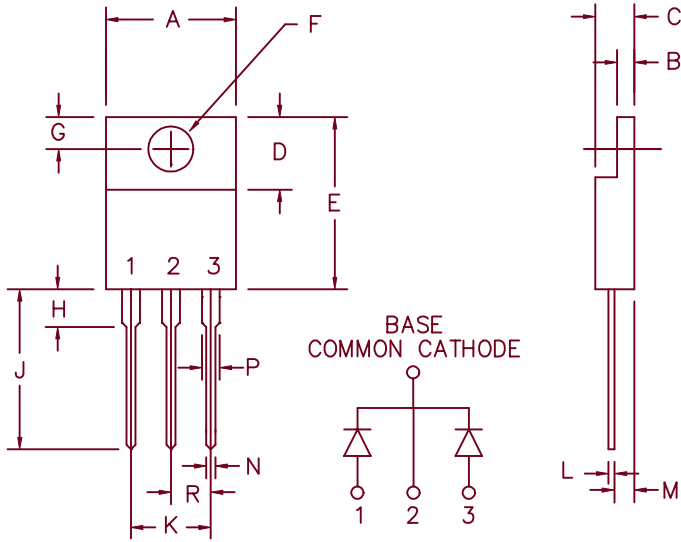


# 20 Amp Schottky Barrier Rectifiers FST2050 — FST2060



| Dim. | Inches  |         | Millimeter |         | Notes |
|------|---------|---------|------------|---------|-------|
|      | Minimum | Maximum | Minimum    | Maximum |       |
| A    | .390    | .415    | 9.91       | 10.54   |       |
| B    | .045    | .055    | 1.14       | 1.40    |       |
| C    | .180    | .190    | 4.57       | 4.83    |       |
| D    | .245    | .260    | 6.22       | 6.60    |       |
| E    | .550    | .650    | 13.97      | 16.51   |       |
| F    | .139    | .161    | 3.53       | 4.09    | Dia.  |
| G    | .100    | .135    | 2.54       | 3.43    |       |
| H    | ---     | .250    | ---        | 6.35    |       |
| J    | .500    | .580    | 12.70      | 14.73   |       |
| K    | .190    | .210    | 4.83       | 5.33    |       |
| L    | .014    | .022    | .357       | .559    |       |
| M    | .080    | .115    | 2.03       | 2.92    |       |
| N    | .015    | .040    | .380       | 1.02    |       |
| P    | .045    | .070    | 1.14       | 1.78    |       |
| R    | .090    | .110    | 2.29       | 2.79    |       |

## PLASTIC TO-220AB

Microsemi Catalog  
Number

FST2050  
FST2060

Repetitive Peak  
Reverse Voltage

50V  
60V

Transient Peak  
Reverse Voltage

50V  
60V

- Schottky barrier rectifier
- Guard ring for reverse protection
- Reverse energy tested
- High surge capacity
- $V_{RRM}$  50 to 60 Volts

## Electrical Characteristics

|                                   |                            |  |
|-----------------------------------|----------------------------|--|
| Average forward current per pkg.  | $I_{F(AV)}$ 20 Amps        | $T_C = 137^\circ\text{C}$ , square wave, $R_{\theta JC} = 2.8^\circ\text{C/W}$ |
| Average forward current per leg   | $I_{F(AV)}$ 10 Amps        | $T_C = 137^\circ\text{C}$ , square wave, $R_{\theta JC} = 5.6^\circ\text{C/W}$ |
| Maximum surge current per leg     | $I_{FSM}$ 225 Amps         | 8.3ms, half sine, $T_J = 175^\circ\text{C}$                                    |
| Max. peak forward voltage per leg | $V_{FM}$ .53 Volts         | $I_{FM} = 10\text{A}$ , $T_J = 175^\circ\text{C}^*$                            |
| Max. peak forward voltage per leg | $V_{FM}$ .67 Volts         | $I_{FM} = 10\text{A}$ , $T_J = 25^\circ\text{C}^*$                             |
| Max. peak reverse current per leg | $I_{RM}$ 10 mA             | $V_{RRM}$ , $T_J = 125^\circ\text{C}^*$  |
| Max. peak reverse current per leg | $I_{RM}$ 250 $\mu\text{A}$ | $V_{RRM}$ , $T_J = 25^\circ\text{C}$   |
| Typical junction capacitance      | $C_J$ 570 pF               | $V_R = 5.0\text{V}$ , $T_J = 25^\circ\text{C}$                                 |

\*Pulse test: Pulse width 300 usec. Duty cycle 2%

## Thermal and Mechanical Characteristics

|                                    |                 |   |
|------------------------------------|-----------------|---|
| Storage temp range                 | $T_{STG}$       | $-55^\circ\text{C}$ to $+175^\circ\text{C}$ |
| Operating junction temp range      | $T_J$           | $-55^\circ\text{C}$ to $+175^\circ\text{C}$ |
| Max thermal resistance per leg     | $R_{\theta JC}$ | $5.6^\circ\text{C/W}$ Junction to case      |
| Max thermal resistance per pkg.    | $R_{\theta JC}$ | $2.8^\circ\text{C/W}$ Junction to case      |
| Typical thermal resistance per leg | $R_{\theta JC}$ | $4.67^\circ\text{C/W}$ Junction to case     |
| Weight                             |                 | .08 ounces (2.3 grams) typical              |

