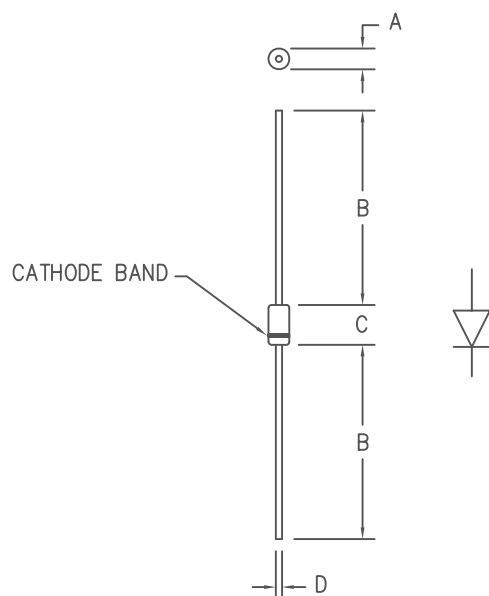


# Ultra Fast Recovery Rectifiers

## UF110 — UF120



| Dim. | Inches  |         | Millimeter |         | Notes |
|------|---------|---------|------------|---------|-------|
|      | Minimum | Maximum | Minimum    | Maximum |       |
| A    | .081    | .107    | 2.057      | 2.718   | Dia.  |
| B    | 1.10    | ----    | 27.94      | ----    |       |
| C    | .160    | .205    | 4.064      | 5.207   |       |
| D    | .028    | .034    | .711       | .864    | Dia.  |

PLASTIC D041

| Microsemi Catalog Number | Industry Part Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage |
|--------------------------|----------------------|------------------------------|---------------------------------|
| UF110                    | UF4001, UF4001GP     | 50V                          | 50V                             |
|                          | VHE205               |                              |                                 |
|                          | MUR110               | 100V                         | 100V                            |
| UF115                    | UF4002, UF4002GP     |                              |                                 |
|                          | VHE210               |                              |                                 |
|                          | MUR115               | 150V                         | 150V                            |
| UF120                    | VHE215               |                              |                                 |
|                          | MUR120               | 200V                         | 200V                            |
|                          | UF4003, UF4003GP     |                              |                                 |
|                          | VHE220               |                              |                                 |

- Ultra Fast Recovery
- 175°C Junction Temperature
- VRRM 100 to 200 Volts
- 1 Amp Current Rating
- $t_{RR}$  30ns Max.

### Electrical Characteristics

|                              |                    |                                                                                |
|------------------------------|--------------------|--------------------------------------------------------------------------------|
| Average forward current      | $I_F(AV)$ 1.0 Amps | $T_L = 135^\circ C$ , Square wave, $R_{\theta JL} = 25^\circ C/W$ , $L = 1/4"$ |
| Maximum surge current        | $I_{FSM}$ 35 Amps  | 8.3ms, half sine, $T_J = 175^\circ C$                                          |
| Max peak forward voltage     | $V_{FM}$ .75 Volts | $I_{FM} = 0.1A: T_J = 25^\circ C^*$                                            |
| Max peak forward voltage     | $V_{FM}$ .95 Volts | $I_{FM} = 1.0A: T_J = 25^\circ C^*$                                            |
| Max reverse recovery time    | $t_{RR}$ 30 ns     | 1/2A, 1A, 1/4A, $T_J = 25^\circ C$                                             |
| Max peak reverse current     | $I_{RM}$ 5 $\mu A$ | $V_{RRM}, T_J = 25^\circ C$                                                    |
| Typical junction capacitance | $C_J$ 10 pF        | $V_R = 10V, T_J = 25^\circ C$                                                  |

