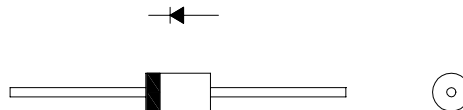


# FRD      Type: 20NFA40

## FEATURES

- \* Ultra – Fast Recovery
- \* Low Forward Voltage Drop
- \* Low Power Loss, High Efficiency
- \* High Surge Capability
- \* 400 Volts and 600 Volts Types Available

## OUTLINE DRAWING



## Maximum Ratings

Apporox Net Weight:1.19g

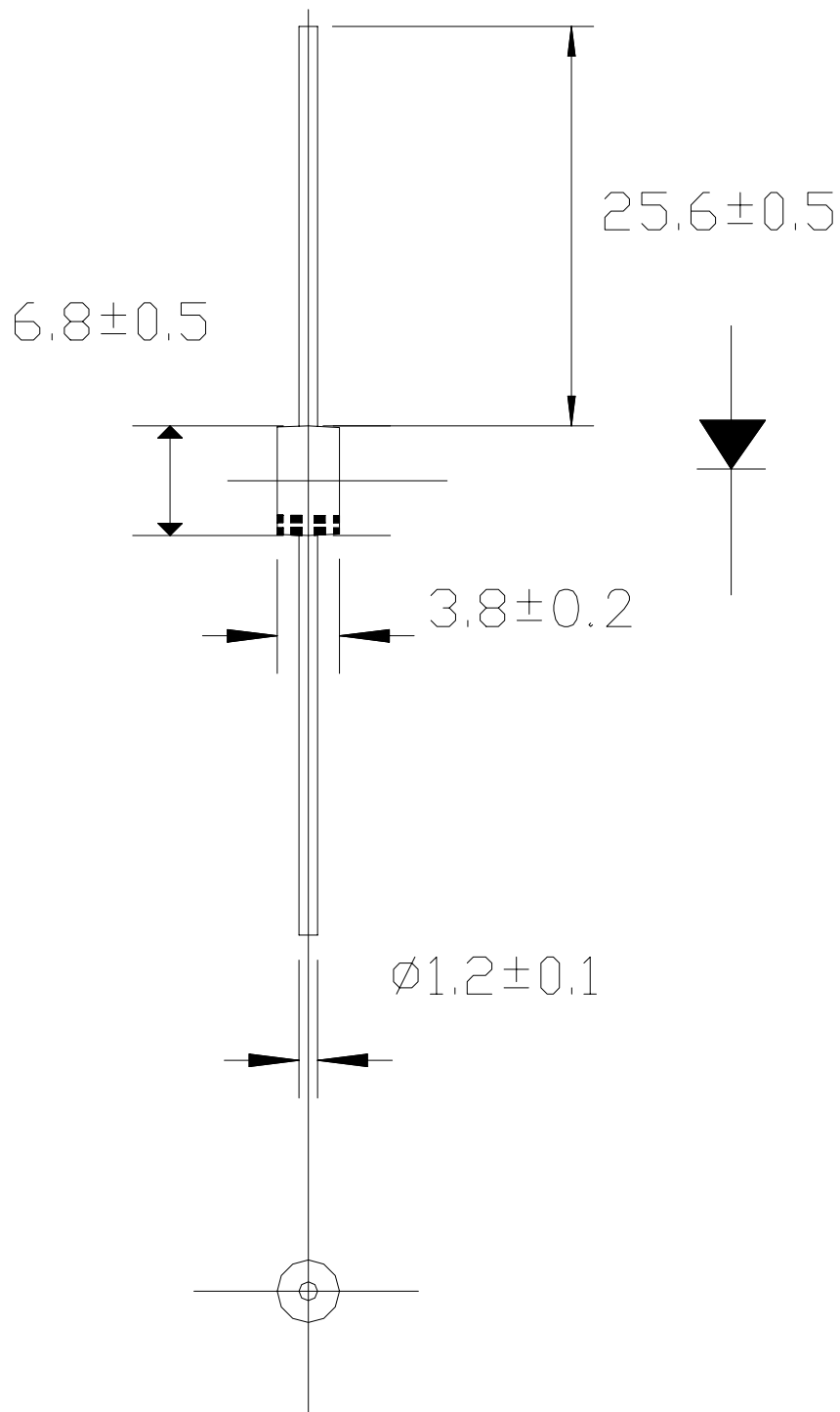
| Rating                              | Symbol              | 20NFA40       |                                               |                                      | Unit |
|-------------------------------------|---------------------|---------------|-----------------------------------------------|--------------------------------------|------|
| Repetitive Peak Reverse Voltage     | V <sub>RRM</sub>    | 400           |                                               |                                      | V    |
| Average Rectified Output Current    | I <sub>O</sub>      | 2.0           | Tl=114°C<br>Tl: Lead Temperature              | 50HzHalf Sine<br>Wave Resistive Load | A    |
|                                     |                     | 1.15          | Ta=25°C *1                                    |                                      |      |
| RMS Forward Current                 | I <sub>F(RMS)</sub> | 3.14          |                                               |                                      | A    |
| Surge Forward Current               | I <sub>FSM</sub>    | 50            | 50Hz Half Sine Wave,1cycle,<br>Non-repetitive |                                      | A    |
| Operating JunctionTemperature Range | T <sub>jw</sub>     | - 40 to + 150 |                                               |                                      | °C   |
| Storage Temperature Range           | T <sub>stg</sub>    | - 40 to + 150 |                                               |                                      | °C   |

