

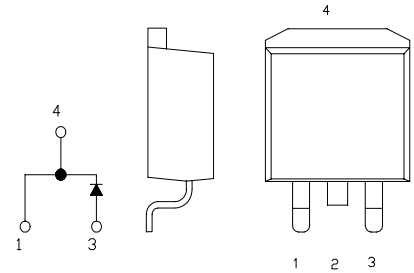
# FRD Type : TSF05A40

## OUTLINE DRAWING

For Power Factor Improvement High Frequency Rectification

### FEATURES

- \* Fast Recovery
- \* Low Forward Voltage Drop
- \* Low Power Loss, High Efficiency
- \* High Surge Capability



### Maximum Ratings

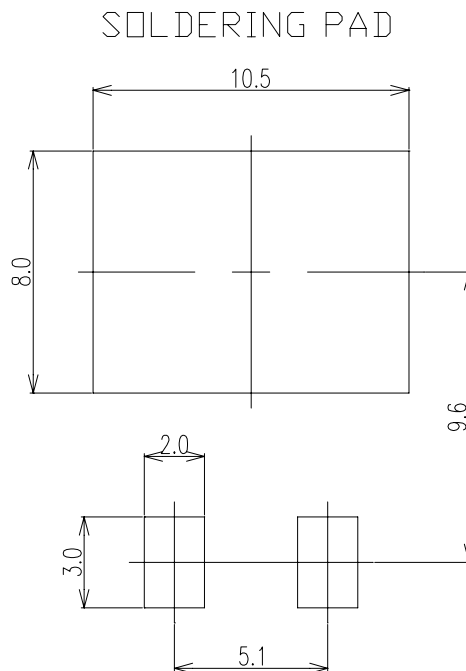
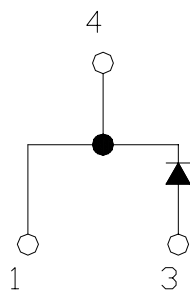
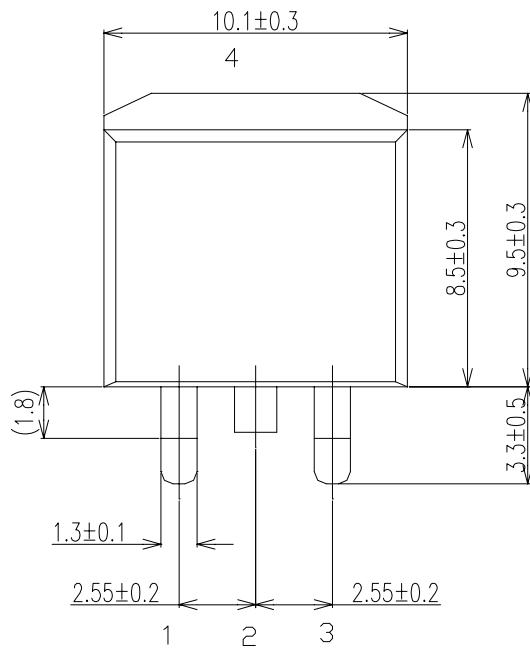
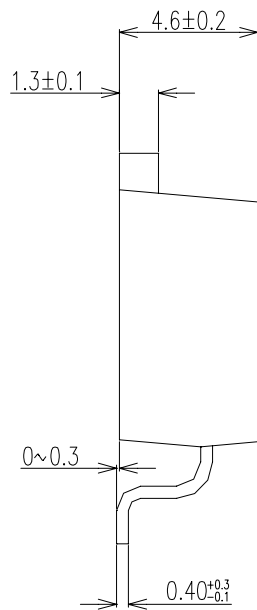
Approx Net Weight:1.45g

| Rating                              | Symbol              | TSF05A40      |                                               |                                        | Unit |
|-------------------------------------|---------------------|---------------|-----------------------------------------------|----------------------------------------|------|
| Repetitive Peak Reverse Voltage     | V <sub>RRM</sub>    | 400           |                                               |                                        | V    |
| Average Rectified Output Current    | I <sub>O</sub>      | 5             | Tc=118℃                                       | 50 Hz Half Sine Wave<br>Resistive Load | A    |
| RMS Forward Current                 | I <sub>F(RMS)</sub> | 7.85          |                                               |                                        | A    |
| Surge Forward Current               | I <sub>FSM</sub>    | 80            | 50 Hz Half Sine Wave,1cycle<br>Non-repetitive |                                        | A    |
| Operating JunctionTemperature Range | T <sub>jw</sub>     | - 40 to + 150 |                                               |                                        | ℃    |
| Storage Temperature Range           | T <sub>stg</sub>    | - 40 to + 150 |                                               |                                        | ℃    |

