



Micro Commercial Components  
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**FST8420SL**

**THRU**

**FST8445SL**

## Features

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss high efficiency
- High surge capacity, High current capability

## Maximum Ratings

- Operating Temperature: -40°C to +175°C
- Storage Temperature: -40°C to +150°C

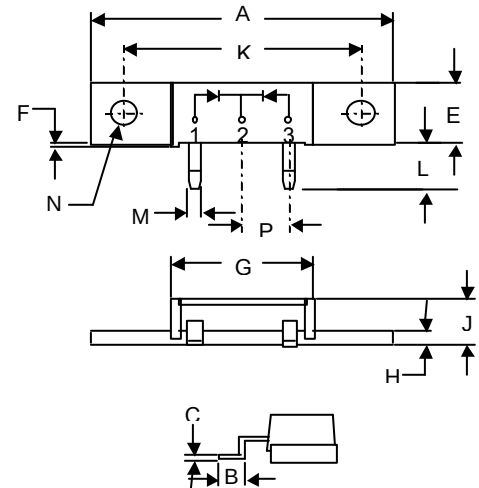
| MCC Part Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------------------------------|---------------------|-----------------------------|
| FST8420SL       | 20V                                    | 14V                 | 20V                         |
| FST8430SL       | 30V                                    | 21V                 | 30V                         |
| FST8435SL       | 35V                                    | 24.5V               | 35V                         |
| FST8440SL       | 40V                                    | 28V                 | 40V                         |
| FST8445SL       | 45V                                    | 31.5V               | 45V                         |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

|                                                           |             |                |                                                       |
|-----------------------------------------------------------|-------------|----------------|-------------------------------------------------------|
| Average Forward Current                                   | $I_{F(AV)}$ | 80 A           | $T_C = 110^\circ\text{C}$                             |
| Peak Forward Surge Current                                | $I_{FSM}$   | 800A           | 8.3ms, half sine                                      |
| Maximum Instantaneous Forward Voltage<br>FST8420SL-8445SL | $V_F$       | .63 V          | $I_{FM} = 40.0\text{A};$<br>$T_J = 25^\circ\text{C}$  |
| Maximum DC Reverse Current At Rated DC Blocking Voltage   | $I_R$       | 3.0mA<br>500mA | $T_J = 25^\circ\text{C}$<br>$T_J = 125^\circ\text{C}$ |
| Typical Junction Capacitance                              | $C_J$       | 2100pF         | Measured at<br>1.0MHz, $V_R = 5.0\text{V}$            |

## 80 Amp Schottky Barrier Rectifier 20 to 45 Volts

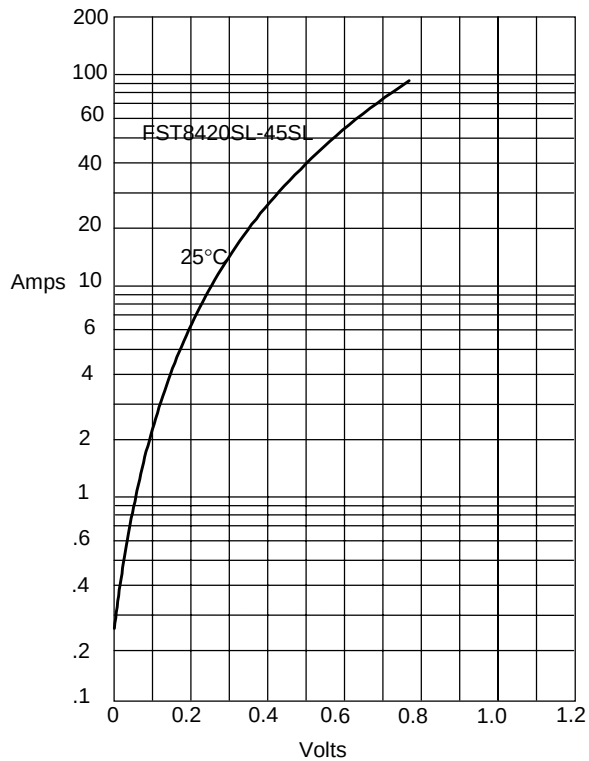
## MINIMOD-SL



| DIM | INCHES |       | MM    |       | NOTE |
|-----|--------|-------|-------|-------|------|
|     | MIN    | MAX   | MIN   | MAX   |      |
| A   | 1.490  | 1.510 | 37.85 | 38.35 |      |
| B   | .110   | .120  | 2.79  | 3.04  |      |
| C   | .027   | .037  | 0.69  | 0.94  |      |
| E   | .350   | .370  | 8.89  | 9.40  |      |
| F   | .015   | .025  | 0.38  | 0.64  |      |
| G   | .695   | .715  | 17.65 | 18.16 |      |
| H   | .088   | .098  | 2.24  | 2.49  |      |
| J   | .240   | .260  | 6.10  | 6.60  |      |
| K   | 1.180  | 1.195 | 29.97 | 30.35 |      |
| L   | .230   | .250  | 5.84  | 6.35  |      |
| M   | .065   | .085  | 1.65  | 2.16  |      |
| N   | .151   | .161  | 3.84  | 4.09  | Ø    |
| P   | .200   | REF   | 5.08  | REF   |      |

