyristor

RoHS COMPLIANT

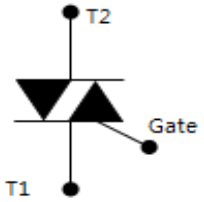
4 Quadrants Sensitive TRIACS

KTA1A60 / KTA1A80



■ Features

- Repetitive peak off-state voltages :600V/800V
- RMS on-state current :1A
- Sensitive Gate Trigger Current
  - 5mA of IGT at I, II and III Quadrants.
  - 12mA of IGT at IV Quadrant.



■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	KTT1A60	KTT1A80	Unit
Peak Repetitive Forward and Reverse Blocking Voltages	V_{DRM} V_{RRM}	600	800	V
Average On-State Current Tc=72℃	$I_{T(AV)}$	0.9		
RMS on-state Current Tc=72℃	$I_{T(RMS)}$	1		A
Non-Repetitive Peak on-state Current	I_{TSM}	12/13		
Circuit Fusing Considerations (t = 10ms)	I^2t	0.7		A^2s
Forward Peak Gate Current T_J=125℃	I_{FGM}	0.5		A
Reverse Peak Gate Voltage T_J=125℃	V_{RGM}	6		V
Peak Gate Power T_J=125℃	P_{GM}	2		W
Average Gate Power T_J = 125℃	$P_{G(AV)}$	0.2		
Thermal Resistance Junction to Ambient	R_{thJA}	150		K/W
Thermal Resistance Junction to Case	R_{thJC}	48		
junction Temperature	T_J	125		℃
Storage Temperature range	T_{stg}	-40to150		

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■ Electrical Characteristics (Ta = 25℃, unless otherwise noted.)

Parameter	Symbol	Test Conditions		Min	Typ.	Max	Unit
Repetitive Peak Off-State Voltage	V_{DRM}	Sine wave, 50/60Hz, Gate open	KTT1A60	600			V
Repetitive Peak Reverse Voltage	V_{RRM}		KTT1A80	800			
Repetitive Peak Off-State Current	I_{DRM}	$V_{DRM}=V_{RRM}$	T_J = 25℃			50	uA
			T_J = 125℃			5	mA
Repetitive Peak Reverse Current	I_{RRM}		T_J = 25℃			50	uA
			T_J = 125℃			5	mA
On-state Voltage	V_{TM}	I_T=1.4A,I_G=20mA			1.2	1.6	V
Gate Trigger Voltage	V_{GT}	V_D=12V, R_L=330Ω	1+,1-,3-			1.5	
			3+			2	
Gate Trigger Current	I_{GT}	V_D=12V, R_L=330Ω	1+,1-,3-			5	mA
			3+			12	
Holding Current	I_H	I_T=200mA				5	
Critical Rate of rise of off-state Voltage	dv/dt	V_D = 2/3 V_{DRM},T_J = 125℃		10			V/us
Non-Trigger Gate Voltage (Note.1)	V_{GD}	V_D = 12V, R_L=330Ω, T_J=125℃		0.2			V

