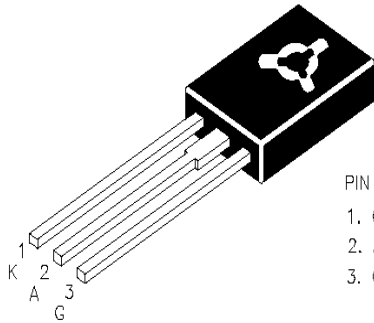


SCR

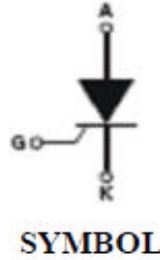
C106M, C106D

TO-126

Plastic Package



PIN CONFIGURATION:-
 1. CATHODE
 2. ANODE
 3. GATE



Features :

- . High Blocking Voltage
- . Low On-State Voltage and high I_{TSM}
- . RoHS Compliant

Description :

Suitable to fit all Models of Control like Phase control, Heating Control, Voltage Regulation Circuits etc.

ABSOLUTE MAXIMUM RATINGS ($T_J=25^\circ\text{C}$, unless otherwise specified)

| PARAMETER | SYMBOL | CONDITIONS | MIN | MAX | UNIT |
|--|--------------|--|-----------------|-----|------------------------|
| Repetitive Peak Off-State Voltage | V_{DRM} | C106M | | 600 | V |
| | | C106D | | 400 | |
| Repetitive Peak Reverse Voltage | V_{RRM} | C106M | | 600 | V |
| | | C106D | | 400 | |
| Average On-State Current | $I_{T(AV)}$ | Half Sine wave, $T_{amb} \leq 109^\circ\text{C}$ | | 2.5 | A |
| On-State RMS Current | $I_{T(RMS)}$ | All Conduction Angles | | 4 | A |
| Non-Repetitive Surge Peak On-state Current | I_{TSM} | Full Sine Wave, $T_J=25^\circ\text{C}$, $t=10\text{ms}$ | | 40 | A |
| | | I^2t | $t=10\text{ms}$ | 6 | |
| Repetitive Rate of Rise of On-State Current After Triggering | di/dt | $I_{TM}=20\text{A}$, $I_G=0.2\text{A}$, $dI_G/dt=0.2\text{A}/\mu\text{s}$ | | 50 | $\text{A}/\mu\text{s}$ |
| Peak Gate Current | I_{GM} | | | 0.5 | A |
| Peak Gate Power | P_{GM} | | | 1 | W |
| Average Gate Power | $P_{G(AV)}$ | over any 20ms period | | 0.2 | W |
| Storage Temperature Range | T_{STG} | | -40 | 150 | $^\circ\text{C}$ |
| Operating Junction Temperature | T_J | | | 125 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS (T_J=25°C, unless otherwise specified)

| PARAMETER | SYMBOL | CONDITIONS | MIN | TYP | MAX | UNIT |
|--|------------------|--|-----|-----|-----|------|
| Peak Repetitive Forward Blocking Current | I _{DRM} | V _{DM} =V _{DRM(MAX)} , T _J =125°C | | 0.1 | 0.5 | mA |
| Peak Repetitive Reverse Blocking Current | I _{RRM} | V _{RM} =V _{RRM(MAX)} , T _J =125°C | | 0.1 | 0.5 | mA |
| Peak On-State Voltage | V _{TM} | I _{TM} =4A | | 1.3 | 2.2 | V |
| Gate Trigger Current | I _{GT} | V _{DM} =12V, I _T =0.1A | | 50 | 200 | μA |
| Gate Trigger Voltage | V _{GT} | V _{DM} =12V, I _T =0.1A | | 0.4 | 1.5 | V |
| Holding Current | I _H | V _{DM} =12V, I _{GT} =0.1A | | 0.3 | 6 | mA |
| Latching Current | I _L | V _{DM} =12V, I _{GT} =0.1A | | 0.4 | 10 | mA |
| Rise of Off-State Voltage | dV/dt | V _{DM} =67%V _{DRM(MAX)} , T _J =125°C | 50 | 100 | | V/μs |
| Gate Controlled Turn-On Time | t _{gt} | I _{TM} =40A, V _{DM} =V _{DRM(MAX)} , I _G =0.1A, dI _G /dt=5A/μs | | 2 | | μs |

THERMAL RESISTANCE

| PARAMETER | SYMBOL | MIN | TYP | MAX | UNIT |
|-----------------------|----------------------|-----|-----|-----|------|
| Junction to Case (AC) | R _{th(J-C)} | | | 3.0 | K/W |
| Junction to Ambient | R _{th(J-A)} | | 75 | | K/W |

TYPICAL CHARACTERISTICS CURVES

Fig. 1: Maximum average power dissipation versus average on-state current.

