

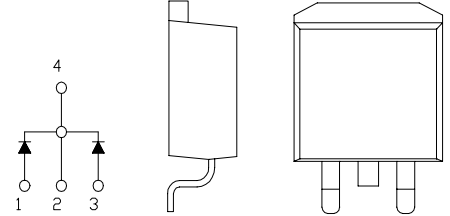
# FRD Type : TCU20B60

OUTLINE DRAWING

For Power Factor Improvement High Frequency Rectification

## FEATURES

- \* Dual Diodes – Cathode Common
- \* Ultra – Fast Recovery
- \* Low Forward Voltage Drop
- \* High Surge Capability



## Maximum Ratings

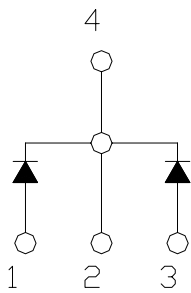
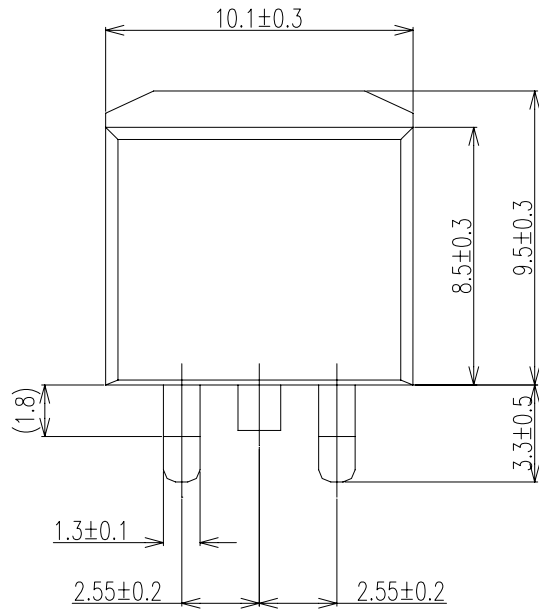
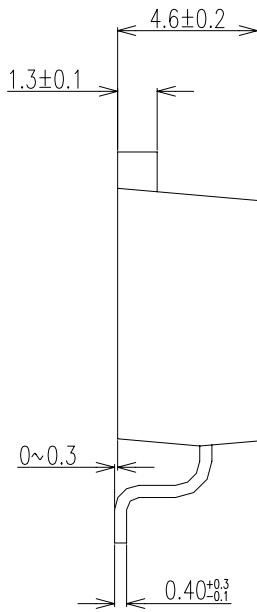
Approx Net Weight:1.45g

| Rating                               | Symbol       | TCU20B60      |   | Unit             |
|--------------------------------------|--------------|---------------|---|------------------|
| Repetitive Peak Reverse Voltage      | $V_{RRM}$    | 600           |   | V                |
| Average Rectified Output Current     | $I_O$        | 20            | $T_c=50^\circ\text{C}$ 50 Hz, Full Sine Wave Resistive Load | A                |
| RMS Forward Current                  | $I_{F(RMS)}$ | 22.2          |   | A                |
| Surge Forward Current                | $I_{FSM}$    | 100           | 50 Hz Full Sine Wave, 1 cycle Non-repetitive                | A                |
| Operating Junction Temperature Range | $T_{jw}$     | - 40 to + 150 |   | $^\circ\text{C}$ |
| Storage Temperature Range            | $T_{stg}$    | - 40 to + 150 |   | $^\circ\text{C}$ |
| Mounting torque                      |              | 0.5           | Recommended value   | N•m              |

