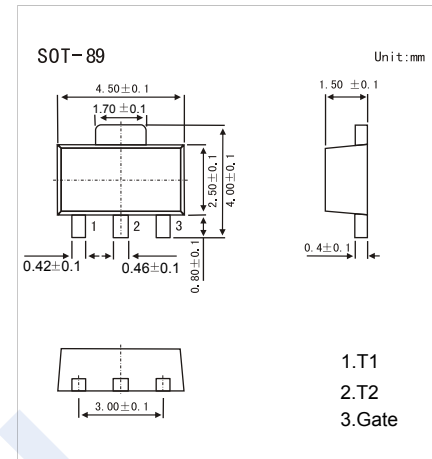
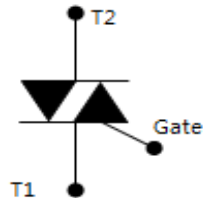


4 Quadrants Sensitive TRIACS

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 $T_a = 25^\circ\text{C}$

| 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 | | A^2s |
| 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/KTA1A80

■ Electrical Characteristics (Ta = 25°C, 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 _{RDM} | | KTA1A80 | 800 | | |
| Repetitive Peak Off-State Current | I _{DRM} | V _{DRM} =V _{RDM} | T _J = 25°C | | 50 | μA |
| | | | T _J = 125°C | | 5 | mA |
| Repetitive Peak Reverse Current | I _{RRM} | | T _J = 25°C | | 50 | μA |
| | | | T _J = 125°C | | 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°C | 10 | | | V/us |
| Non-Trigger Gate Voltage (Note.1) | V _{GD} | V _D = 12V, R _L =330Ω, T _J =125°C | 0.2 | | | V |

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

■ Marking

| NO | KTA1A60 | KTA1A80 |
|---------|---------|---------|
| Marking | 1A60 | 1A80 |

