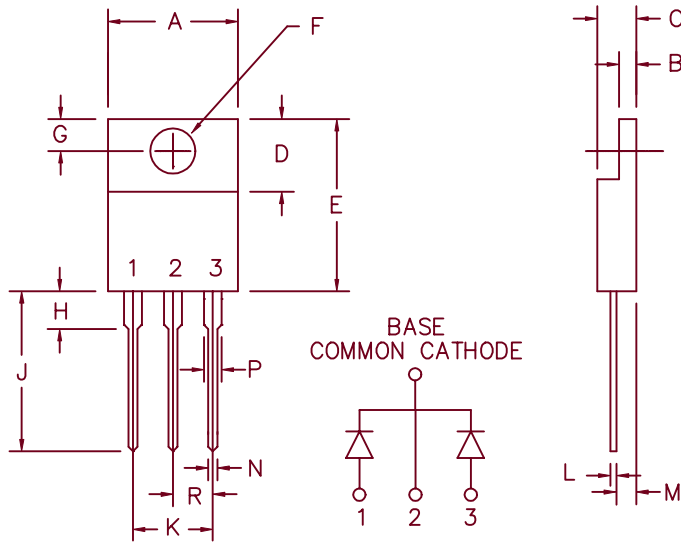


# 20 Amp Schottky Barrier Rectifiers FST2050 — FST2060



| 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.  
Average forward current per leg  
Maximum surge current per leg  
Max. peak forward voltage per leg  
Max. peak forward voltage per leg  
Max. peak reverse current per leg  
Max. peak reverse current per leg  
Typical junction capacitance

$I_F(AV)$  20 Amps  
 $I_F(AV)$  10 Amps  
 $I_{FSM}$  225 Amps  
 $V_{FM}$  .53 Volts  
 $V_{FM}$  .67 Volts  
 $I_{RM}$  10 mA  
 $I_{RM}$  250  $\mu$ A  
 $C_J$  570 pF

$T_C = 137^\circ\text{C}$ , square wave,  $R_{\theta JC} = 2.8^\circ\text{C/W}$   
 $T_C = 137^\circ\text{C}$ , square wave,  $R_{\theta JC} = 5.6^\circ\text{C/W}$   
8.3ms, half sine,  $T_J = 175^\circ\text{C}$   
 $I_{FM} = 10\text{A}$ ,  $T_J = 175^\circ\text{C}^*$   
 $I_{FM} = 10\text{A}$ ,  $T_J = 25^\circ\text{C}^*$   
 $V_{RRM}$ ,  $T_J = 125^\circ\text{C}^*$   
 $V_{RRM}$ ,  $T_J = 25^\circ\text{C}$   
 $V_R = 5.0\text{V}$ ,  $T_J = 25^\circ\text{C}$

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

## Thermal and Mechanical Characteristics

Storage temp range  
Operating junction temp range  
Max thermal resistance per leg  
Max thermal resistance per pkg.  
Typical thermal resistance per leg  
Weight

$T_{STG}$   
 $T_J$   
 $R_{\theta JC}$   
 $R_{\theta JC}$   
 $R_{\theta JC}$

$-55^\circ\text{C}$  to  $+175^\circ\text{C}$   
 $-55^\circ\text{C}$  to  $+175^\circ\text{C}$   
 $5.6^\circ\text{C/W}$  Junction to case  
 $2.8^\circ\text{C/W}$  Junction to case  
 $4.67^\circ\text{C/W}$  Junction to case  
.08 ounces (2.3 grams) typical

