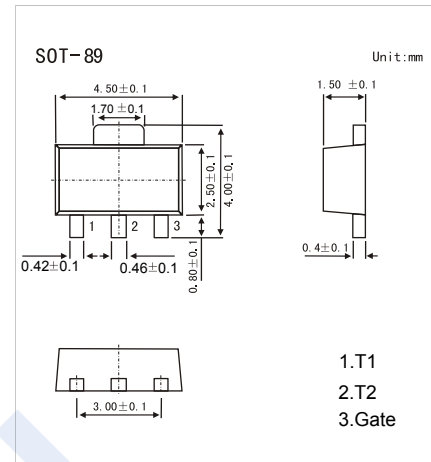
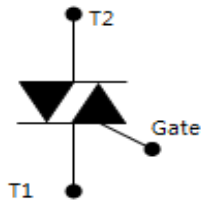


## 4 Quadrants Sensitive TRIACS

### KTA1A60-HF/KTA1A80-HF

#### ■ 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.
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



#### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	KTA1A60	KTA1A80	Unit
Peak Repetitive Forward and Reverse Blocking Voltages	$V_{DRM}$ $V_{RRM}$	600	800	V
Average On-State Current $T_c=72^\circ\text{C}$	$I_{T(AV)}$	0.9		A
RMS on-state Current $T_c=72^\circ\text{C}$	$I_{T(RMS)}$	1		
Non-Repetitive Peak on-state Current	$I_{TSM}$	12/13		$\text{A}^2\text{s}$
Circuit Fusing Considerations ( $t = 10\text{ms}$ )	$i^2t$	0.7		
Forward Peak Gate Current $T_J=125^\circ\text{C}$	$I_{FGM}$	0.5		A
Reverse Peak Gate Voltage $T_J=125^\circ\text{C}$	$V_{RGM}$	6		V
Peak Gate Power $T_J=125^\circ\text{C}$	$P_{GM}$	2		W
Average Gate Power $T_J = 125^\circ\text{C}$	$P_{G(AV)}$	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		$^\circ\text{C}$
Storage Temperature range	$T_{stg}$	-40to150		

## 4 Quadrants Sensitive TRIACS

### KTA1A60-HF/KTA1A80-HF

#### ■ Electrical Characteristics (Ta = 25°C, unless otherwise noted.)

Parameter	Symbol	Test Conditions	Min	Typ.	Max	Unit
Repetitive Peak Off-State Voltage	V <sub>DRM</sub>	Sine wave, 50/60Hz, Gate open	KTA1A60	600		V
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>		KTA1A80	800		
Repetitive Peak Off-State Current	I <sub>DRM</sub>	V <sub>DRM</sub> =V <sub>RRM</sub>	T <sub>J</sub> = 25°C		50	μA
			T <sub>J</sub> = 125°C		5	mA
Repetitive Peak Reverse Current	I <sub>RRM</sub>		T <sub>J</sub> = 25°C		50	μA
			T <sub>J</sub> = 125°C		5	mA
On-state Voltage	V <sub>TM</sub>	I <sub>T</sub> =1.4A, I <sub>G</sub> =20mA		1.2	1.6	V
Gate Trigger Voltage	V <sub>GT</sub>	V <sub>D</sub> =12V, R <sub>L</sub> =330Ω	1+, 1-, 3-, 3+		1.5	
Gate Trigger Current	I <sub>GT</sub>	V <sub>D</sub> =12V, R <sub>L</sub> =330Ω	1+, 1-, 3-, 3+		5	mA
Holding Current	I <sub>H</sub>	I <sub>T</sub> =200mA			5	
Critical Rate of rise of off-state Voltage	dv/dt	V <sub>D</sub> = 2/3 V <sub>DRM</sub> , T <sub>J</sub> = 125°C	10			V/us
Non-Trigger Gate Voltage (Note.1)	V <sub>GD</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> =330Ω, T <sub>J</sub> =125°C	0.2			V

