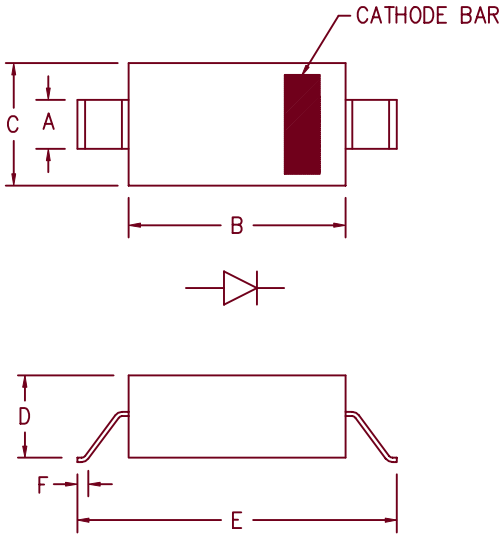
# 1 Amp Fast Recovery Rectifier
# MFS112 – MFS116




| Dim. | Inches | | Millimeter | | |
|---|---|---|---|---|---|
| | Minimum | Maximum | Minimum | Maximum | Notes |
| A | .081 | .087 | 2.06 | 2.21 | |
| B | .160 | .180 | 4.06 | 4.57 | |
| C | .130 | .155 | 3.30 | 3.94 | |
| D | .075 | .095 | 1.90 | 2.41 | |
| E | .270 | .290 | 6.86 | 7.37 | |
| F | .015 | .030 | .381 | .762 | |

DO–215AA

| Microsemi Catalog Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage |
|---|---|---|
| MFS112 | 1200V | 1200V |
| MFS114 | 1400V | 1400V |
| MFS116 | 1600V | 1600V |

- Fast Recovery Rectifier
- Surface Mount Package
- $V_{RRM}$ 1200 to 1600 Volts
- $t_{RR}$ 500nS Max.
- 175°C Junction Temperature

## Electrical Characteristics

| | | |
|---|---|---|
| Average forward current | $I_{F(AV)}$ 1.0 Amps | $T_L$ = 102°C, Square wave, $R_{\theta JL}$ = 20°C/W |
| Maximum surge current | $I_{FSM}$ 25 Amps | 8.3ms, half sine, $T_J$ = 175°C |
| Max peak forward voltage | $V_{FM}$ 1.6 Volts | $I_{FM}$ = 1A; $T_J$ = 25°C* |
| Max peak reverse current | $I_{RM}$ 1.5 mA | $V_{RRM}$, $T_J$ = 125°C |
| Max peak reverse current | $I_{RM}$ 10 µA | $V_{RRM}$, $T_J$ = 25°C |
| Max reverse recovery time | $t_{RR}$ 500 ns | 1/2A, 1A, 1/4A, $T_J$ = 25°C |
| Typical junction capacitance | $C_J$ 6.5 pF | $T_J$ = 25°C, $V_R$ = 10V |

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

## Thermal and Thermal 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 | $R_{\theta JL}$ | 20°C/W Junction to lead |
| Weight | | .0047 ounces (.013 grams) typical |

5–16–01 Rev. 1

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# MFS112 – MFS116

Figure 1
Typical Forward Characteristics

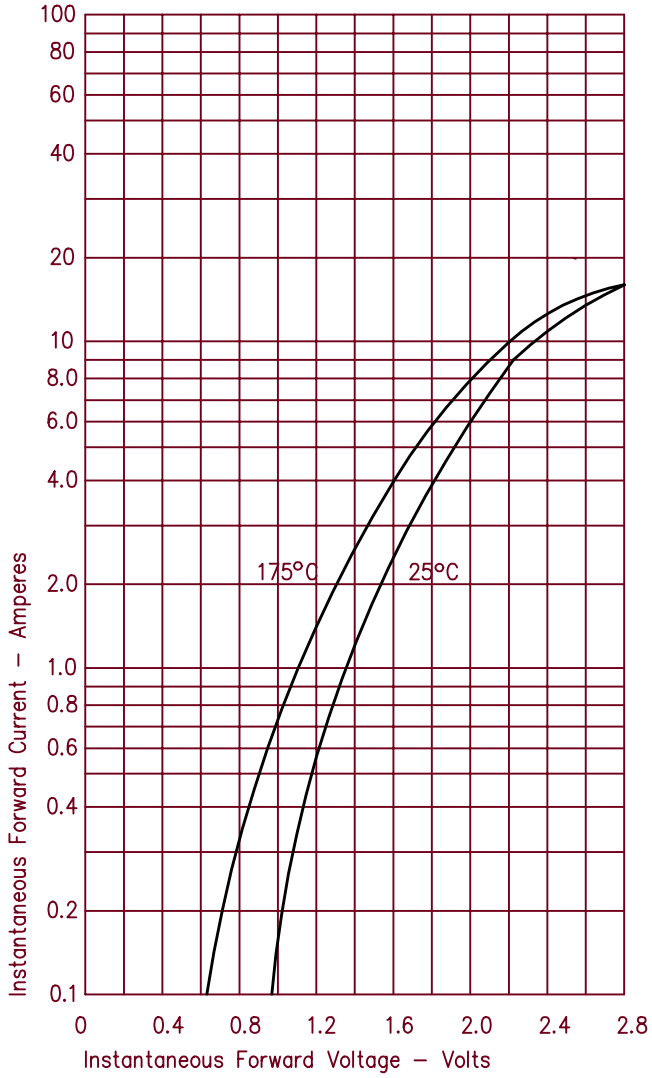



Figure 2
Typical Reverse Characteristics

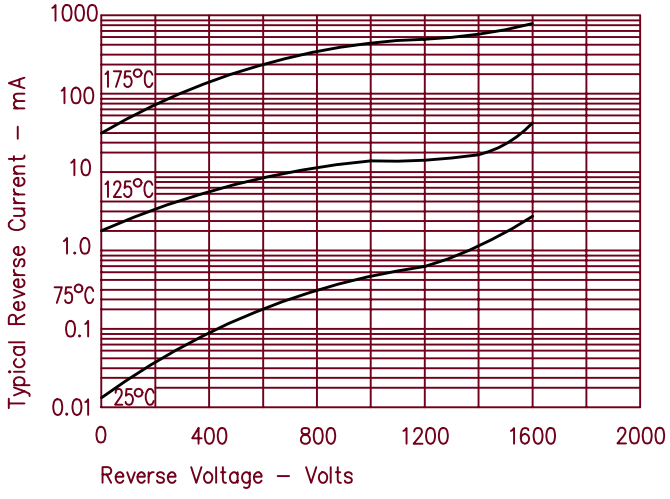



Figure 3
Typical Junction Capacitance

