

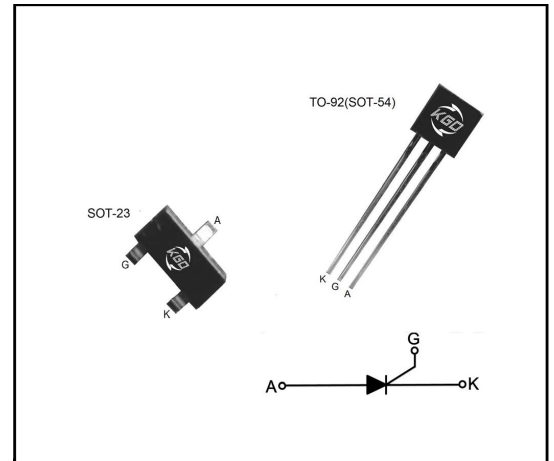
- **Description:**

Highly sensitive triggering levels, the PCRX06 Series SCRs is suitable for all applications, where the available gate current is limited, such as capacitive discharge ignitions, motor control in kitchen aids, overvoltage crowbar protection in low power supplies...

- **Features:**

Blocking voltage to 400/600V
On-state RMS current to 0.6A
Non-repetitive peak on-state current to 6A

- **Absolute Maximum Ratings**



| Symbol | Parameter | Conditions | Value | Unit |
|--------------|--|--|---------|----------------------|
| V_{DRM} | Repetitive peak off-state voltage | $T_J=25^\circ\text{C}$ | 400/600 | V |
| $I_{T(RMS)}$ | RMS on-state current (180° conduction half sine wave) | $T_c=60^\circ\text{C}$ | 0.6 | A |
| $I_{T(av)}$ | Average on-state current (180° conduction half sine wave) | $T_c=60^\circ\text{C}$ | 0.4 | A |
| I_{TSM} | Non-repetitive surge peak On-state current($T_J=25^\circ\text{C}$) | $t_p=10\text{ms}$ | 6 | A |
| I^2t | I^2t Value for fusing | $t_p=10\text{ms}$ | 0.25 | A^2S |
| I_{GM} | Peak gate current | $t_p=20\mu\text{s}, T_J=110^\circ\text{C}$ | 0.5 | A |
| $P_{G(AV)}$ | Average gate power dissipation | | 0.1 | W |
| T_{STG} | Storage temperature | | -40 150 | $^\circ\text{C}$ |
| T_J | Junction temperature | | -40 110 | $^\circ\text{C}$ |

● Electrical Characteristics

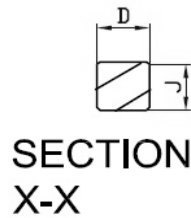
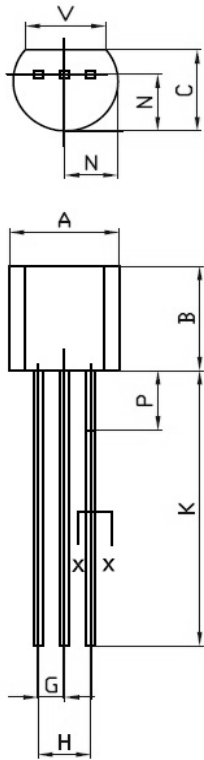
| Symbol | Conditions | Value | | | Unit |
|----------|---|-------|-----|-----|------------|
| | | MIN | TYP | MAX | |
| I_{GT} | $V_D=6V, R_L=100\Omega$ | 5 | 30 | 120 | μA |
| V_{GT} | | / | 0.6 | 0.8 | V |
| V_{GD} | $V_D=V_{DRM}, R_L=3.3K\Omega, R_{GK}=1K\Omega, T_J=110^\circ C$ | 0.1 | / | / | V |
| I_L | $I_G=1.2 I_{GT}$ | / | / | 6 | mA |
| I_H | $I_T=50mA$ | / | / | 5 | mA |
| dv/dt | $V_{DM}=67\%V_{DRM}, R_{GK}=1K\Omega, T_J=110^\circ C$ | 10 | / | / | V/ μs |

