

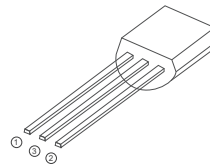
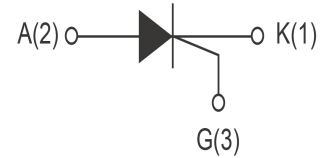
Sensitive Gate SCRS

FEATURES

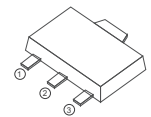
- > IT(RMS):0.8A
- > VGT: 0.8V
- > VDRM VRRM:400Vand600V

APPLICATIONS

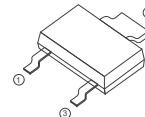
Washing machine,vacuums, massager,solid state relay ,
AC Motor speed regulation and so on.



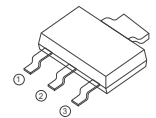
TO-92



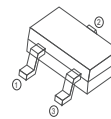
SOT-89



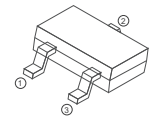
SOT-89-2L



SOT-223



SOT-23



SOT-23-3L

Absolute Maximum Ratings (Tj=25°C unless otherwise specified)

| Symbol | Parameter | Conditions | Ratings | Unit |
|--------------|-----------------------------------|----------------------|---------|------|
| VDRM VRRM | Repetitive Peak Off-State Voltage | MCR100-6 MCR100-8 | 600/800 | V |
| IT(AV) | Average On-State Current | | 0.7 | A |
| IT(RMS) | R.M.S On-State Current | | 1 | A |
| ITSM | Surge On-State Current | F=50Hz Tp=10ms | 11 | A |
| I²t | I²t for fusing | Tp=10ms | 0.45 | A²s |
| PG(AV) | Average Gate Power Dissipation | Tj=125°C | 0.1 | W |
| PGM | Peak Gate Power Dissipation | tp=20us Tj=125°C | 0.5 | W |
| Tj | Operating Junction Temperature | | ~40~125 | °C |
| TSTG | Storage Temperature | | ~40~150 | °C |

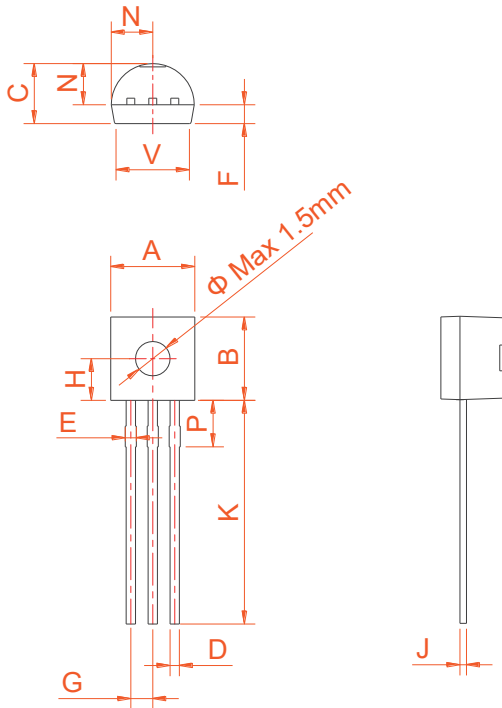
Electrical Characteristics (T_J=25°C unless otherwise specified)

| Symbol | Parameter | Test Conditions | Value | Unit |
|-----------------|--|--|-------|------|
| IDRM | Repetitive Peak Off-State Current | T _c =25°C | ≤5 | uA |
| | | T _c =110°C | ≤100 | uA |
| IRRM | Repetitive Peak Reverse Current | T _c =25°C | ≤5 | uA |
| | | T _c =110°C | ≤100 | uA |
| V _{TM} | Forward "on" voltage | I _T =1.2A t _p =380us | ≤1.7 | V |
| V _{GD} | Gate non-trigger voltage | V _D =V _{DRM} , T _J =110°C, R _{GK} =1kΩ, R _L =3.3kΩ | ≥0.1 | V |
| V _{GT} | Gate trigger voltage | V _D =12V, I _T =0.1A | ≤0.8 | V |
| I _H | Holding current | I _T =50mA | ≤4 | mA |
| I _L | Latching current | I _G =1.2 I _{GT} | ≤6 | mA |
| I _{GT} | Gate trigger current | V _D =12V, I _T =0.1A | ≤200 | uA |
| dv/dt | Critical-rate of rise of commutation voltage | T _J =110°C, V _D =2/3V _{DRM} , R _{GK} =1KΩ | ≥10 | V/us |

THERMAL RESISTANCES

| Symbol | Parameter | | Value | Unit |
|----------------------|------------------|--------------------------|-------|------|
| R _{th(j-c)} | junction to case | TO-92/ SOT-23/ SOT-23-3L | 75 | °C/W |
| | | SOT-89 SOT-89-2L | 45 | |
| | | SOT-223 | 31 | |