## Electrical/Thermal • Characteristics

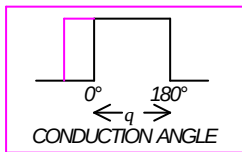
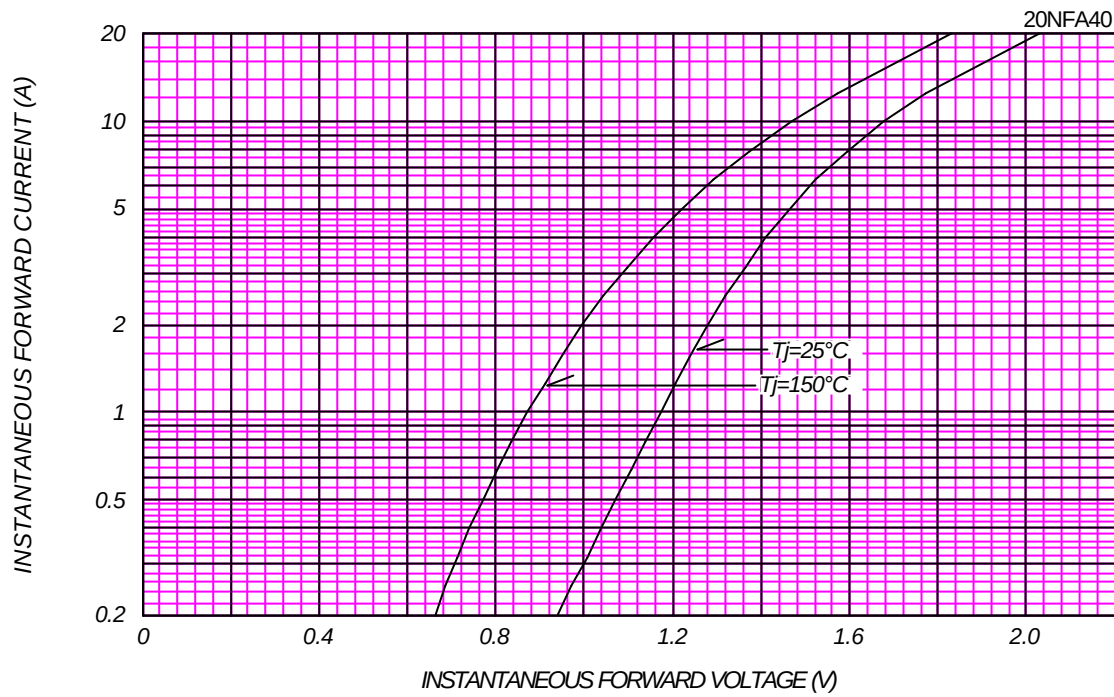
| Characteristics       | Symbol        | Conditions                                                                          | Min. | Typ. | Max. | Unit                        |
|-----------------------|---------------|-------------------------------------------------------------------------------------|------|------|------|-----------------------------|
| Peak Reverse Current  | $I_{RM}$      | $T_j = 25^{\circ}\text{C}$ , $V_{RM} = V_{RRM}$                                     | -    | -    | 10   | $\mu\text{A}$               |
| Peak Forward Voltage  | $V_{FM}$      | $T_j = 25^{\circ}\text{C}$ , $I_{FM} = 2\text{A}$                                   | -    | -    | 1.28 | V                           |
| Reverse Recovery Time | $t_{rr}$      | $T_a = 25^{\circ}\text{C}$ , $I_{FM} = 2\text{A}$ $-di/dt = 50\text{A}/\mu\text{s}$ | -    | -    | 35   | ns                          |
| Thermal Resistance    | $R_{th(j-l)}$ | Junction to Lead                                                                    | -    | -    | 15   | $^{\circ}\text{C}/\text{W}$ |
|                       | $R_{th(j-a)}$ | Junction to Ambient                                                                 |      |      | 90   |                             |

