

## Ultrasoft Recovery Bridge



ABS-F Package

### PINNING

| PIN | DESCRIPTION        |
|-----|--------------------|
| 1   | Input Pin (~)      |
| 2   | Input Pin (~)      |
| 3   | Output Anode (+)   |
| 4   | Output Cathode (-) |

### Features

- Glass Passivated Chip Junction
- Reverse Voltage - 1000 V
- Forward Current - 2 A
- Ultrasoft Recovery
- Designed For Surface Mount Application

### Benefits

- Case: ABS-F
- Terminals: Solderable Per MIL-STD-750
- Approx. Weight: 82mg 0.0029oz

### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

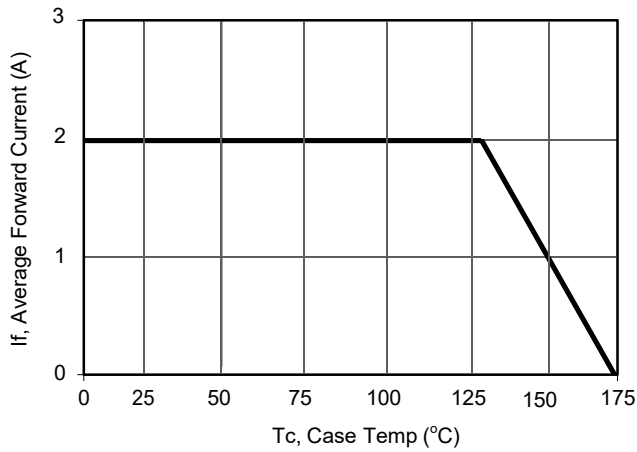
| Parameter   | Symbols                                | WRABS20MF  | Units            |
|---|--|------------|------------------|
| Maximum Repetitive Peak Reverse Voltage   | VRRM                                   | 1000       | V                |
| Maximum RMS voltage   | VRMS                                   | 700        | V                |
| Maximum DC Blocking Voltage   | VDC                                    | 1000       | V                |
| Average Rectified Output Current  | I <sub>o</sub>                         | 2          | A                |
| Reverse Recovery Time.<br>IF=0.5A,IR=1A,IRR=0.25A   | T <sub>rr</sub>                        | 10         | us               |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) | IFSM                                   | 55         | A                |
| I <sup>2</sup> t rating for fusing ( 1ms< t < 10ms)   | I <sup>2</sup> t                       | 15         | A <sup>2</sup> S |
| Maximum Forward Voltage at 1 A  | V <sub>F</sub>                         | 1.1        | V                |
| Maximum DC Reverse Current @TA=25 °C at Rated DC Blocking Voltage @TA=125 °C                      | I <sub>R</sub>                         | 5<br>100   | μA               |
| Typical Junction Capacitance (Note1)  | C <sub>j</sub>                         | 40         | pF               |
| Operating and Storage Temperature Range   | T <sub>j</sub> , T <sub>stg</sub>      | -55 ~ +175 | °C               |
| Typical thermal resistance (Note 2)   | R <sub>thJC</sub><br>R <sub>thJA</sub> | 16<br>45   | °C/W             |

Note: 1. Measured at 1MHz and applied reverse voltage of 4 VDC.

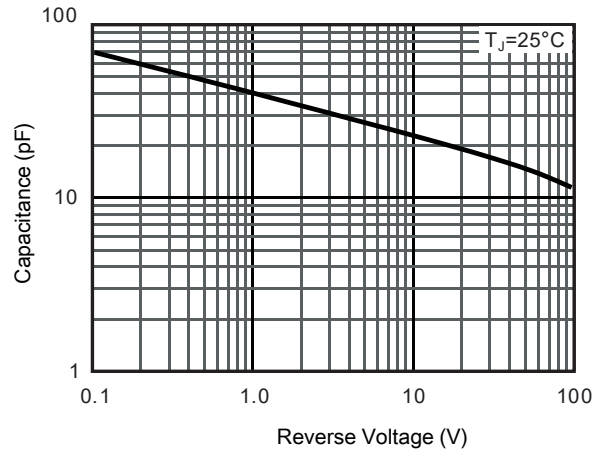
2. Thermal resistance junction to case, lead and ambient in accordance with JESD-51.

