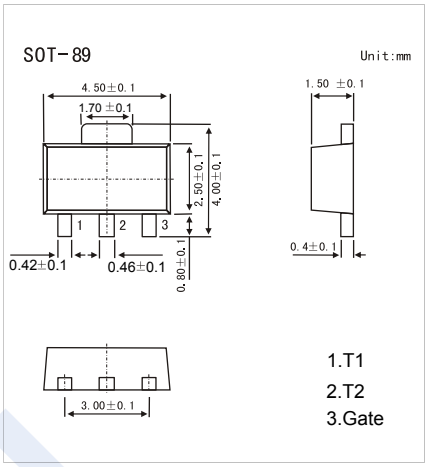
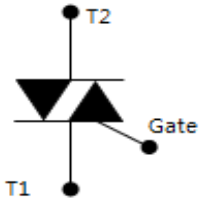
4 Quadrants Sensitive TRIACS
KTA1A60/KTA1A80



■ 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	KTA1A60	KTA1A80	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		

4 Quadrants Sensitive TRIACS
KTA1A60/KTA1A80

■ 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	KTA1A60	600			V
Repetitive Peak Reverse Voltage	V_{RRM}		KTA1A80	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

NO	KTA1A60	KTA1A80
Marking	1A60	1A80

■ Typical Characterisitics

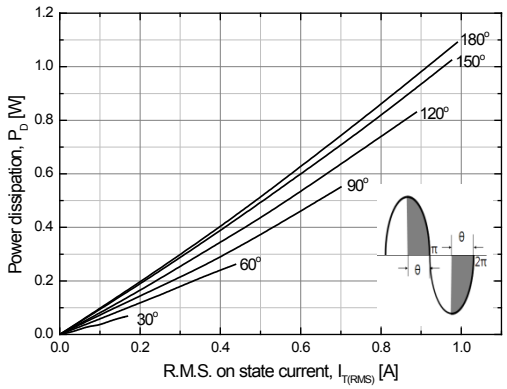


Fig 1. R.M.S. current vs. Power dissipation

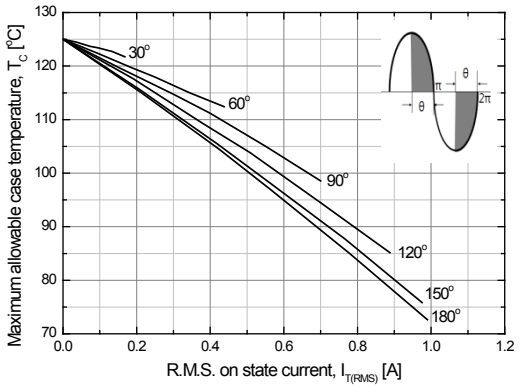


Fig 2. R.M.S. current vs. Case temperature

4 Quadrants Sensitive TRIACS
KTA1A60/KTA1A80

■ Typical Characterisitics

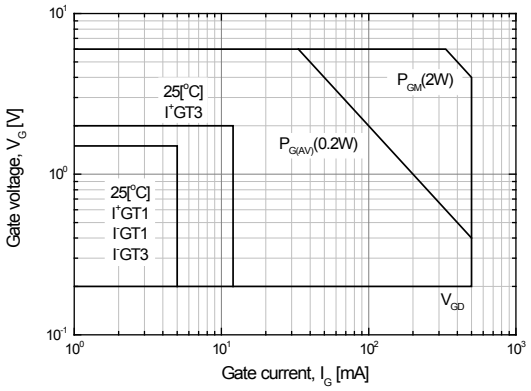


Fig 3. Gate power characteristics

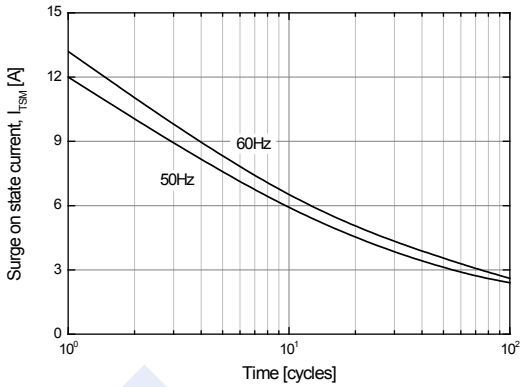


Fig 4. Surge on state current rating (Non-repetitive)

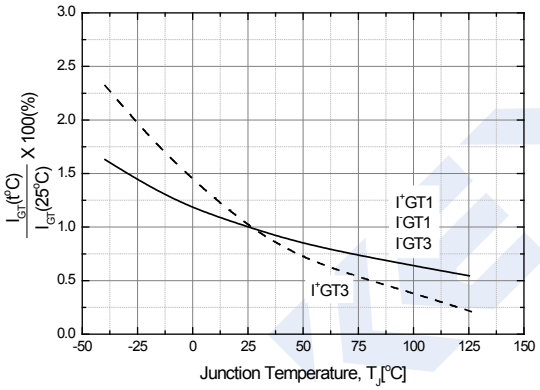


Fig 5. Gate trigger current vs. junction temperature

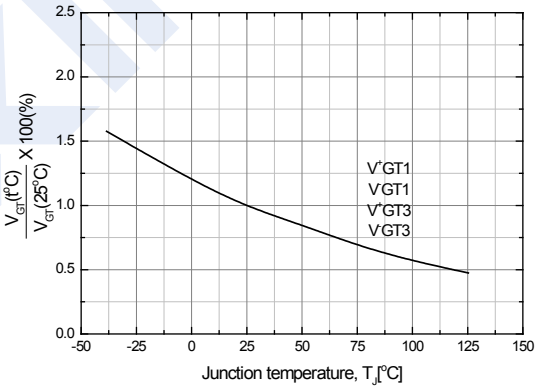


Fig 6. Gate trigger voltage vs. junction temperature

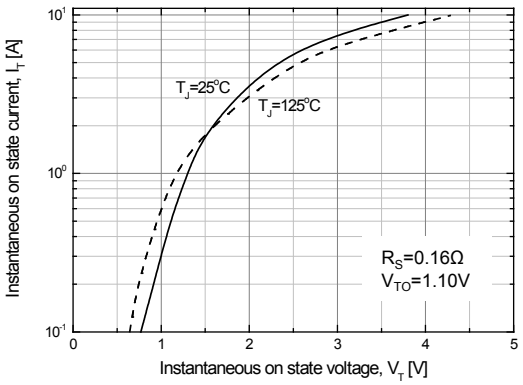


Fig 7. Instantaneous on state current vs. Instantaneous on state voltage

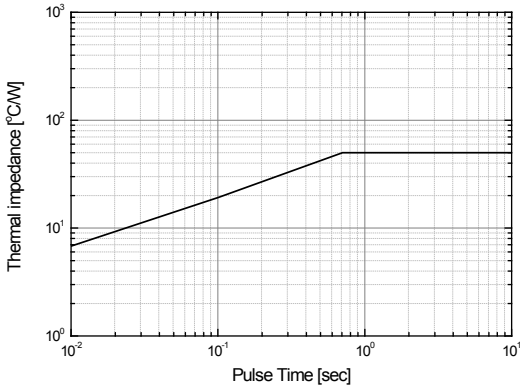


Fig 8. Thermal Impedance vs. pulse time