\*1: Without Fin or P.C. Board

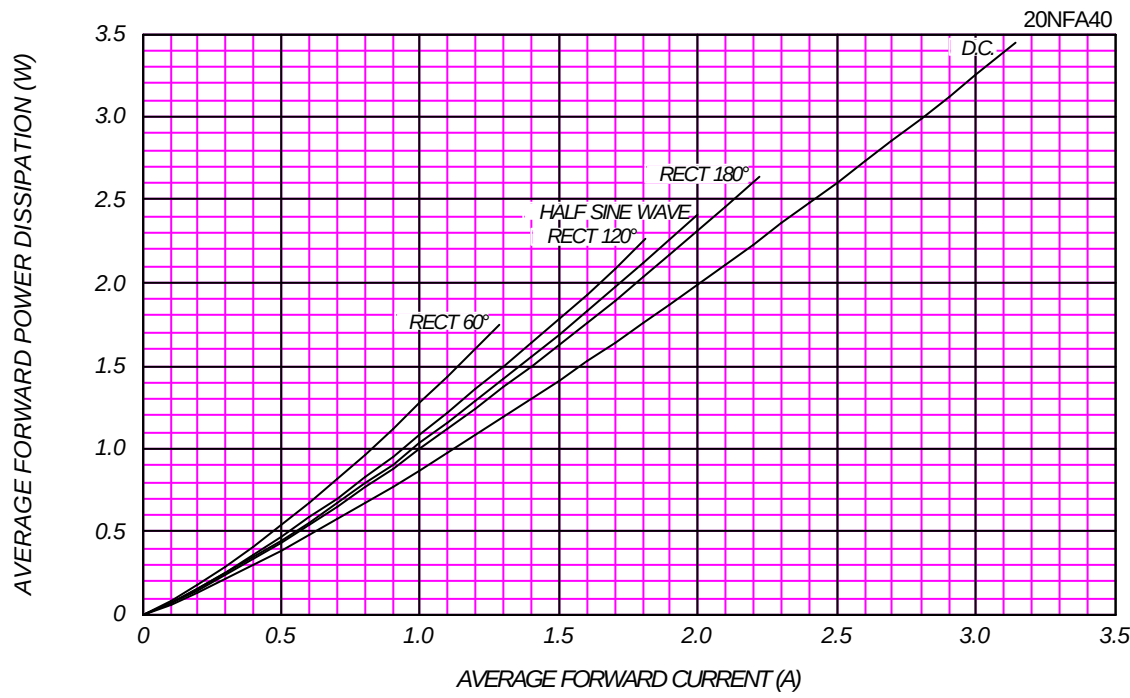
20NFA\_ OUTLINE DRAWING (Dimensions in mm)