Unit mounted on glass-epoxy substrate with 1oz/ft<sup>2</sup> 20x20 mm copper pad per pin with heatsink

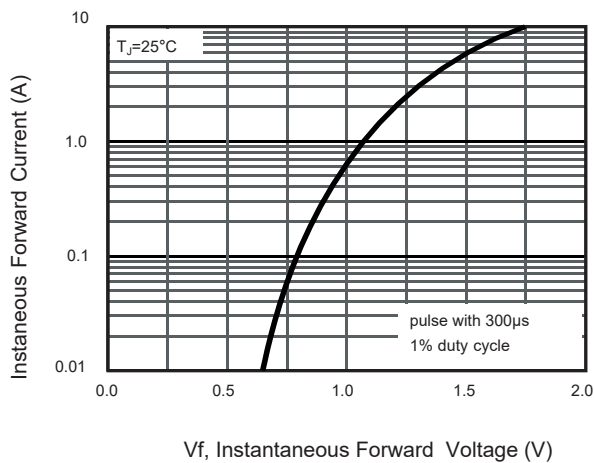
## RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)



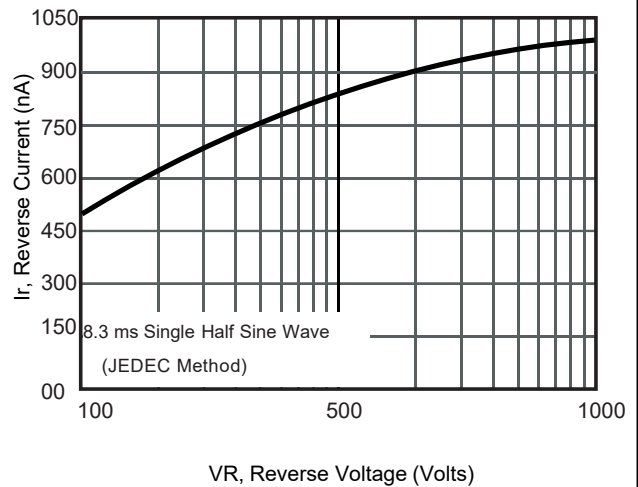
Current Derating, Case



Typical Junction Capacitance

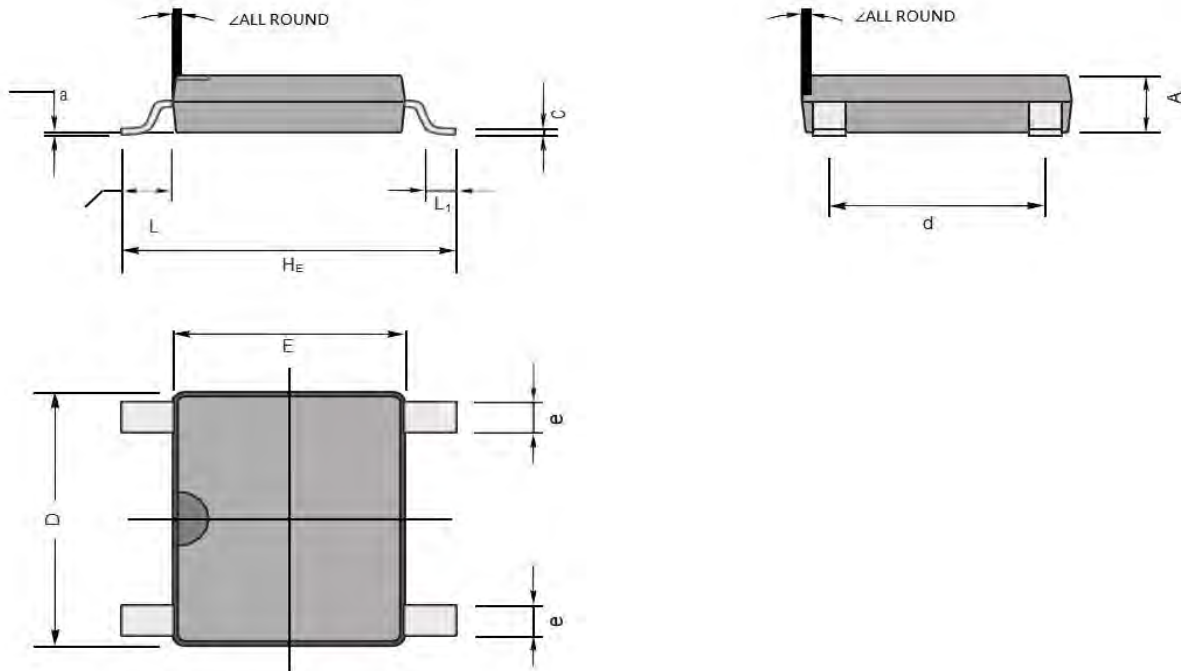


Typical Forward Voltage



Typical Reverse Current

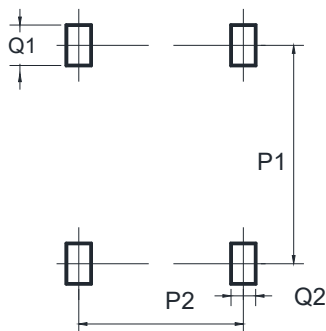
## PACKAGE OUTLINE DIMENSIONS



## ABS-F mechanical data

| UNIT |     | A     | C    | D   | E   | HE  | d   | e     | L     | L <sub>1</sub> | a    | ∠  |
|------|-----|-------|------|-----|-----|-----|-----|-------|-------|----------------|------|----|
| mm   | max | 1.3   | 0.25 | 5.2 | 4.5 | 6.4 | 4.2 | 0.7   | 0.95  | 0.6            | 0.2  | 7° |
|      | min | 1.0   | 0.15 | 4.9 | 4.2 | 6.0 | 3.8 | 0.5   |       |                |      |    |
| mil  | max | 51.19 | 9.85 | 205 | 177 | 252 | 165 | 27.55 | 37.40 | 23.62          | 7.87 |    |
|      | min | 39.37 | 5.91 | 193 | 166 | 236 | 149 | 19.68 |       |                |      |    |

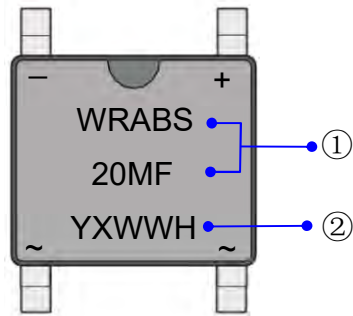
## ABS-F Suggested Pad Layout



Dimensions is millimeters

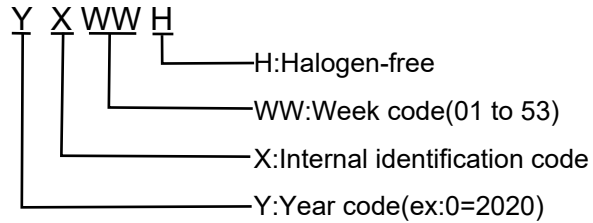
| UNIT |     | P1     | P2     | Q1    | Q2    |
|------|-----|--------|--------|-------|-------|
