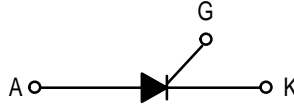


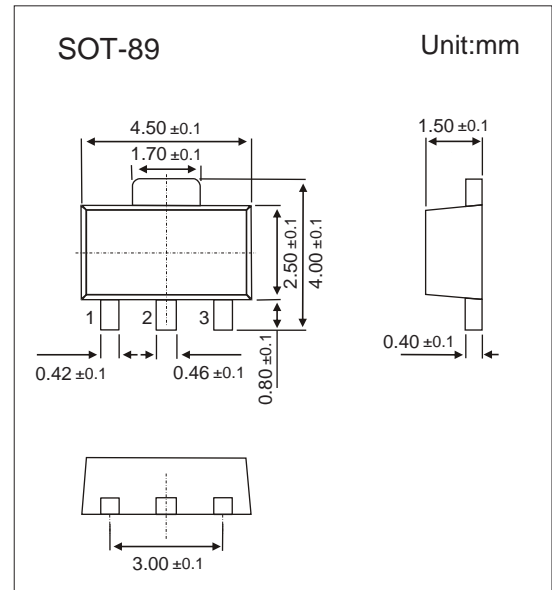
■ Features

- Blocking voltage to 600V
- RMS on-state current to 0.8 A
- General purpose switching



■ Ordering information

| Normal | Pin Assignment | | |
|-----------|----------------|---|---|
| | 1 | 2 | 3 |
| MCR100-8 | G | A | K |
| MCR100-8R | K | A | G |



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

| Parameter | Symbol | Rating | Unit |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------|----------------------|
| Peak Repetitive Forward and Reverse Blocking Voltage ($T_J = 25$ to 125°C , $R_{GK} = 1\text{ K}\Omega$) | V_{DRM} and V_{RRM} | 600 | V |
| Forward Current RMS | $I_{T(RMS)}$ | 0.8 | A |
| Peak Forward Surge Current, $T_A = 25^\circ\text{C}$ (1/2 Cycle, Sine Wave, 60 Hz) | I_{TSM} | 10 | A |
| Circuit Fusing Considerations ($t = 8.3\text{ ms}$) | I^2t | 0.415 | A^2s |
| Peak Gate Power — Forward, $T_A = 25^\circ\text{C}$ | P_{GM} | 0.1 | W |
| Average Gate Power — Forward, $T_A = 25^\circ\text{C}$ | $P_{GF(AV)}$ | 0.01 | W |
| Peak Gate Current — Forward, $T_A = 25^\circ\text{C}$ (300 ms, 120 PPS) | I_{GFM} | 1 | A |
| Peak Gate Voltage — Reverse | V_{GRM} | 5 | V |
| Thermal Resistance, Junction to Ambient | $R_{\theta JA}$ | 200 | $^\circ\text{C/W}$ |
| Thermal Resistance, Junction to Case | $R_{\theta JC}$ | 75 | $^\circ\text{C/W}$ |
| Operating Junction Temperature Range @ Rated V_{RRM} and V_{DRM} | T_J | -40 to +125 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -40 to +150 | $^\circ\text{C}$ |
| Lead Solder Temperature (<1/16" from case, 10 s max) | | 230 | $^\circ\text{C}$ |

■ Electrical Characteristics ($T_a = 25^\circ\text{C}$, $R_{GK} = 1\text{ k}\Omega$ unless otherwise noted.)

| Parameter | Symbol | Test conditions | Min | Max | Unit |
|------------------------------------------------------------------|-----------------------|------------------------------------------------------|-----|-----|---------------|
| Peak Forward or Reverse Blocking Current | I_{DRM} , I_{RRM} | $V_{AK} = \text{Rated } V_{DRM} \text{ or } V_{RRM}$ | | 10 | μA |
| Blocking Current | | | | 100 | μA |
| Forward "On" Voltage *1 | V_{TM} | $I_{TM} = 1\text{ A Peak @ } T_A = 25^\circ\text{C}$ | | 1.7 | V |
| Gate Trigger Current (Continuous DC) *2 $T_c = 25^\circ\text{C}$ | I_{GT} | Anode Voltage = 7 V, $R_L = 100\Omega$ | | 200 | μA |
| Gate Trigger Voltage (Continuous DC) $T_c = 25^\circ\text{C}$ | V_{GT} | Anode Voltage = 7V, $R_L = 100\Omega$ | | 0.8 | V |
| | | Anode Voltage = Rated V_{DRM} , $R_L = 100\Omega$ | 0.1 | 1.2 | V |
| Holding Current $T_c = 25^\circ\text{C}$ | I_H | Anode Voltage = 7V, initiating current = 20mA | | 5 | mA |
| $T_c = -40^\circ\text{C}$ | | | | 10 | mA |

*1. Forward current applied for 1 ms maximum duration, duty cycle $\leq 1\%$.

*2. R_{GK} current is not included in measurement.