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

#### ■ Marking

NO	KTA1A60-HF	KTA1A80-HF
Marking	1A60 <sub>F</sub>	1A80 <sub>F</sub>

#### ■ Typical Characteristics

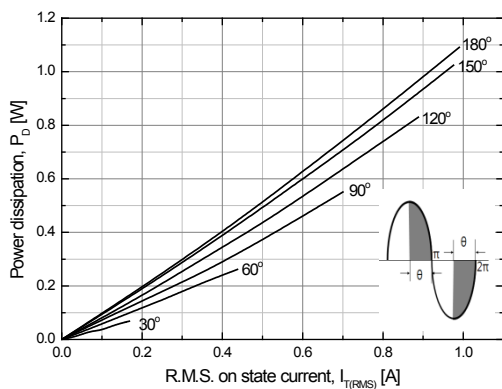


Fig 1. R.M.S. current vs. Power dissipation

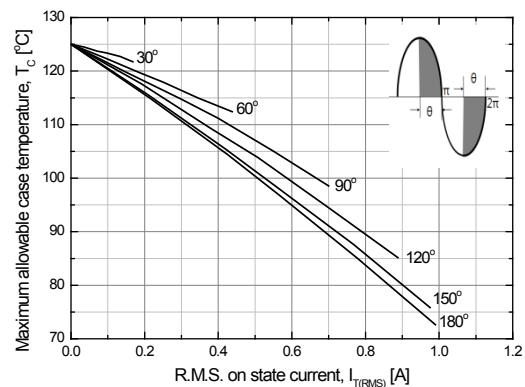


Fig 2. R.M.S. current vs. Case temperature

## 4 Quadrants Sensitive TRIACS KTA1A60-HF/KTA1A80-HF

### ■ Typical Characteristics

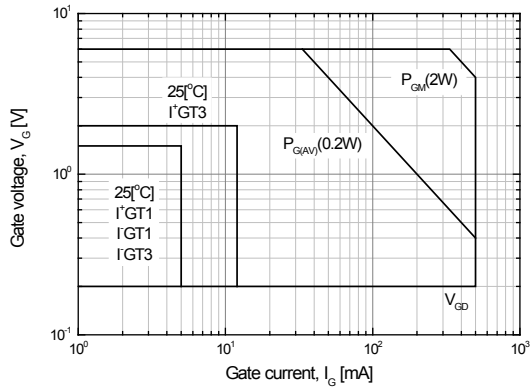


Fig 3. Gate power characteristics

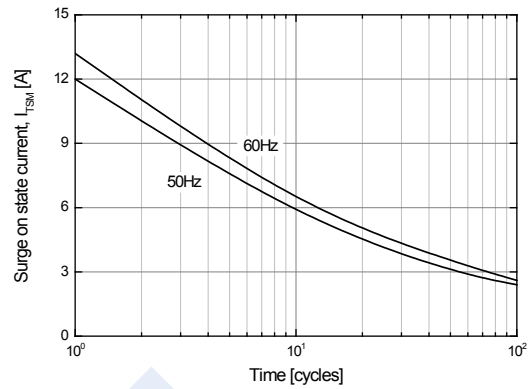


Fig 4. Surge on state current rating (Non-repetitive)

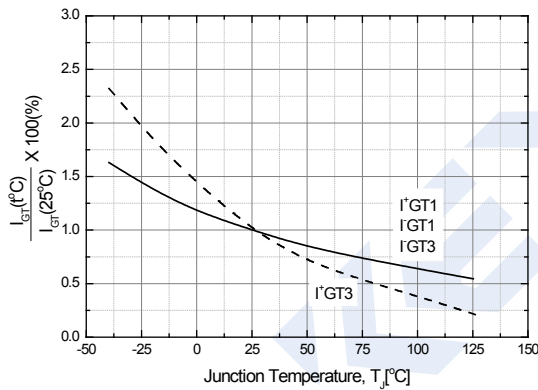


Fig 5. Gate trigger current vs. junction temperature

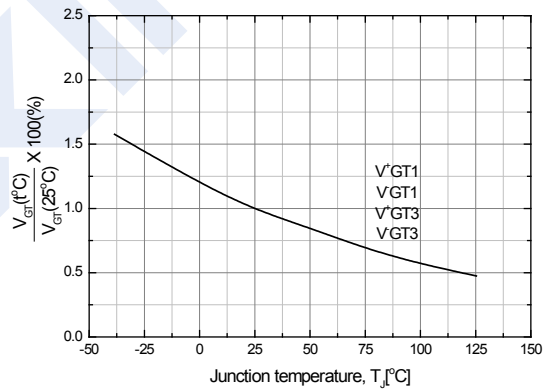


Fig 6. Gate trigger voltage vs. junction temperature

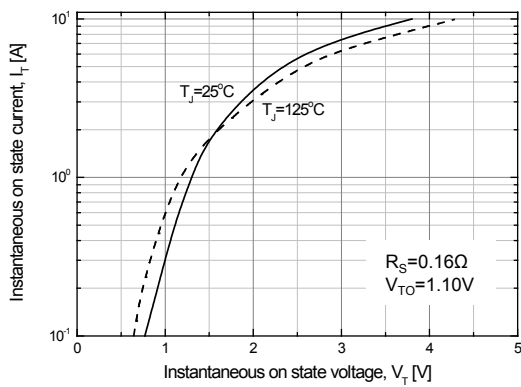


Fig 7. Instantaneous on state current vs. Instantaneous on state voltage

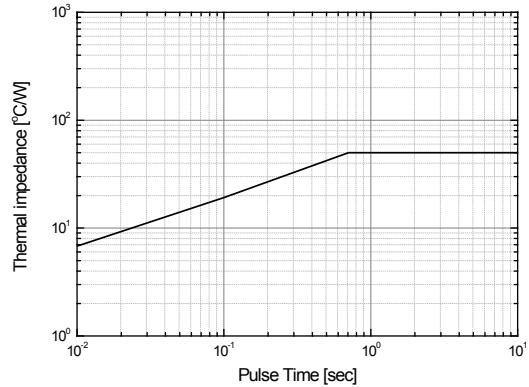


Fig 8. Thermal Impedance vs. pulse time