Note.1: Pulse Width ≤ 1.0ms, Duty Cycle ≤ 1%

■ Marking Classification

NO	KTT1A60	KTT1A80
Marking	1A60	1A80

■ Typical Characterisitics

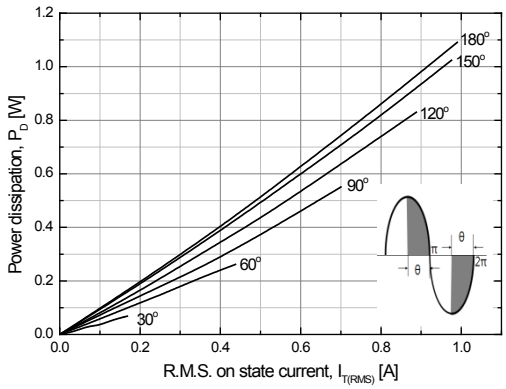

Fig 1. R.M.S. current vs. Power dissipation

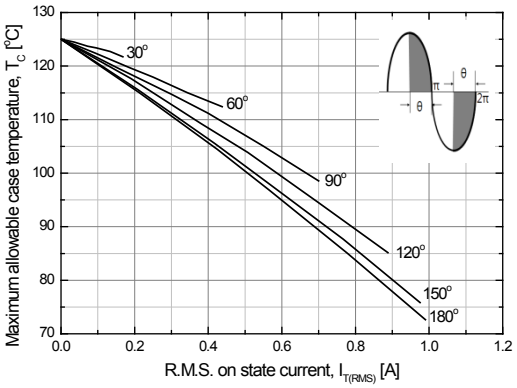

Fig 2. R.M.S. current vs. Case temperature

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■ Typical Characterisitics

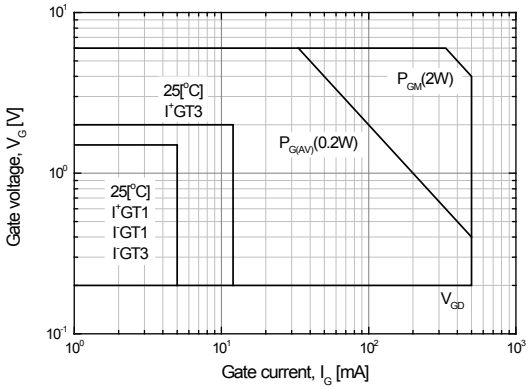

Fig 3. Gate power characteristics

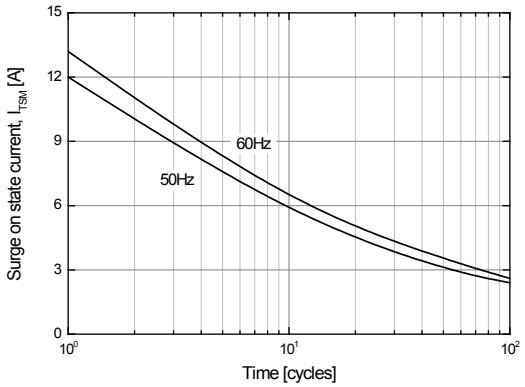

Fig 4. Surge on state current rating (Non-repetitive)

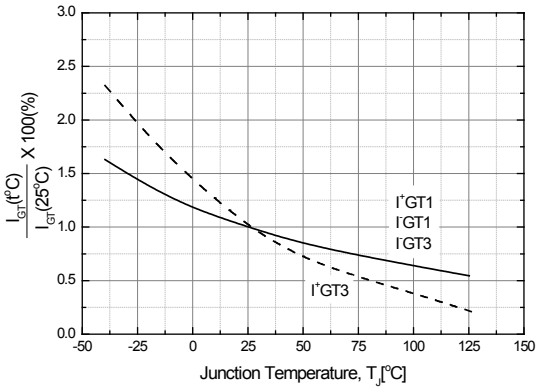

Fig 5. Gate trigger current vs. junction temperature

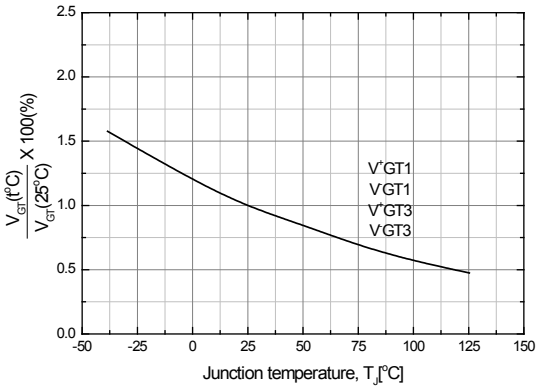

Fig 6. Gate trigger voltage vs. junction temperature

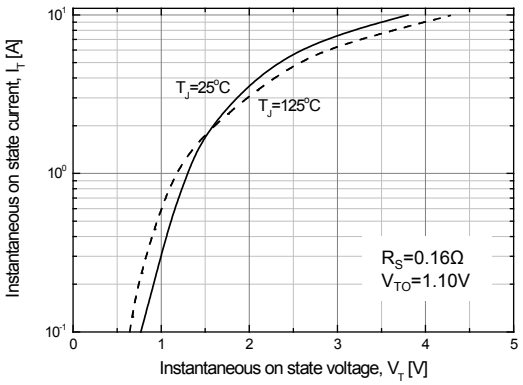

Fig 7. Instantaneous on state current vs. Instantaneous on state voltage

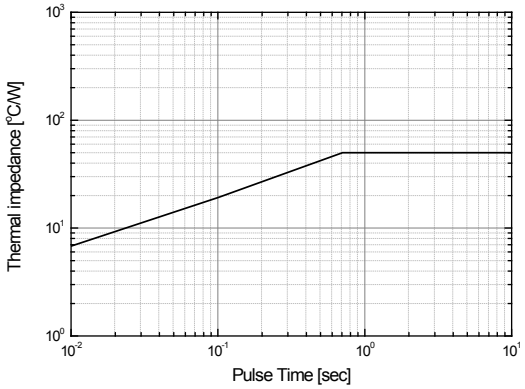

Fig 8. Thermal Impedance vs. pulse time