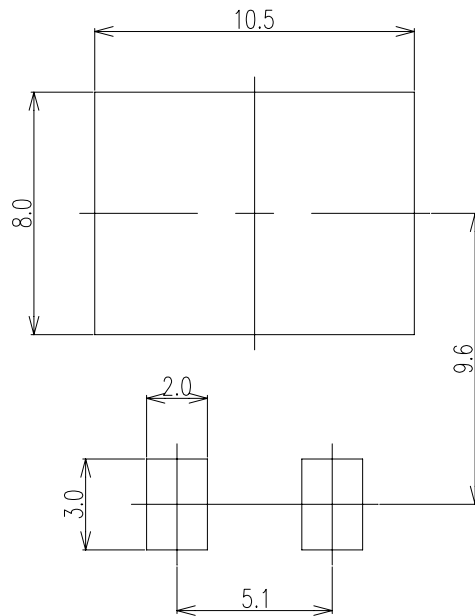
## Electrical • Thermal Characteristics

| Characteristics       | Symbol        | Conditions  | Min. | Typ. | Max. | Unit                      |
|-----------------------|---------------|---|------|------|------|---------------------------|
| Peak Reverse Current  | $I_{RM}$      | $T_j=25^\circ\text{C}, V_{RM}=V_{RRM}$ per Arm                                    | -    | -    | 30   | $\mu\text{A}$             |
| Peak Forward Voltage  | $V_{FM}$      | $T_j=25^\circ\text{C}, I_{FM}=10\text{A}$ per Arm                                 | -    | 2.3  | 2.7  | V                         |
| Reverse Recovery Time | $t_{rr}$      | $I_{FM}=10\text{A}$ ,<br>$-di/dt=50\text{A}/\mu\text{s}$ , $T_a=25^\circ\text{C}$ | -    | 25   | 40   | ns                        |
| Thermal Resistance    | $R_{th(j-c)}$ | Junction to Case  | -    | -    | 2    | $^\circ\text{C}/\text{W}$ |

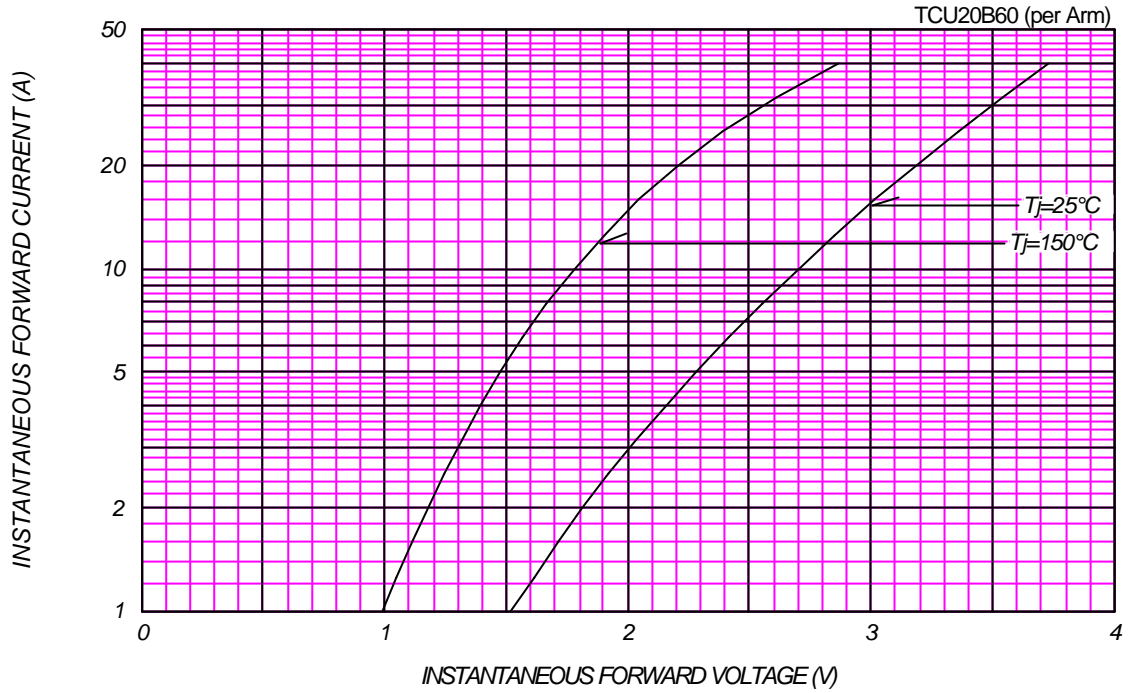
TCU\_外形図 (mm)