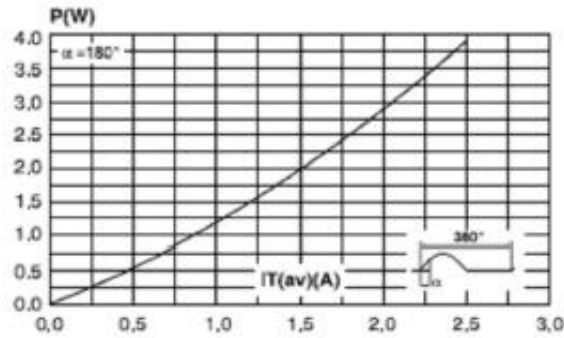


Fig.2 On-state characteristics (maximum values).

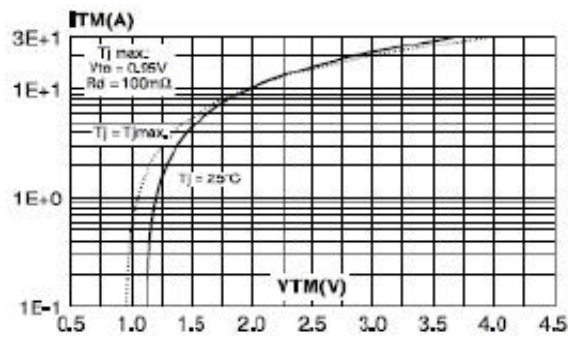
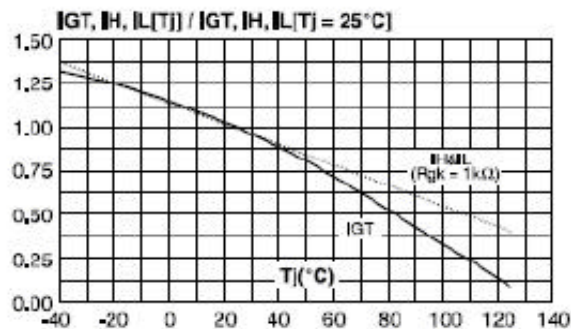
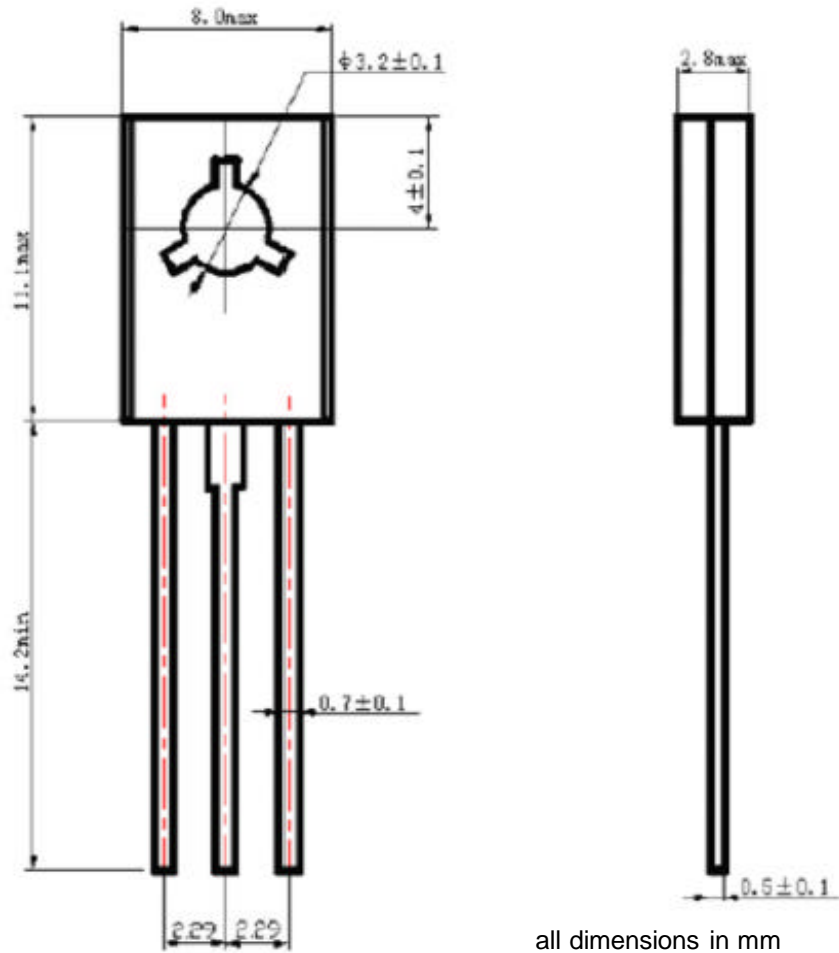


FIG. 3 Relative variation of gate trigger current, holding current and latching current versus junction temperature (typical values).



TO-126 PACKAGE OUTLINE AND DIMENSION





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Customer Notes

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

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