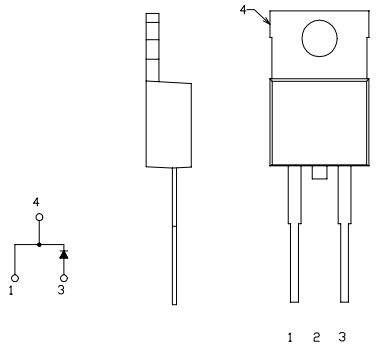
Nihon Inter Electronics Corporation

# FRD Type : GSF05A40

OUTLINE DRAWING

## FEATURES

* Similar to TO-220AB Case
* Ultra – Fast Recovery
* Low Forward Voltage Drop
* Low Power Loss, High Efficiency
* High Surge Capability
* 200 Volts thru 600 Volts Types Available




## Maximum Ratings

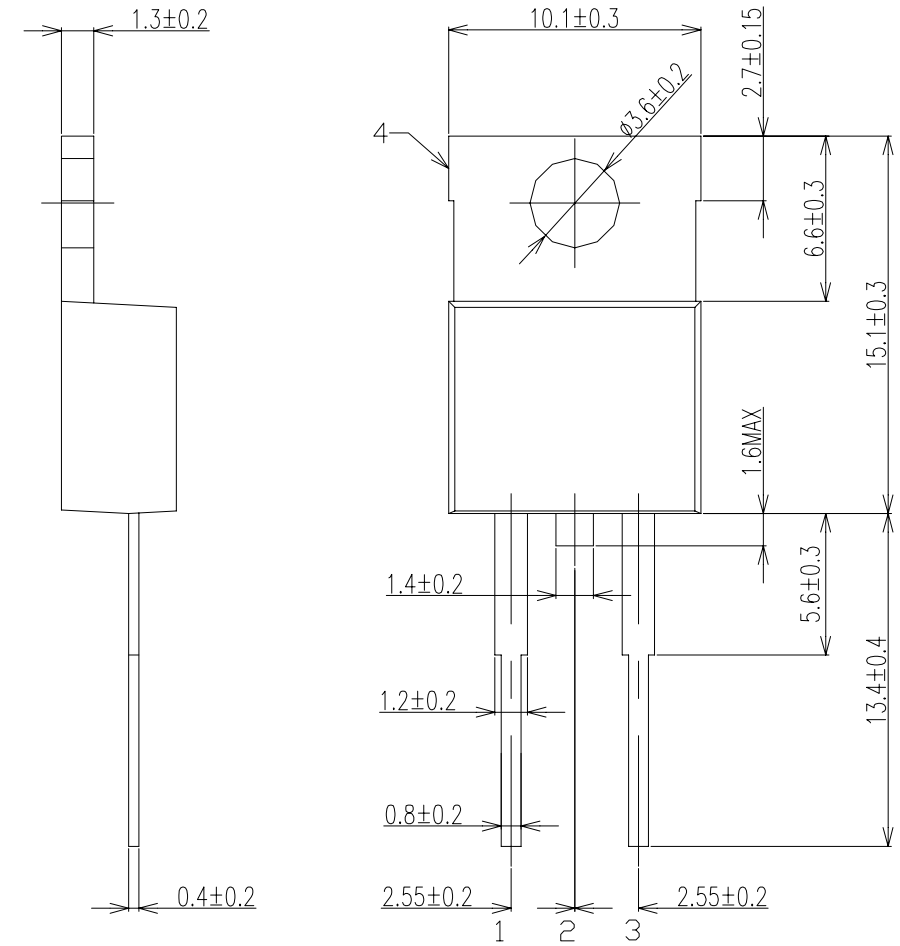
Approx Net Weight:1.85g

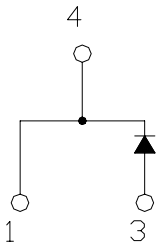
| Rating | Symbol | GSF05A40 | | | Unit |
|---|---|---|---|---|---|
| Repetitive Peak Reverse Voltage | $V_{RRM}$ | 400 | | | V |
| Non-repetitive Peak Reverse Voltage | $V_{RSM}$ | 440 | | | |
| Average Rectified Output Current | $I_O$ | 5 | Tc=118℃ | 50 Hz Half Sine Wave Resistive Load | A |
| RMS Forward Current | $I_{F(RMS)}$ | 7.85 | | | A |
| Surge Forward Current | $I_{FSM}$ | 80 | 50 Hz Half Sine Wave,1cycle Non-repetitive | | A |
| Operating JunctionTemperature Range | Tjw | - 40 to + 150 | | | ℃ |
| Storage Temperature Range | Tstg | - 40 to + 150 | | | ℃ |
| Mounting torque | | 0.5 | Recommended value | | N•m |

