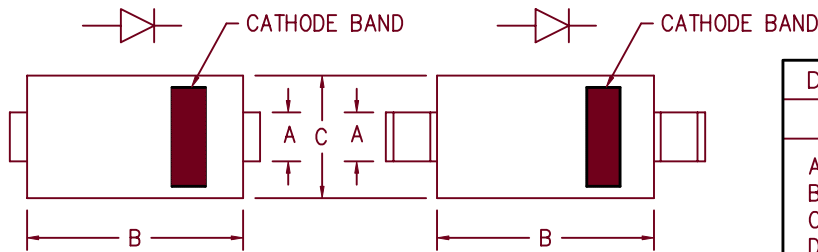


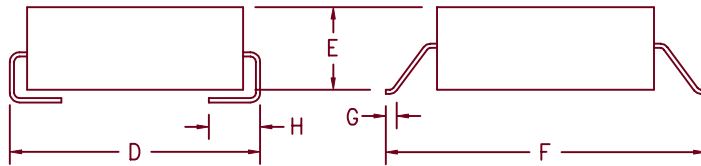
# Ultra Fast Recovery Rectifiers

## UFS305 — UFS320



D0214AB

D0215AB



| Dim. | Inches  |         | Millimeter |         | Notes |
|------|---------|---------|------------|---------|-------|
|      | Minimum | Maximum | Minimum    | Maximum |       |
| A    | .117    | .123    | 2.97       | 3.12    |       |
| B    | .260    | .280    | 6.60       | 7.11    |       |
| C    | .220    | .245    | 5.59       | 6.22    |       |
| D    | .307    | .322    | 7.80       | 8.18    |       |
| E    | .075    | .095    | 1.91       | 2.41    |       |
| F    | .380    | .400    | 9.65       | 10.16   |       |
| G    | .025    | .040    | .640       | 1.02    |       |
| H    | .030    | .060    | .760       | 1.52    |       |

| Microsemi Catalog Number | Industry Part Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage |
|--------------------------|----------------------|------------------------------|---------------------------------|
| *UFS305                  | ER3A                 | 50V                          | 50V                             |
| *UFS310                  | ER3B                 | 100V                         | 100V                            |
| *UFS315                  |                      | 150V                         | 150V                            |
| *UFS320                  | ER3D                 | 200V                         | 200V                            |

MURS320T3

\*Add Suffix J For J Lead or G For Gull Wing Lead Configuration

- Ultra Fast Recovery
- 175°C Junction Temperature
- VRRM 50 to 200 Volts
- 3 Amp Current Rating
- $t_{RR}$  30 ns Max.

### Electrical Characteristics

|                              |                     |                                       |
|------------------------------|---------------------|---------------------------------------|
| Average forward current      | $I_F(AV)$ 3.0 Amps  | Square wave                           |
| Maximum surge current        | $I_{FSM}$ 100 Amps  | 8.3ms, half sine, $T_J = 175^\circ C$ |
| Max peak forward voltage     | $V_{FM}$ .95 Volts  | $I_{FM} = 3.0A; T_J = 25^\circ C^*$   |
| Max reverse recovery time    | $t_{RR}$ 30 ns      | 1/2A, 1A, 1/4A, $T_J = 25^\circ C$    |
| Max peak reverse current     | $I_{RM}$ 10 $\mu A$ | $V_{RRM}, T_J = 25^\circ C$           |
| Typical junction capacitance | $C_J$ 38 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    | $R_{\theta JL}$ | 25°C/W Junction to lead          |
| Weight                        |                 | .008 ounces (0.22 grams) typical |

10-1-01 Rev. 2

# UFS305 – UFS320

Figure 1  
Typical Forward Characteristics

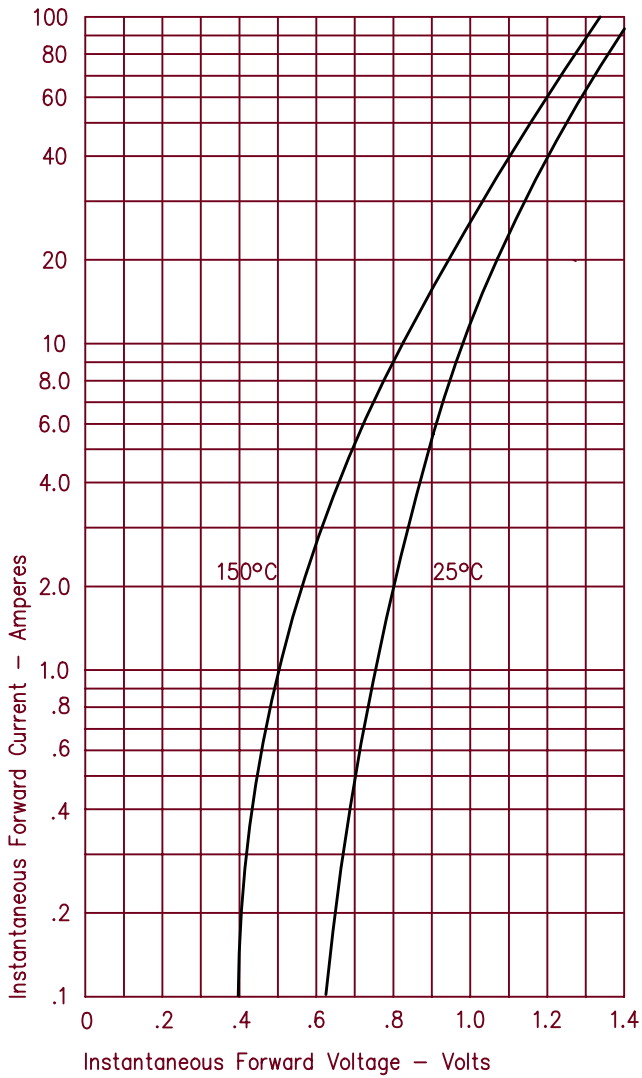


Figure 3  
Typical Junction Capacitance

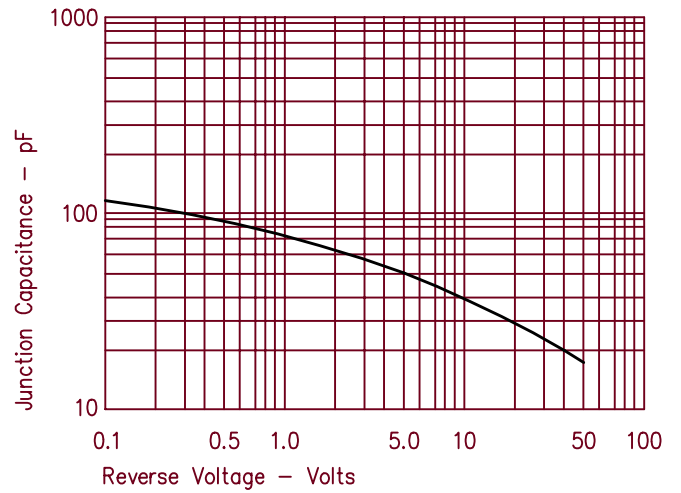


Figure 2  
Typical Reverse Characteristics