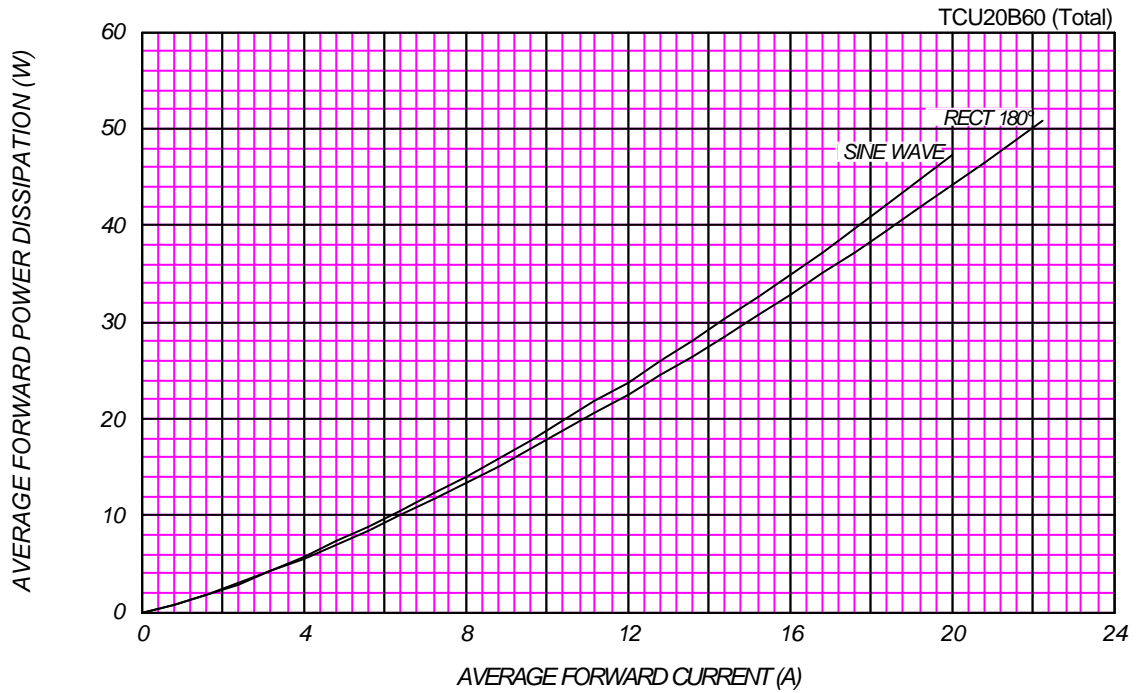
SOLDERING PAD



### FORWARD CURRENT VS. VOLTAGE

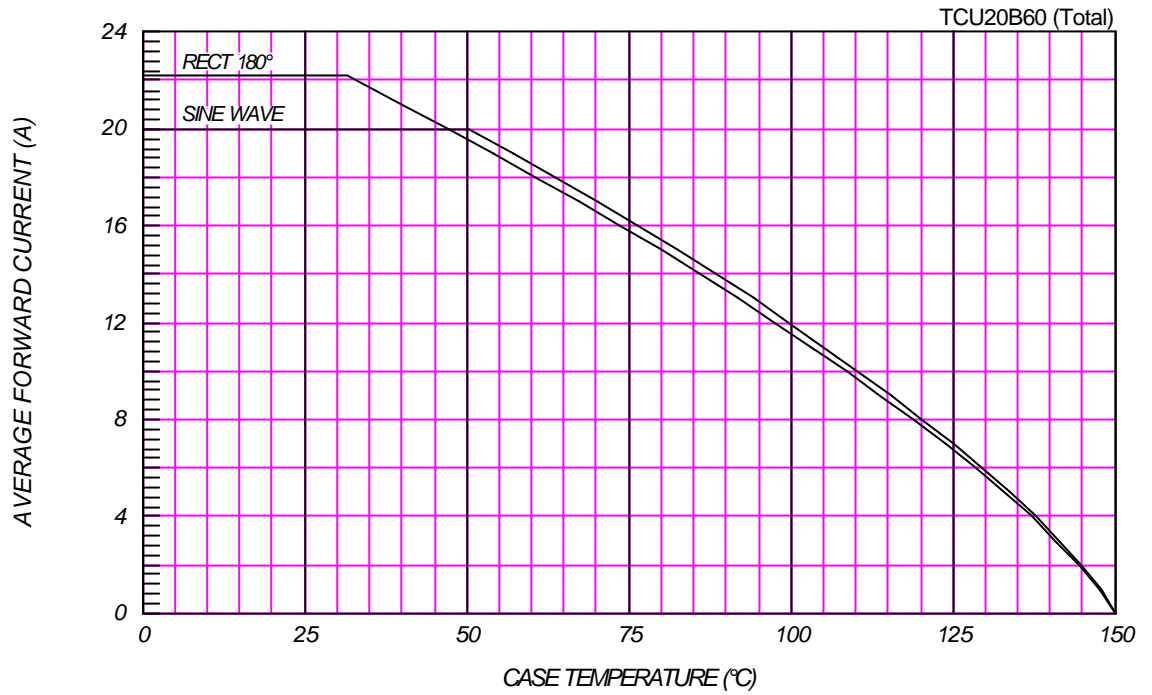


### AVERAGE FORWARD POWER DISSIPATION



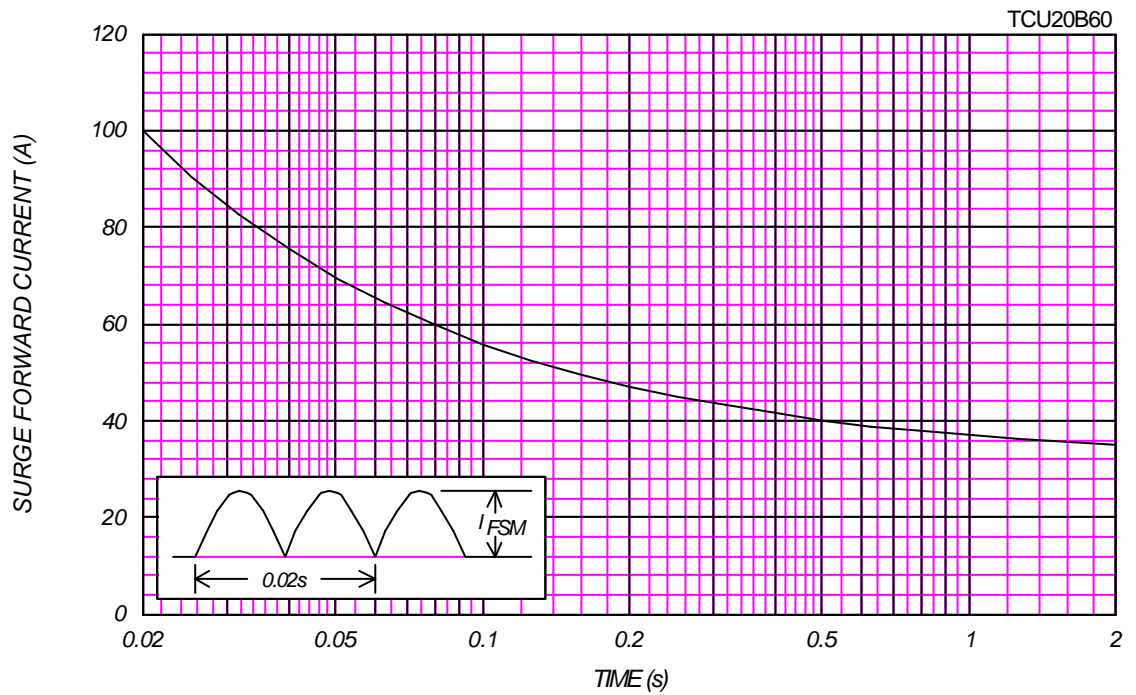


### AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE



### SURGE CURRENT RATINGS

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



# RMS SURGE CURRENT RATINGS

Ta=40°C, Non-Repetitive, No Load

TCU20B60