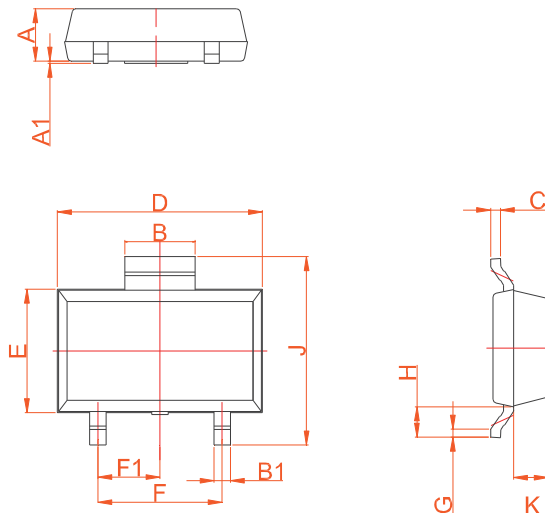
PACKAGE MECHANICAL DATA



TO-92

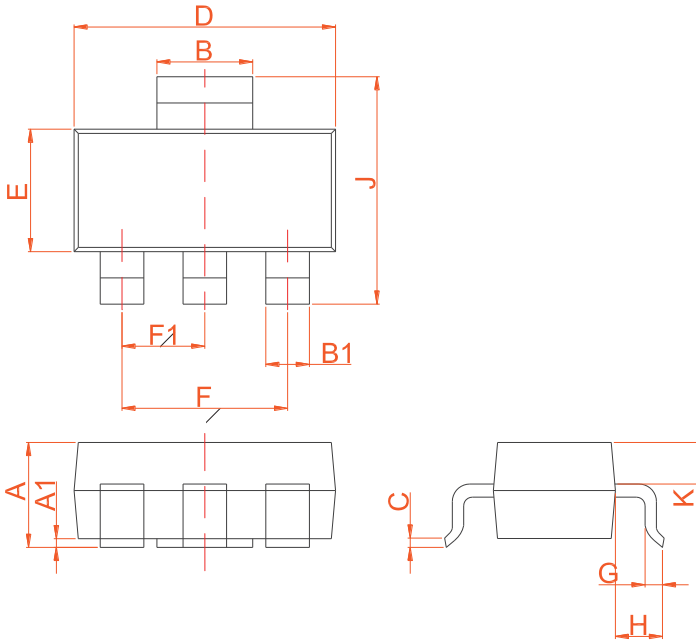
| Ref. | Dimensions | | | | | |
|------|-------------|------|-------|--------|-------|-------|
| | Millimeters | | | Inches | | |
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 4.45 | | 5.20 | 0.175 | | 0.205 |
| B | 4.32 | | 5.33 | 0.170 | | 0.210 |
| C | 3.18 | | 4.19 | 0.125 | | 0.165 |
| D | 0.407 | | 0.533 | 0.016 | | 0.021 |
| E | 0.60 | | 0.80 | 0.024 | | 0.031 |
| F | - | 1.1 | - | - | 0.043 | - |
| G | - | 1.27 | - | - | 0.050 | - |
| H | - | 2.30 | - | - | 0.091 | - |
| J | 0.36 | | 0.50 | 0.014 | | 0.020 |
| K | 12.70 | | 15.0 | 0.500 | | 0.591 |
| N | 2.04 | | 2.66 | 0.080 | | 0.105 |
| P | 1.86 | | 2.06 | 0.073 | | 0.081 |
| V | - | | 4.3 | - | | 0.169 |

| Ref. | Dimensions | | | | | |
|------|-------------|-------|------|--------|-------|-------|
| | Millimeters | | | Inches | | |
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 1.3 | 1.4 | 1.5 | 0.051 | 0.055 | 0.059 |
| A1 | 0.01 | 0.06 | 0.10 | 0.001 | 0.002 | 0.004 |
| B | 1.6 | 1.7 | 1.8 | 0.063 | 0.067 | 0.071 |
| B1 | 0.3 | 0.4 | 0.5 | 0.012 | 0.016 | 0.020 |
| C | 0.22 | 0.254 | 0.32 | 0.009 | 0.010 | 0.013 |
| D | 4.75 | 4.95 | 5.15 | 0.187 | 0.195 | 0.203 |
| E | 2.75 | 2.95 | 3.15 | 0.108 | 0.116 | 0.124 |
| F | | 3.0 | | | 0.118 | |
| F1 | | 1.5 | | | 0.059 | |
| G | 0.2 | 0.3 | 0.4 | 0.008 | 0.012 | 0.016 |
| H | 0.58 | 0.78 | 0.98 | 0.023 | 0.031 | 0.039 |
| J | 4.3 | 4.5 | 4.7 | 0.169 | 0.177 | 0.185 |
| K | | 0.88 | | | 0.035 | |