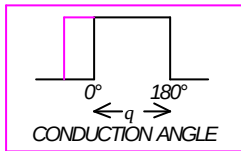


FORWARD CURRENT VS. VOLTAGE



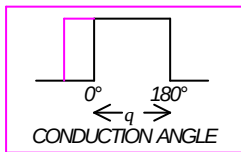
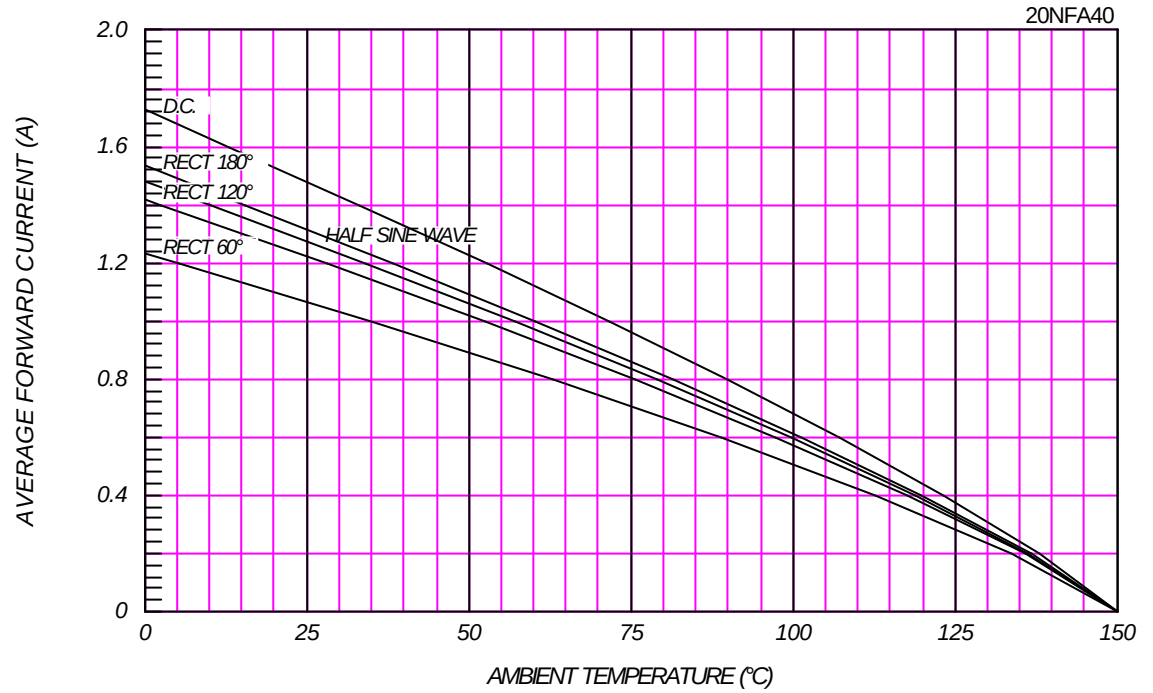
AVERAGE FORWARD POWER DISSIPATION



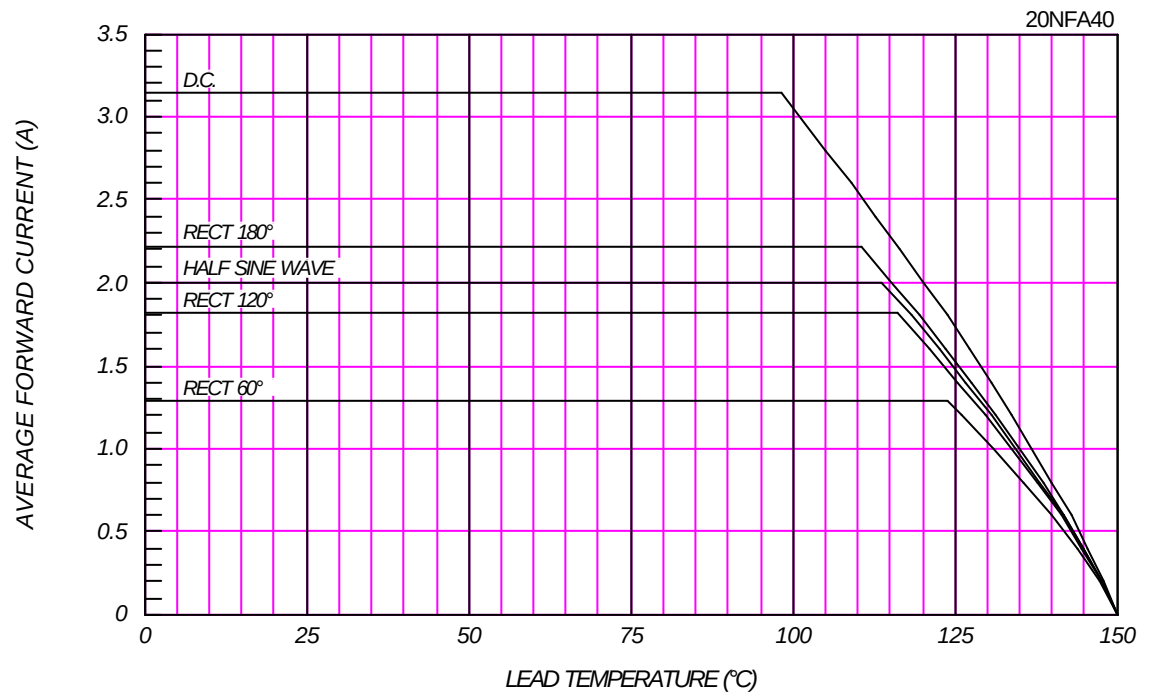


### AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

Without Fin or P.C.Board



### AVERAGE FORWARD CURRENT VS. LEAD TEMPERATURE



# SURGE CURRENT RATINGS

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

20NFA40