■ Typical Characteristics

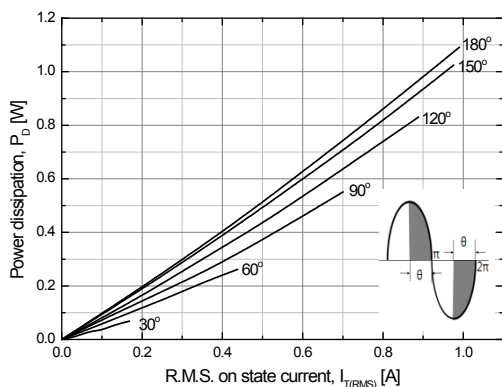


Fig 1. R.M.S. current vs. Power dissipation

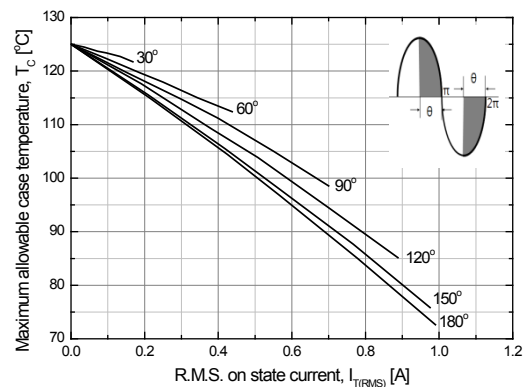


Fig 2. R.M.S. current vs. Case temperature

4 Quadrants Sensitive TRIACS KTA1A60/KTA1A80

■ Typical Characteristics

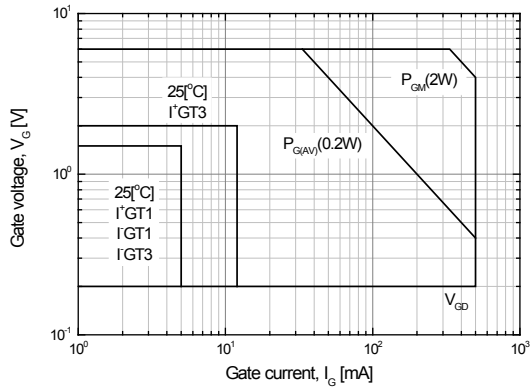


Fig 3. Gate power characteristics

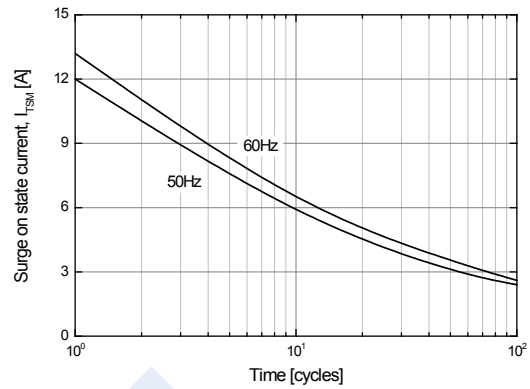


Fig 4. Surge on state current rating (Non-repetitive)

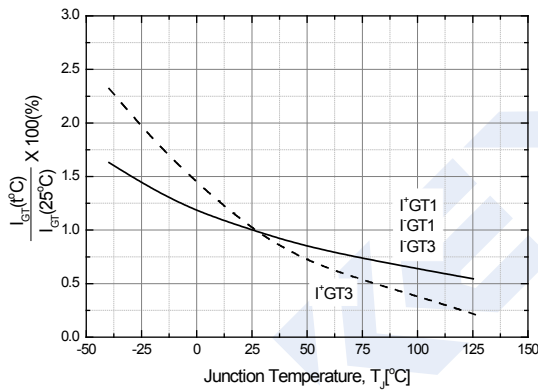


Fig 5. Gate trigger current vs. junction temperature

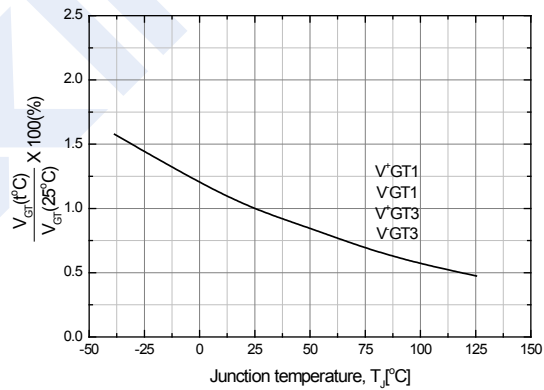


Fig 6. Gate trigger voltage vs. junction temperature

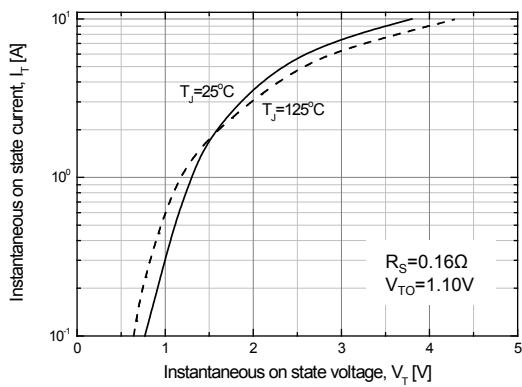


Fig 7. Instantaneous on state current vs. Instantaneous on state voltage

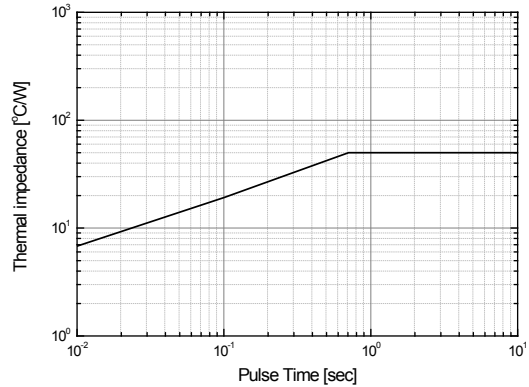


Fig 8. Thermal Impedance vs. pulse time