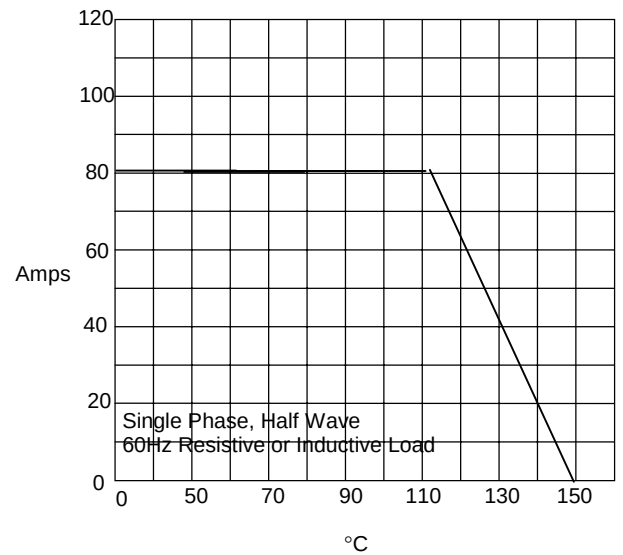
Pulse Test: Pulse Width 300µsec, Duty Cycle 2%

Figure 1  
Typical Forward Characteristics



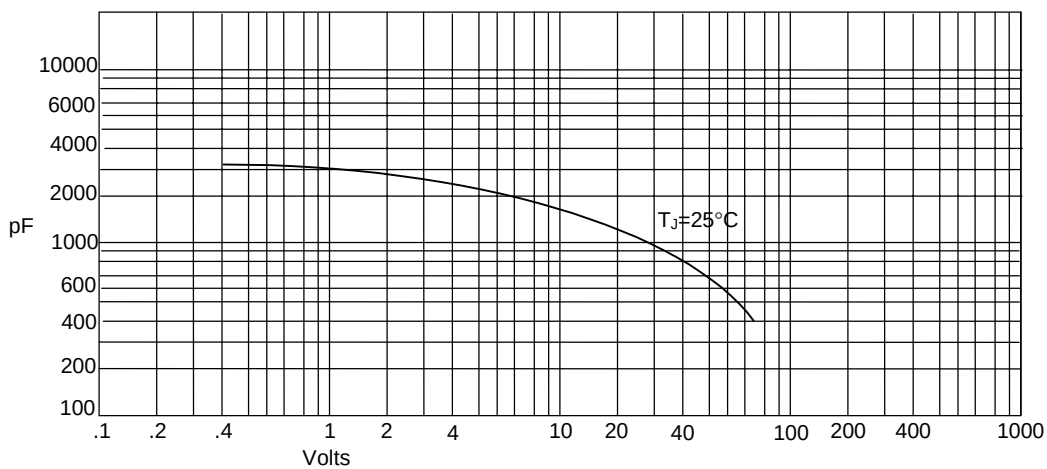
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



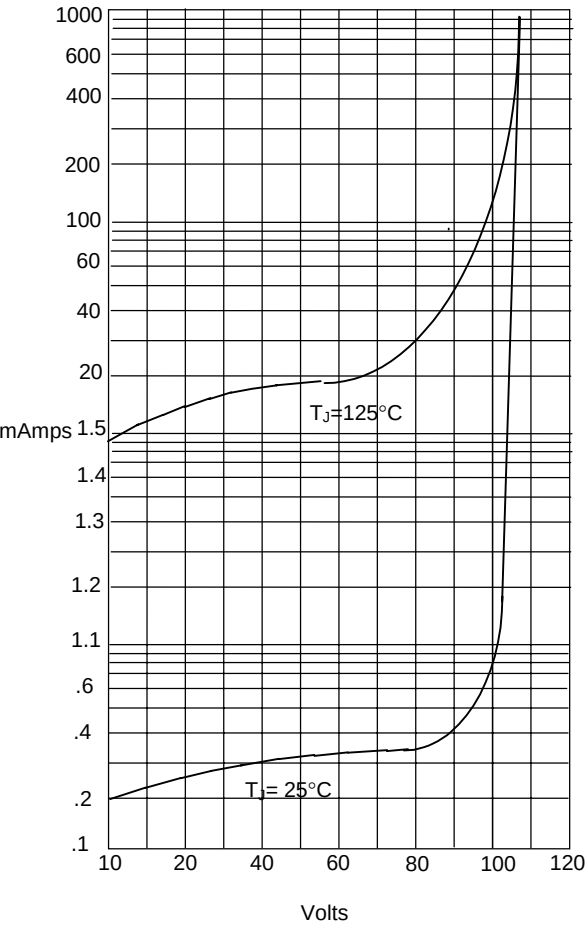
Average Forward Rectified Current - Amperes versus  
Case Temperature - °C

Figure 3  
Junction Capacitance



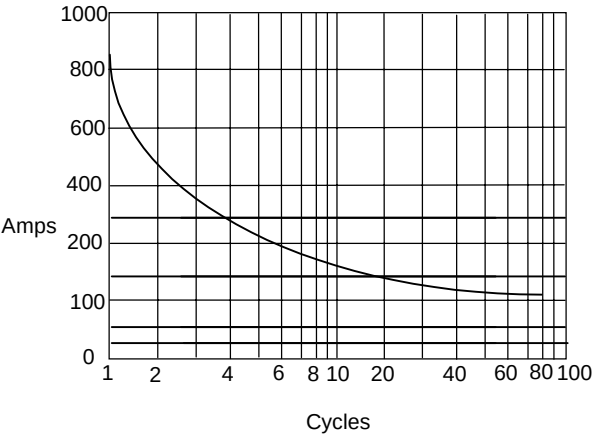
Junction Capacitance - pF versus  
Reverse Voltage - Volts

Figure 4  
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5  
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*  
Number Of Cycles At 60Hz - Cycles