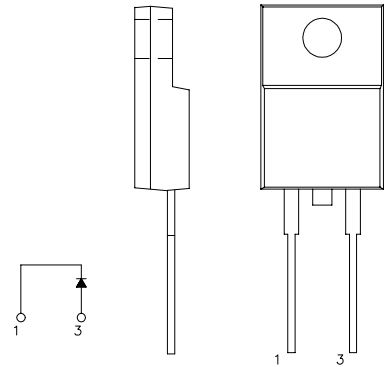


# FRD Type : FSF05A20

## OUTLINE DRAWING

### FEATURES

- \* Fully Molded Isolation 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

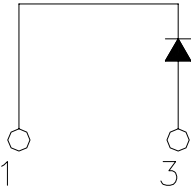
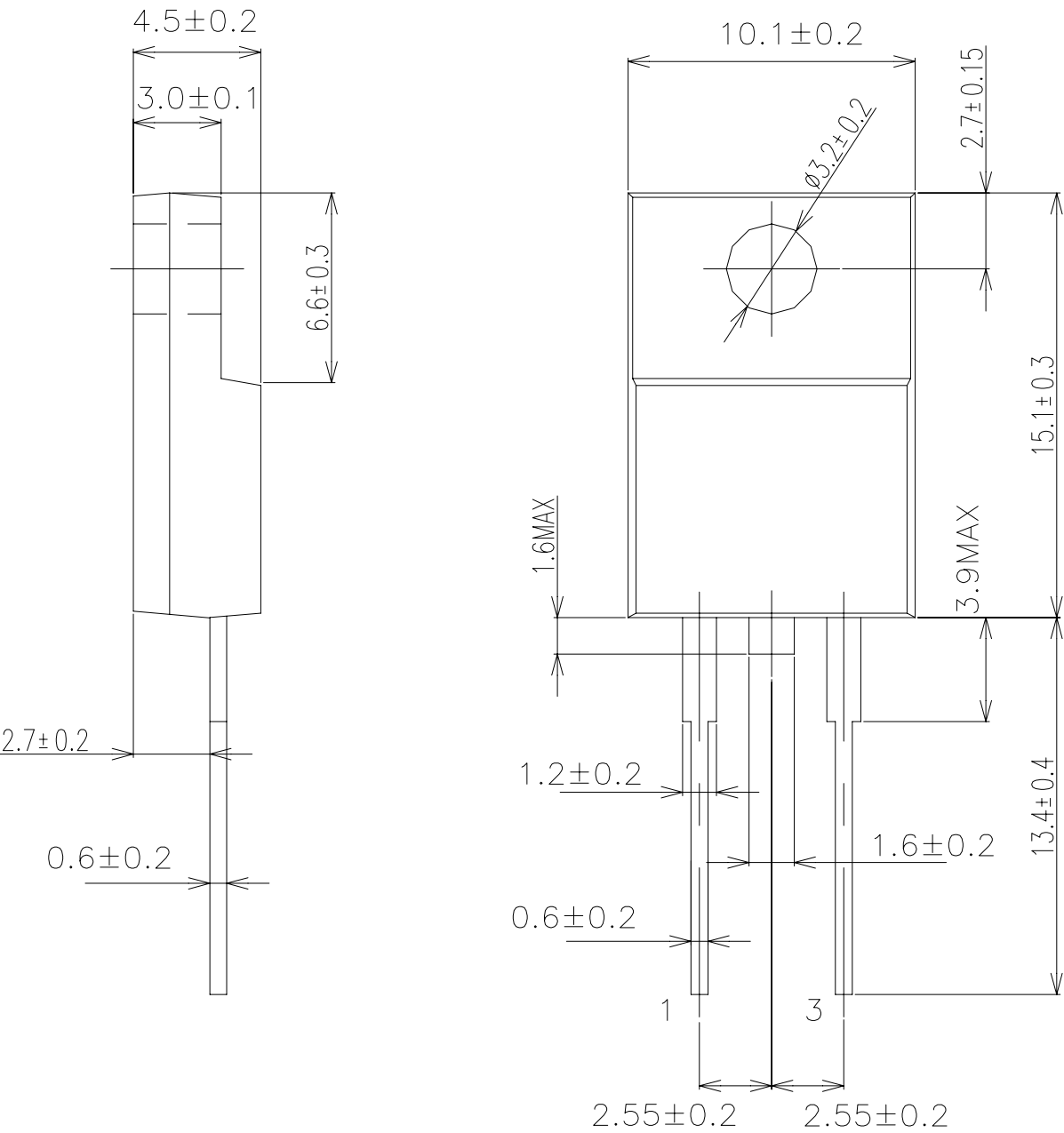
Approx Net Weight:1.7g

| Rating                              | Symbol              | FSF05A20      |                                               |                                        | Unit |
|-------------------------------------|---------------------|---------------|-----------------------------------------------|----------------------------------------|------|
| Repetitive Peak Reverse Voltage     | V <sub>RRM</sub>    | 200           |                                               |                                        | V    |
| Non-repetitive Peak Reverse Voltage | V <sub>RSM</sub>    | 220           |                                               |                                        |      |
| Average Rectified Output Current    | I <sub>O</sub>      | 5             | Tc=122℃                                       | 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 |                                               |                                        | ℃    |
| Mounting torque                     |                     | 0.5           | Recommended value                             |                                        | N•m  |