● Electrical Characteristics

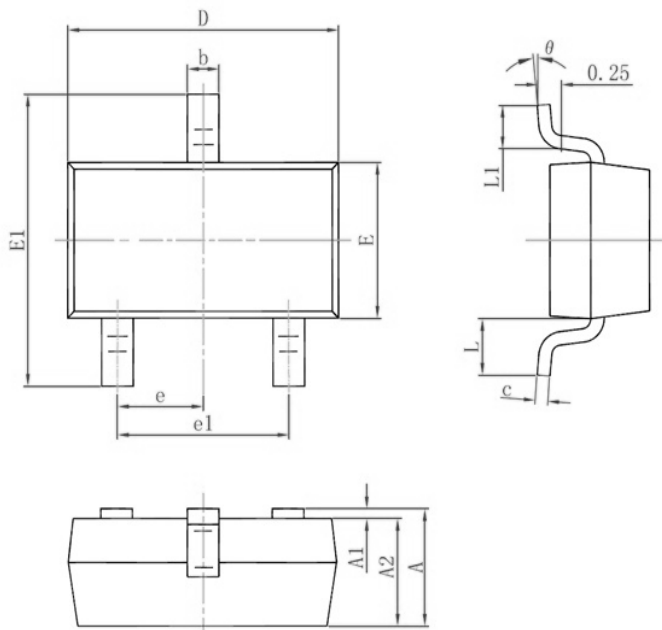
| Symbol | Parameter | Numerical | Unit |
|-----------|--|-----------|---------|
| V_{TM} | $I_T=1A, t_p=380\mu s$ $T_J=25^\circ C$ | 1.7 | V |
| I_{DRM} | $V_D=V_{DRM}, V_R=V_{RRM}$ $T_J=25^\circ C$ | 5 | μA |
| I_{RRM} | $T_J=125^\circ C$ | 0.1 | mA |

● Thermal Characteristics

| Symbol | Parameter | Numerical(MAX) | Unit |
|---------------|--|----------------|------------|
| $R_{th(j-c)}$ | Junction to case | TO-92 | 75 |
| | | SOT-23 | 15 |
| $R_{th(j-a)}$ | Junction to ambient | TO-92 | 200 |
| | | SOT-23 | 400 |
| T_L | Lead Solder Temperature(<1/16" from case, 10 secs max) | 260 | $^\circ C$ |

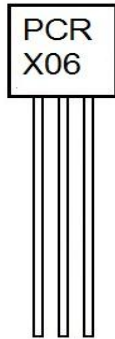
Package Outline Dimensions
TO-92 (SOT-54)


| Ref. | Dimensions | | | |
|------|-------------|-------|--------|-------|
| | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| A | 4.45 | 5.2 | 0.175 | 0.205 |
| B | 4.32 | 5.33 | 0.170 | 0.210 |
| C | 3.18 | 4.19 | 0.125 | 0.165 |
| D | 0.407 | 0.533 | 0.016 | 0.021 |
| G | 1.15 | 1.39 | 0.045 | 0.055 |
| H | 2.42 | 2.66 | 0.095 | 0.105 |
| J | 0.39 | 0.50 | 0.015 | 0.020 |
| K | 12.70 | - | 0.500 | - |
| N | 2.04 | 2.66 | 0.080 | 0.105 |
| P | - | 2.54 | - | 0.100 |
| V | 3.43 | - | 0.135 | - |

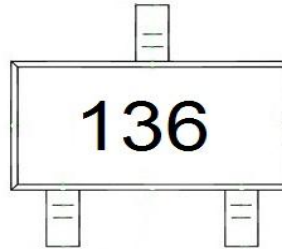
SOT-23


| Ref. | Dimensions | | | |
|----------|-------------|-------|--------|-------|
| | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| A | 0.900 | 1.150 | 0.035 | 0.045 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.050 | 0.035 | 0.041 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 2.800 | 3.000 | 0.110 | 0.118 |
| E | 1.200 | 1.400 | 0.047 | 0.055 |
| E1 | 2.250 | 2.550 | 0.089 | 0.100 |
| e | 0.950 | | 0.037 | |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.550 | | 0.022 | |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| θ | 0° | 8° | 0° | 8° |

- **Marking**



TO-92



SOT-23