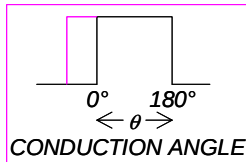
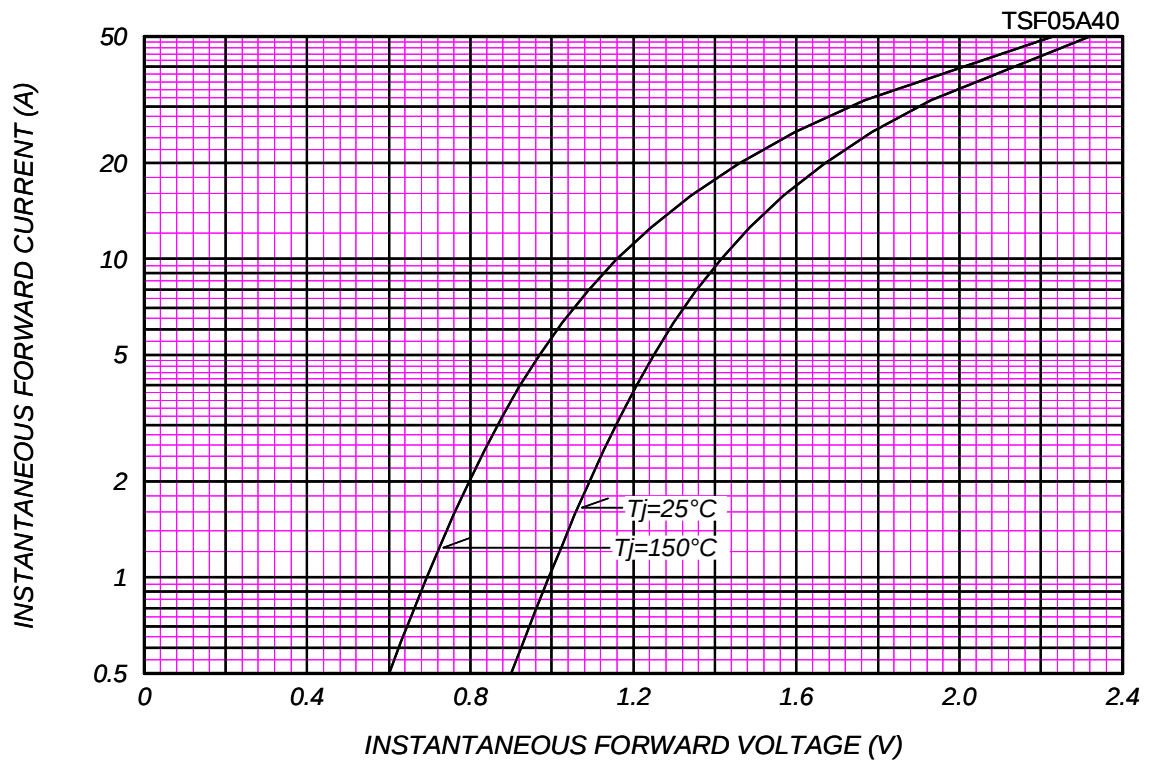
### Electrical • Thermal Characteristics

| Characteristics       | Symbol        | Conditions                                                                          | Min. | Typ. | Max. | Unit                        |
|-----------------------|---------------|-------------------------------------------------------------------------------------|------|------|------|-----------------------------|
| Peak Reverse Current  | $I_{RM}$      | $T_j= 25^{\circ}\text{C}, V_{RM}= V_{RRM}$                                          | -    | -    | 30   | $\mu\text{A}$               |
| Peak Forward Voltage  | $V_{FM}$      | $T_j= 25^{\circ}\text{C}, I_{FM}= 5\text{A}$                                        | -    | -    | 1.25 | V                           |
| Reverse Recovery Time | $t_{rr}$      | $I_{FM}= 5\text{A},$<br>$-di/dt= 50 \text{ A}/\mu\text{s}, T_a= 25^{\circ}\text{C}$ | -    | -    | 45   | ns                          |
| Thermal Resistance    | $R_{th(j-c)}$ | Junction to Case                                                                    | -    | -    | 5    | $^{\circ}\text{C}/\text{W}$ |