\*Pulse test: Pulse width 300  $\mu sec$ , Duty cycle 2%

### Thermal and Mechanical Characteristics

|                               |                            |                                  |
|-------------------------------|----------------------------|----------------------------------|
| Storage temperature range     | $T_{STG}$                  | -55°C to 175°C                   |
| Operating junction temp range | $T_J$                      | -55°C to 175°C                   |
| Maximum thermal resistance    | $L = 1/4"$ $R_{\theta JL}$ | 25°C/W Junction to Lead          |
| Weight                        |                            | .011 ounces (0.34 grams) typical |



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05-04-07 Rev. 4

# UF110 — UF120

Figure 1  
Typical Forward Characteristics

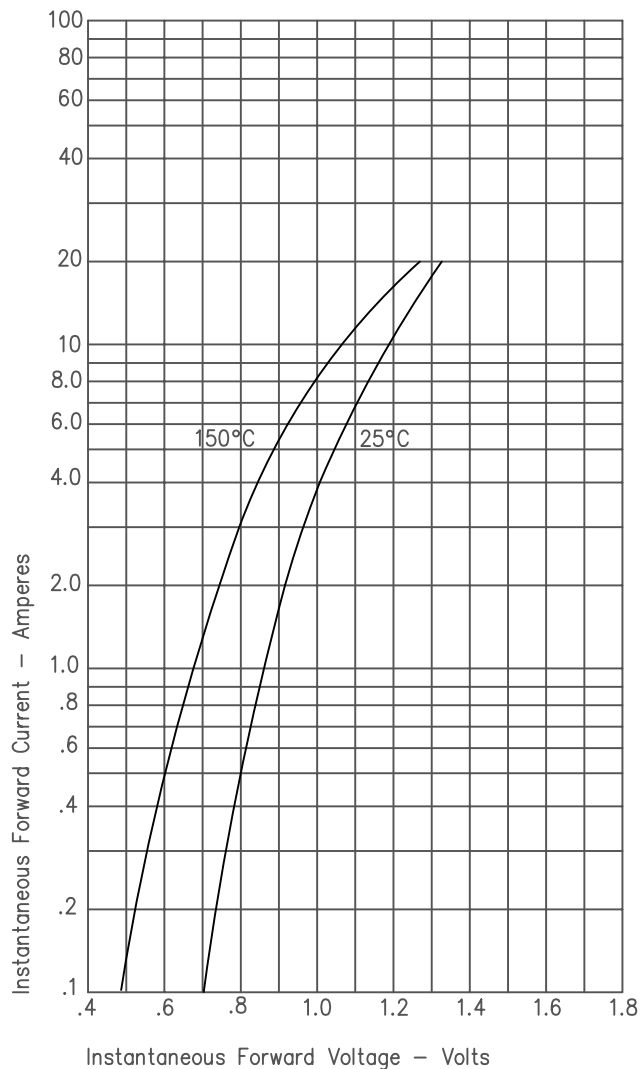


Figure 3  
Typical Junction Capacitance

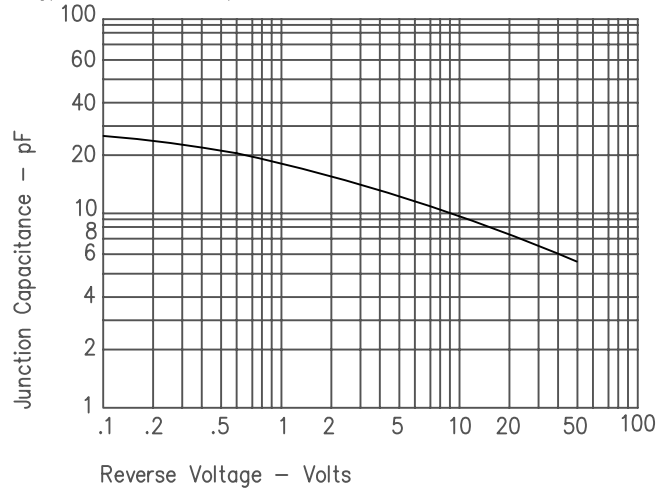


Figure 2  
Typical Reverse Characteristics