| mm   | min | 5.70   | 4.00   | 1.0   | 0.9   |
| mil  | min | 224.40 | 157.48 | 39.37 | 35.43 |

## Marking Information



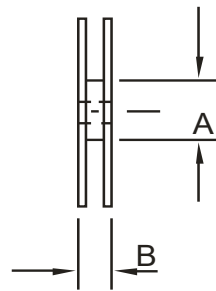
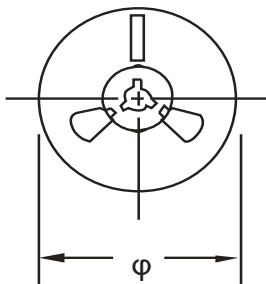
① Product model : WRABS20MF (or WRABS20JF ;or WRABS20KF)

② PDC information:

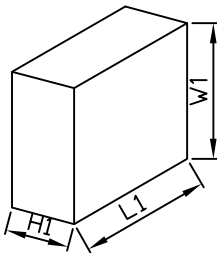


## Packaging Information

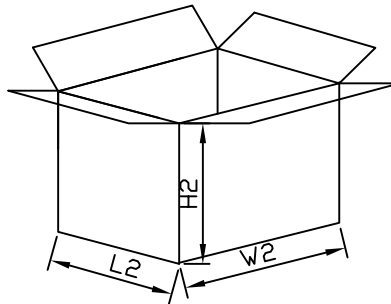
### 1.Reel Dimensions



### 2. Inside Box



### 3. Outside Box



## Packaging Information

| NO   | UNIT | Reel Dimensions               |     |    | Inside Box                |     |    | Outside Box                      |     |     |
|------|------|-------------------------------|-----|----|---------------------------|-----|----|----------------------------------|-----|-----|
|      |      | φ                             | A   | B  | L1                        | W1  | H1 | L2                               | W2  | H2  |
| Size | mm   | 330                           | 100 | 15 | 335                       | 335 | 43 | 360                              | 360 | 270 |
| QTY  | PCS  | Smallest package,5000PCS/reel |     |    | 10,000PCS,2 reel in total |     |    | 60,000PCS/carton,6boxes in total |     |     |
| Note |      | Tolerance ≤20mm,±3mm;         |     |    | 21-100mm,±5mm;            |     |    | 101-500mm,±10mm                  |     |     |