SOT-89-2L

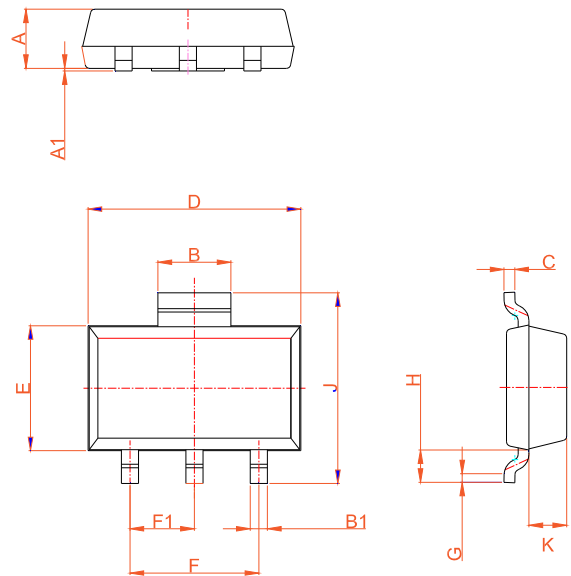
PACKAGE MECHANICAL DATA



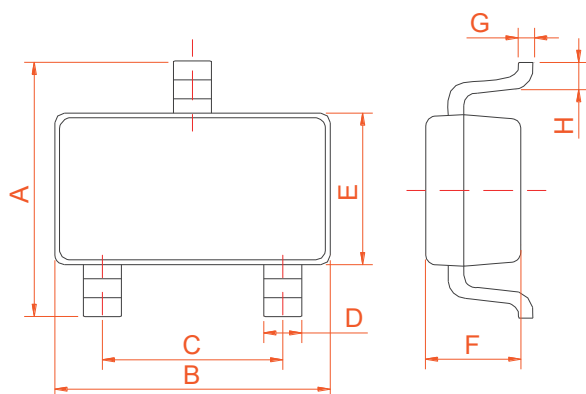
| Ref. | Dimensions | | | | | |
|------|-------------|------|------|--------|-------|-------|
| | Millimeters | | | Inches | | |
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 1.5 | 1.6 | 1.8 | 0.059 | 0.063 | 0.071 |
| A1 | 0 | 0.06 | 0.10 | 0 | 0.002 | 0.004 |
| B | 2.9 | 3.0 | 3.1 | 0.114 | 0.118 | 0.122 |
| B1 | 0.6 | 0.7 | 0.8 | 0.024 | 0.028 | 0.031 |
| C | 0.22 | 0.26 | 0.32 | 0.009 | 0.010 | 0.013 |
| D | 6.3 | 6.5 | 6.7 | 0.248 | 0.256 | 0.264 |
| E | 3.3 | 3.5 | 3.7 | 0.130 | 0.138 | 0.146 |
| F | | 4.6 | | | 0.181 | |
| F1 | | 2.3 | | | 0.091 | |
| G | 0.7 | 0.9 | 1.1 | 0.028 | 0.035 | 0.043 |
| H | 1.5 | 1.75 | 2.0 | 0.059 | 0.069 | 0.079 |
| J | 6.7 | 7.0 | 7.3 | 0.264 | 0.276 | 0.287 |
| K | 0.8 | 0.9 | 1.0 | 0.031 | 0.035 | 0.039 |

SOT-223

| Ref. | Dimensions | | | | | |
|------|-------------|-------|------|--------|-------|-------|
| | Millimeters | | | Inches | | |
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 1.3 | 1.4 | 1.5 | 0.051 | 0.055 | 0.059 |
| A1 | 0.01 | 0.06 | 0.10 | 0.001 | 0.002 | 0.004 |
| B | 1.6 | 1.7 | 1.8 | 0.063 | 0.067 | 0.071 |
| B1 | 0.3 | 0.4 | 0.5 | 0.012 | 0.016 | 0.020 |
| C | 0.22 | 0.254 | 0.32 | 0.009 | 0.010 | 0.013 |
| D | 4.75 | 4.95 | 5.15 | 0.187 | 0.195 | 0.203 |
| E | 2.75 | 2.95 | 3.15 | 0.108 | 0.116 | 0.124 |
| F | | 3.0 | | | 0.118 | |
| F1 | | 1.5 | | | 0.059 | |
| G | 0.2 | 0.3 | 0.4 | 0.008 | 0.012 | 0.016 |
| H | 0.58 | 0.78 | 0.98 | 0.023 | 0.031 | 0.039 |
| J | 4.3 | 4.5 | 4.7 | 0.169 | 0.177 | 0.185 |
| K | | 0.88 | | | 0.035 | |



SOT-89



SOT-23-3L

| Ref. | Dimensions | | | | | |
|------|-------------|------|------|--------|-------|-------|
| | Millimeters | | | Inches | | |
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 2.65 | | 2.95 | 0.104 | | 0.116 |
| B | | 2.92 | | | 0.115 | |
| C | | 1.90 | | | 0.075 | |
| D | 0.34 | | 0.36 | 0.013 | | 0.014 |
| E | | 1.60 | | | 0.063 | |
| F | | 1.17 | | | 0.046 | |
| G | | 0.15 | | | 0.006 | |
| H | 0.25 | | 0.55 | 0.010 | | 0.022 |