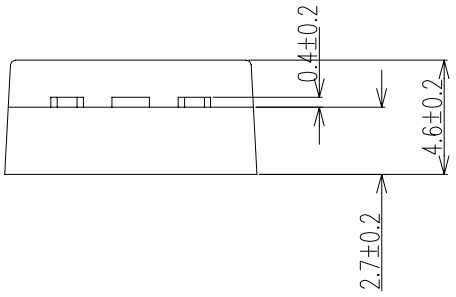
## Electrical • Thermal Characteristics

| Characteristics | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Peak Reverse Current | $I_{RM}$ | Tj= 25℃, $V_{RM}$= $V_{RRM}$ | - | - | 30 | μA |
| Peak Forward Voltage | $V_{FM}$ | Tj= 25℃, $I_{FM}$= 5A | - | - | 1.25 | V |
| Reverse Recovery Time | trr | $I_{FM}$= 5A, -di/dt= 50 A/μs, Ta= 25℃ | - | - | 45 | ns |
| Thermal Resistance | Rth(j-c) | Junction to Case | - | - | 5 | ℃/W |

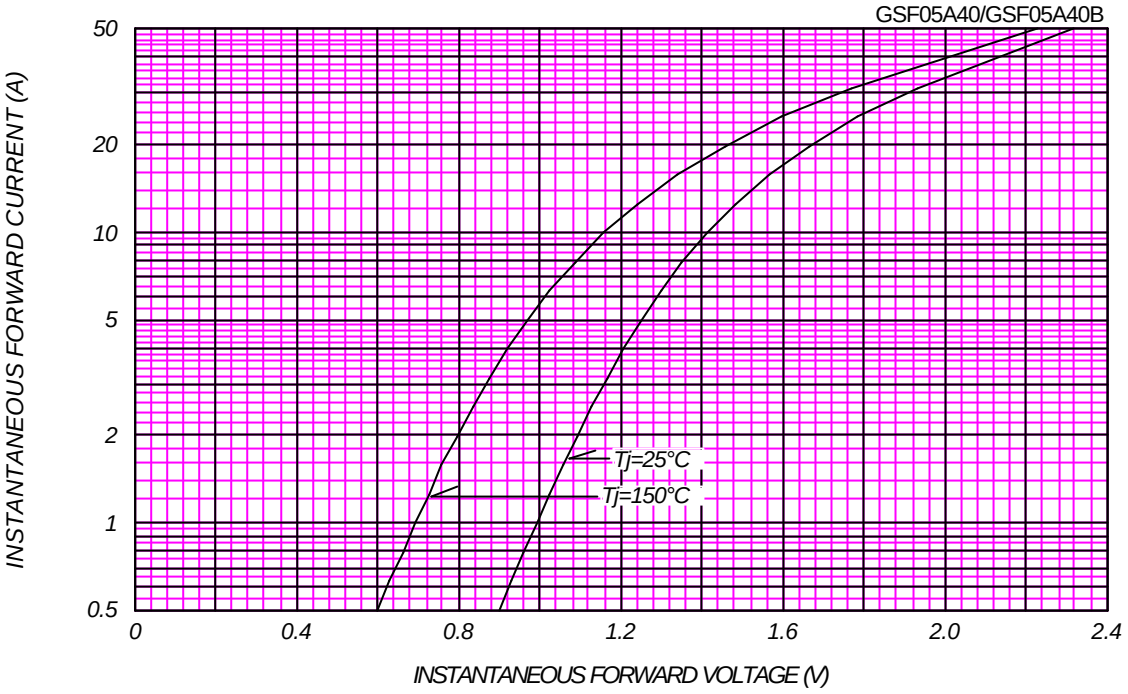
GSF_A_ OUTLINE DRAWING (Dimensions in mm)