# FST2050, FST2060

Figure 1  
Typical Forward Characteristics – per leg

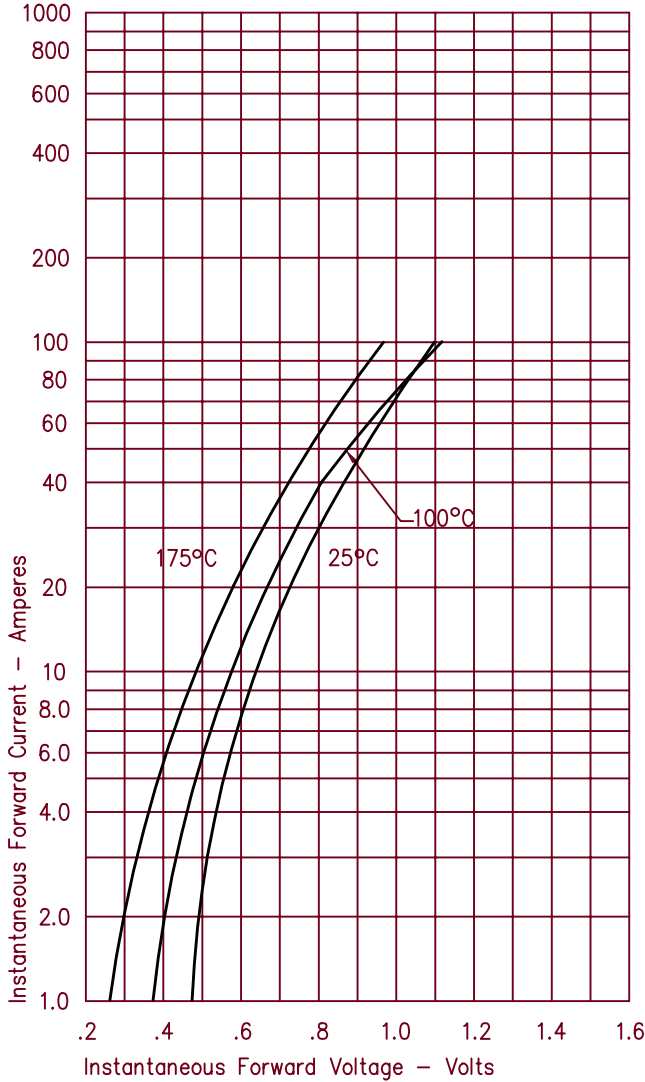


Figure 3  
Typical Junction Capacitance – per leg

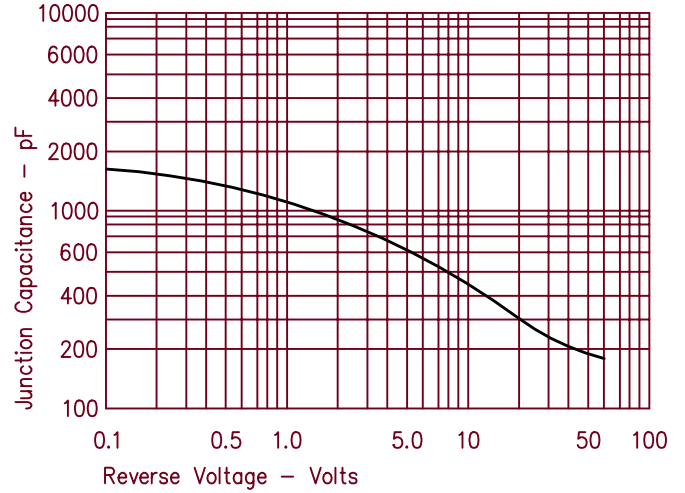


Figure 4  
Forward Current Derating – per leg

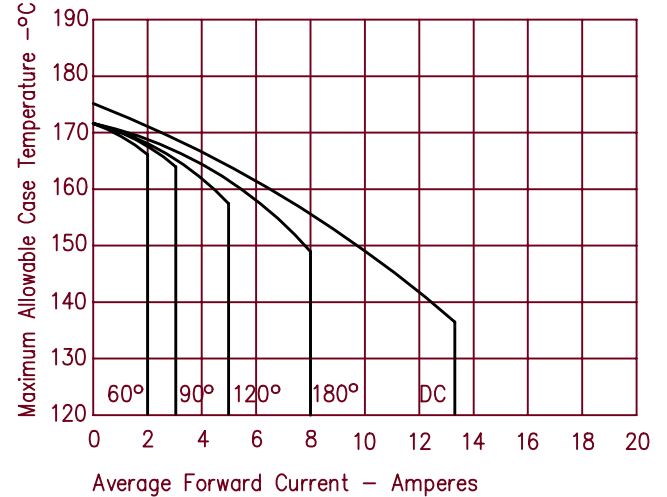


Figure 2  
Typical Reverse Characteristics – per leg

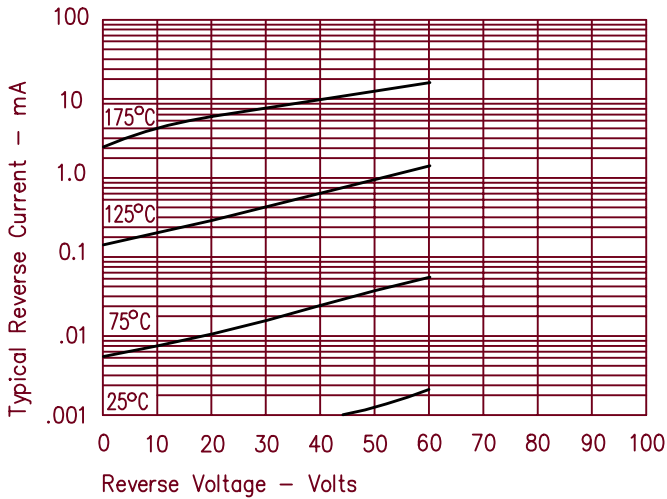


Figure 5  
Maximum Forward Power Dissipation – per leg