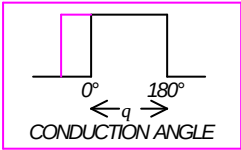
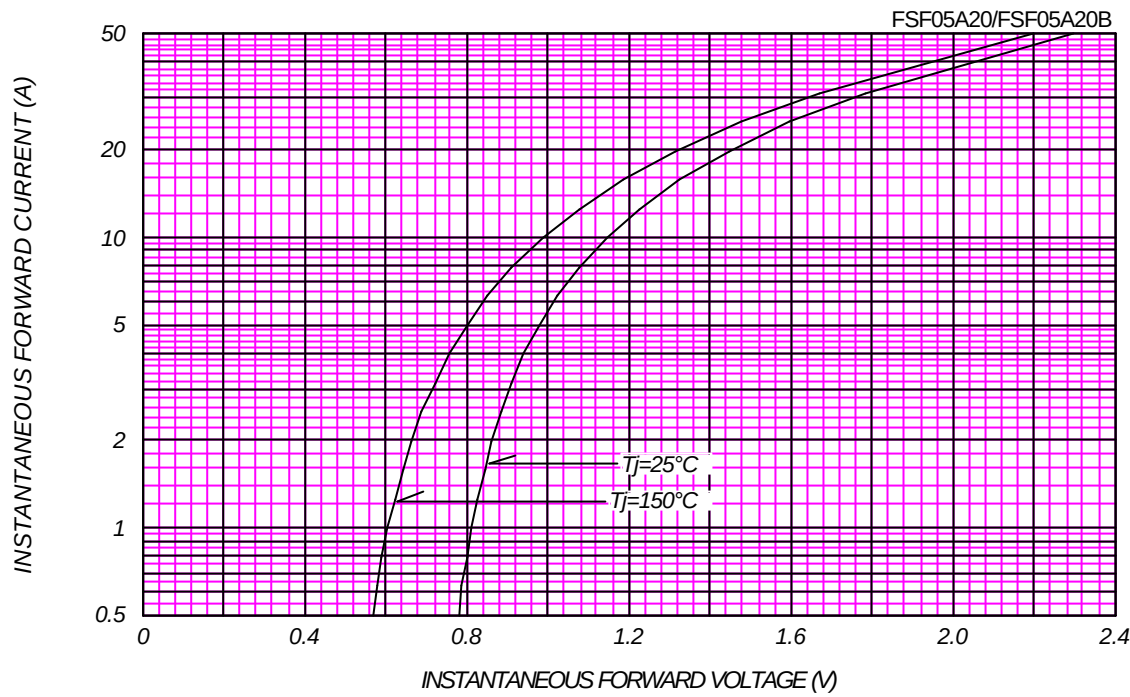
### Electrical • Thermal Characteristics

| Characteristics       | Symbol        | Conditions                                                                                | Min. | Typ. | Max. | Unit                        |
|-----------------------|---------------|-------------------------------------------------------------------------------------------|------|------|------|-----------------------------|
| Peak Reverse Current  | $I_{RM}$      | $T_j = 25^{\circ}\text{C}$ , $V_{RM} = V_{RRM}$                                           | -    | -    | 20   | $\mu\text{A}$               |
| Peak Forward Voltage  | $V_{FM}$      | $T_j = 25^{\circ}\text{C}$ , $I_{FM} = 5\text{A}$                                         | -    | -    | 0.98 | V                           |
| Reverse Recovery Time | $t_{rr}$      | $I_{FM} = 5\text{A}$ ,<br>$-di/dt = 50\text{ A}/\mu\text{s}$ , $T_a = 25^{\circ}\text{C}$ | -    | -    | 35   | ns                          |
| Thermal Resistance    | $R_{th(j-c)}$ | Junction to Case                                                                          | -    | -    | 5    | $^{\circ}\text{C}/\text{W}$ |
|                       | $R_{th(c-f)}$ | Case to Fin                                                                               | -    | -    | 1.5  |                             |