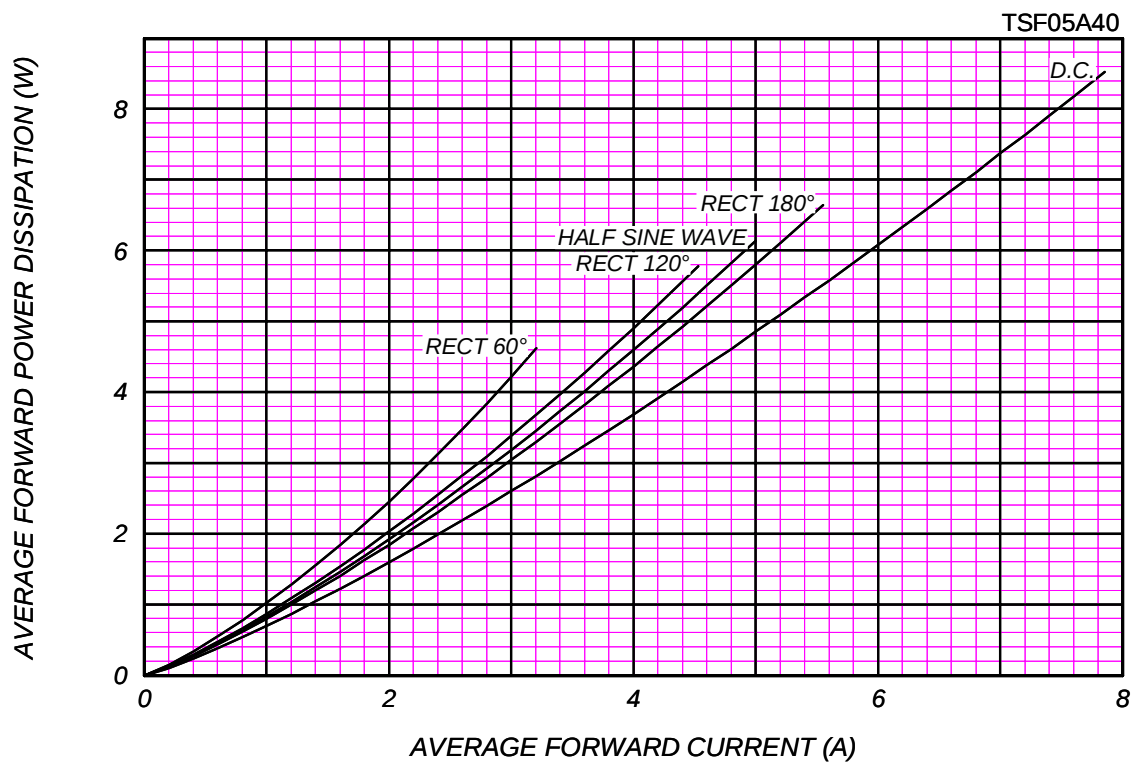
TSF\_ OUTLINE DRAWING (Dimensions in mm)

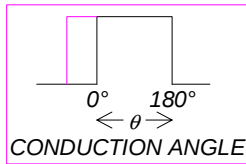


# FORWARD CURRENT VS. VOLTAGE

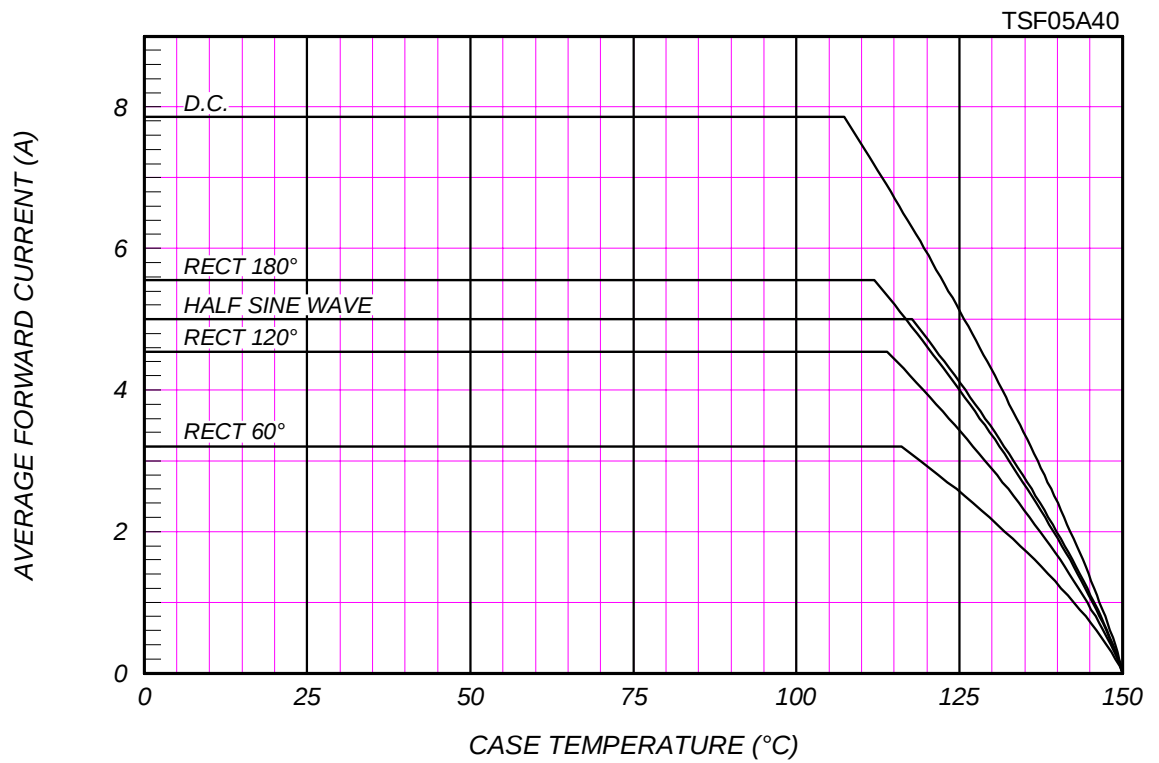


# AVERAGE FORWARD POWER DISSIPATION





### AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE



### SURGE CURRENT RATINGS

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