# FST2050, FST2060

Figure 1  
Typical Forward Characteristics – per leg

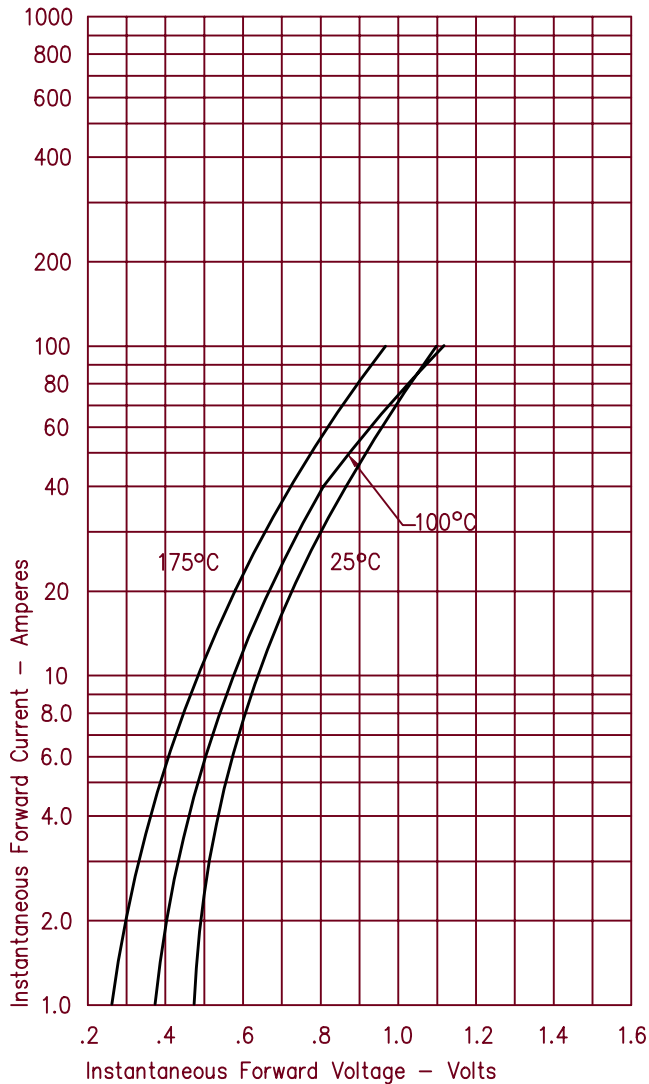


Figure 3  
Typical Junction Capacitance – per leg

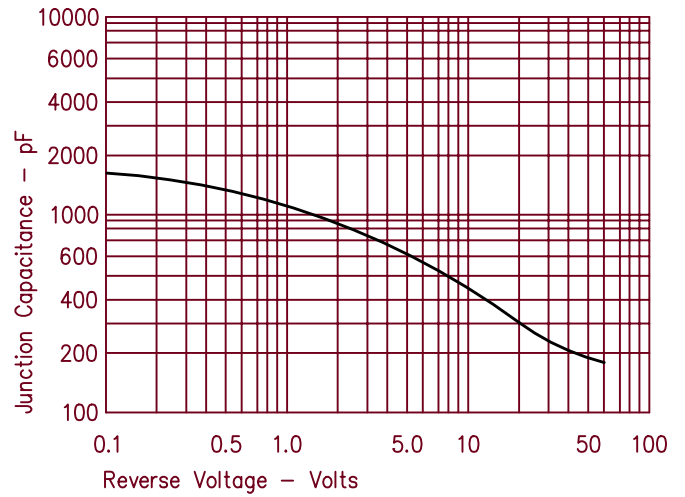


Figure 4  
Forward Current Derating – per leg

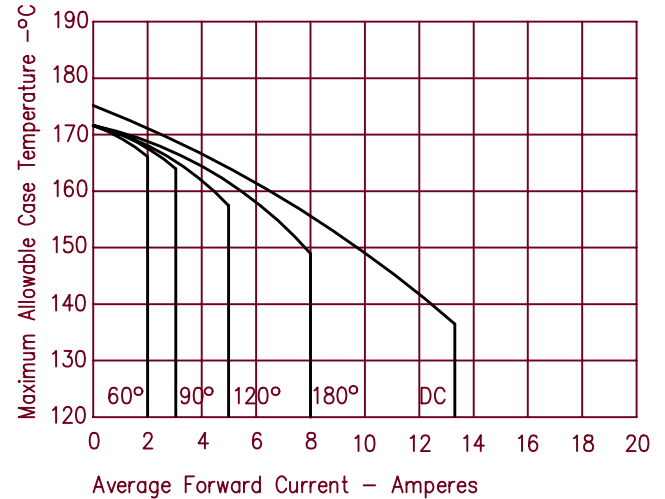


Figure 2  
Typical Reverse Characteristics – per leg

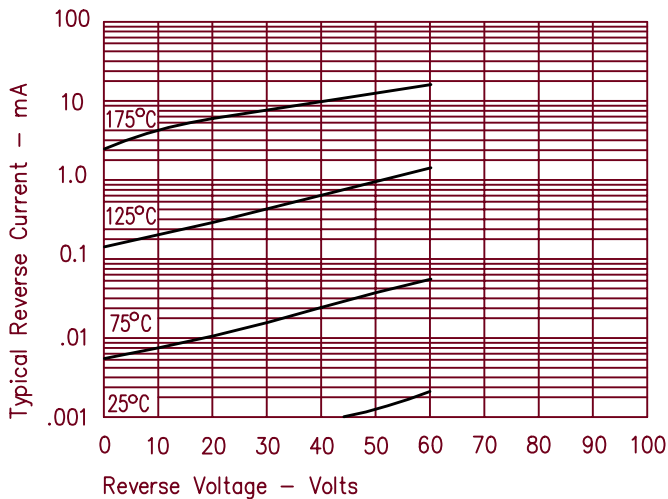


Figure 5  
Maximum Forward Power Dissipation – per leg