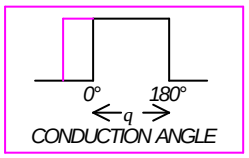


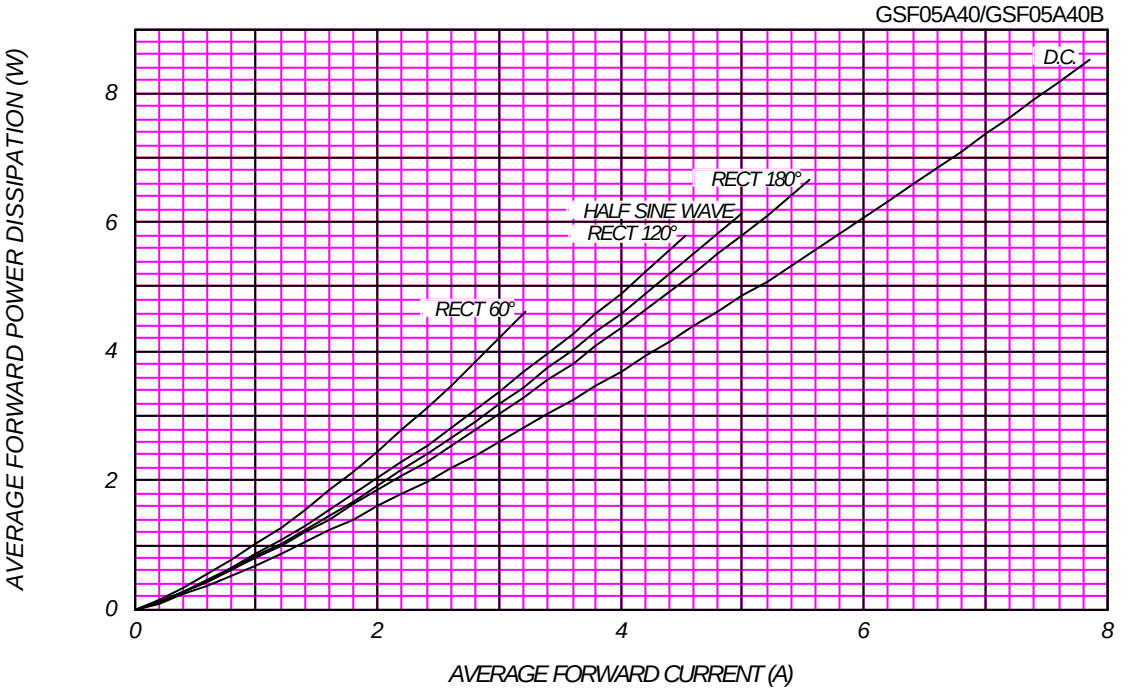



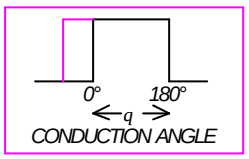
## FORWARD CURRENT VS. VOLTAGE



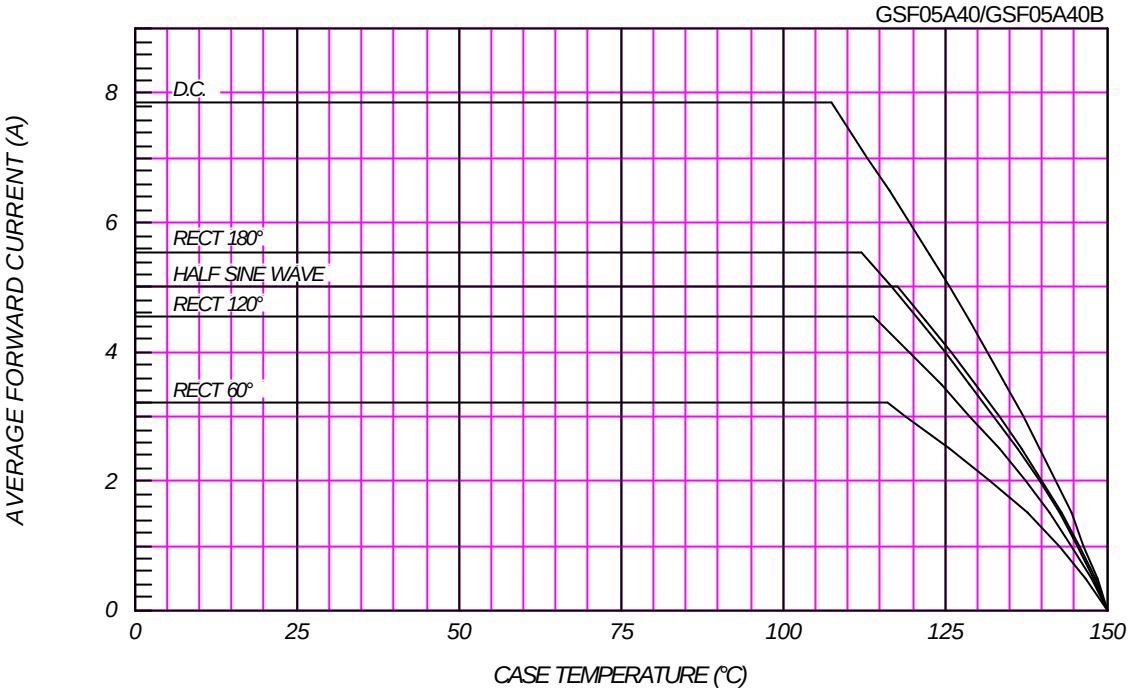




## AVERAGE FORWARD POWER DISSIPATION






## AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE




## SURGE CURRENT RATINGS

f=50Hz,Half Sine Wave,Non-Repetitive,No Load