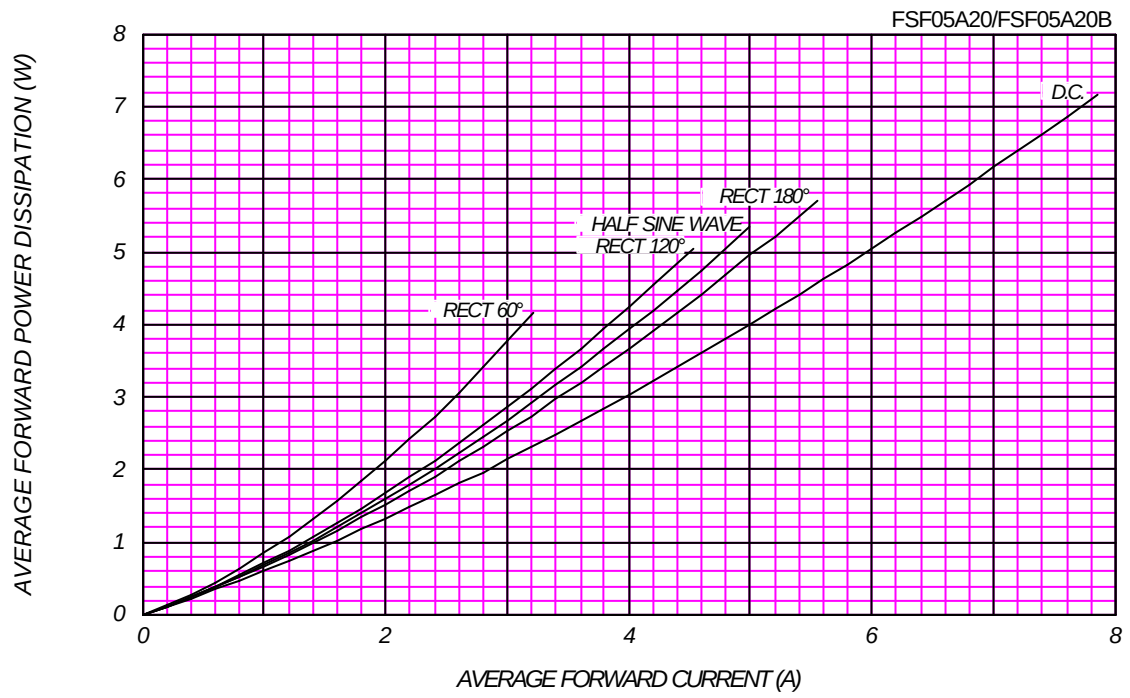
FSF\_A\_ OUTLINE DRAWING (Dimensions in mm)

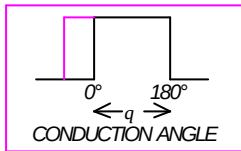


FORWARD CURRENT VS. VOLTAGE

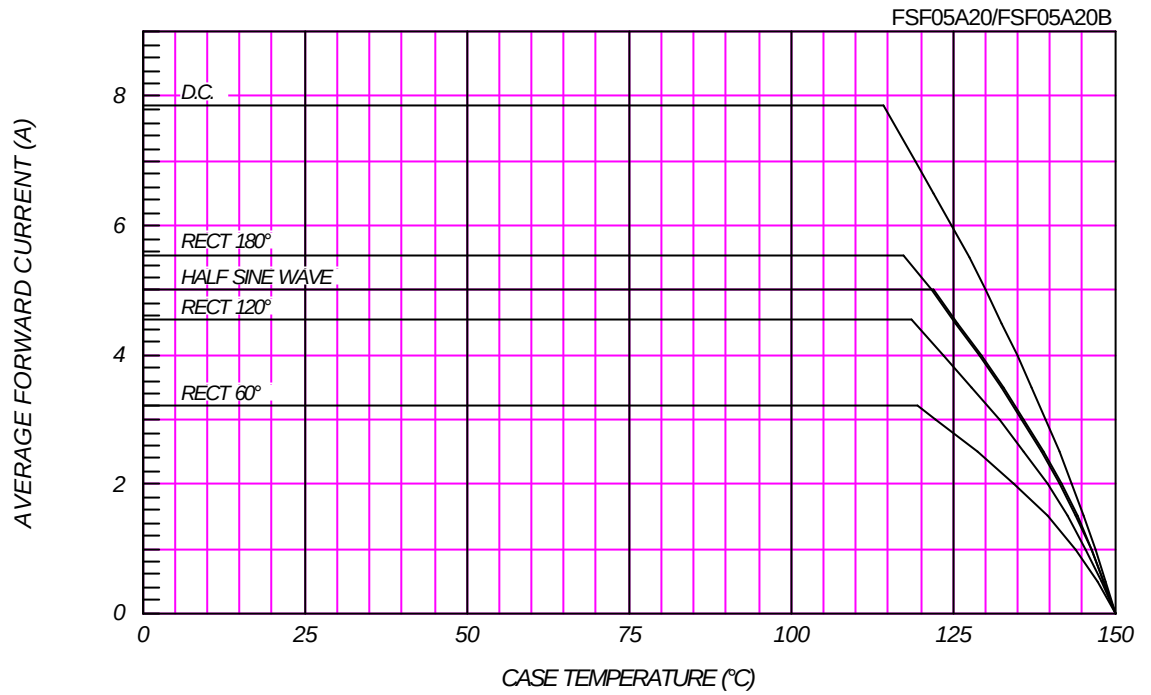


AVERAGE FORWARD POWER DISSIPATION





AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE



SURGE CURRENT RATINGS

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

