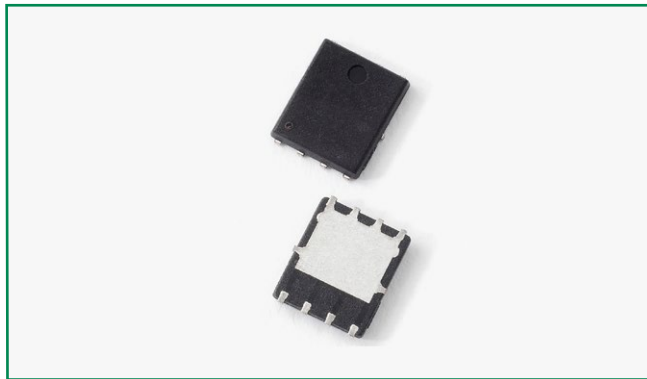
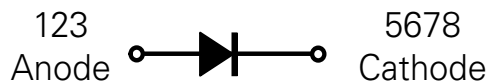


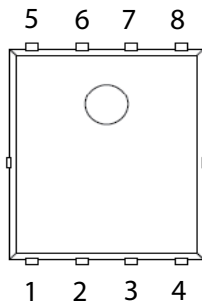
### DST3060DJF



#### Schematic



#### Pin out



| Pin     | Function |
|---------|----------|
| 1,2,3   | Anode    |
| 4       | open     |
| 5,6,7,8 | Cathode  |

#### Description

Littelfuse DST series Ultra Low  $V_F$  Schottky Barrier Rectifier is designed to meet the general requirements of commercial and industry applications by providing high temperature, low leakage and low  $V_F$  products.

It is suitable for high frequency switching mode power supply applications, as free-wheeling and polarity protection diodes.

#### Features

- Ultra low forward voltage drop
- High frequency operation
- High junction temperature capability
- Guard ring for enhanced ruggedness and long term reliability
- Single die in PDFNWB5x6-8L package

#### Applications

- Switching mode power supply
- DC/DC converters
- Free-Wheeling diodes
- Polarity Protection Diodes

#### Maximum Ratings

| Parameters                                              | Symbol      | Test Conditions                                                    | Max | Unit |
|---------------------------------------------------------|-------------|--------------------------------------------------------------------|-----|------|
| Peak Inverse Voltage                                    | $V_{RWM}$   | -                                                                  | 60  | V    |
| Average Forward Current (per device)                    | $I_{F(AV)}$ | 50% duty cycle @ $T_C = 80^\circ\text{C}$<br>rectangular wave form | 30  | A    |
| Peak One Cycle Non-Repetitive Surge Current (per diode) | $I_{FSM}$   | 8.3 ms, half Sine pulse                                            | 240 | A    |

#### Electrical Characteristics

| Parameters                        | Symbol   | Test Conditions                                         | Max  | Unit |
|-----------------------------------|----------|---------------------------------------------------------|------|------|
| Forward Voltage Drop (per diode)* | $V_{F1}$ | @30A, Pulse, $T_J = 25^\circ\text{C}$                   | 0.77 | V    |
|                                   | $V_{F2}$ | @30A, Pulse, $T_J = 125^\circ\text{C}$                  | 0.72 |      |
| Reverse Current (per diode)*      | $I_{R1}$ | @ $V_R = \text{rated } V_R$ , $T_J = 25^\circ\text{C}$  | 6    | mA   |
|                                   | $I_{R2}$ | @ $V_R = \text{rated } V_R$ , $T_J = 125^\circ\text{C}$ | 190  |      |

\* Pulse Width < 300 $\mu\text{s}$ , Duty Cycle < 2%

### Thermal-Mechanical Specifications

| Parameters                                                 | Symbol       | Test Conditions | Max         | Unit |
|------------------------------------------------------------|--------------|-----------------|-------------|------|
| Junction Temperature                                       | $T_J$        |                 | -55 to +150 | °C   |
| Storage Temperature                                        | $T_{stg}$    |                 | -55 to +150 | °C   |
| Typical Thermal Resistance<br>Junction to Case (per diode) | $R_{thJC}$   | DC operation    | 2.6         | °C/W |
| Approximate Weight                                         | wt           |                 | 0.095       | g    |
| Case Style                                                 | PDFNWB5x6-8L |                 |             |      |

Figure 1: Typical Forward Characteristics

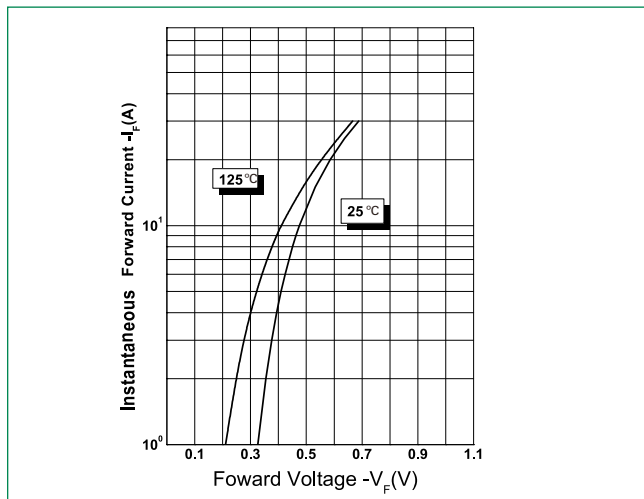


Figure 2: Typical Reverse Characteristics

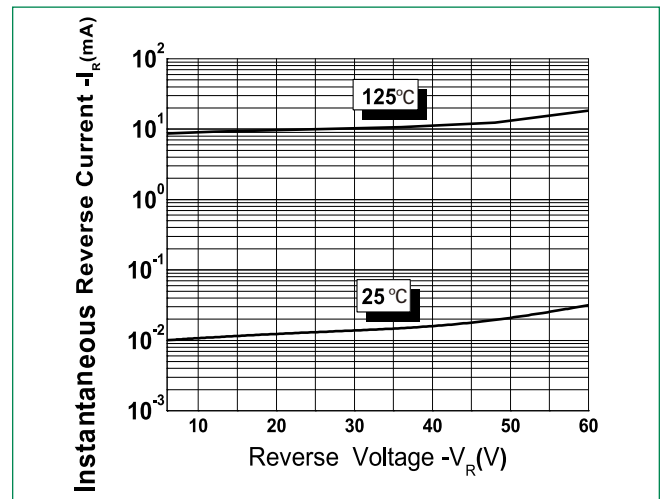
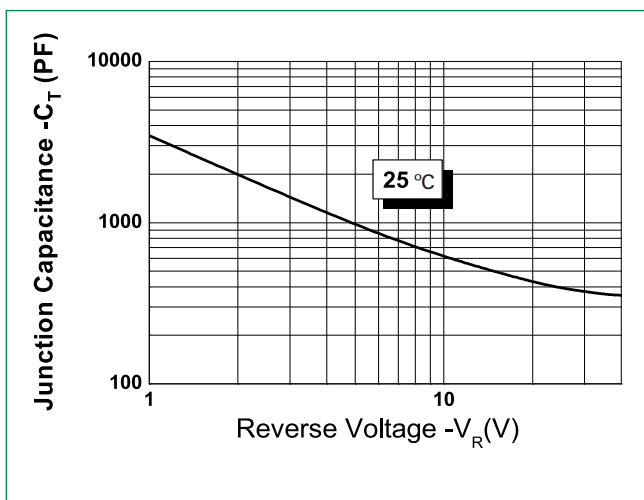


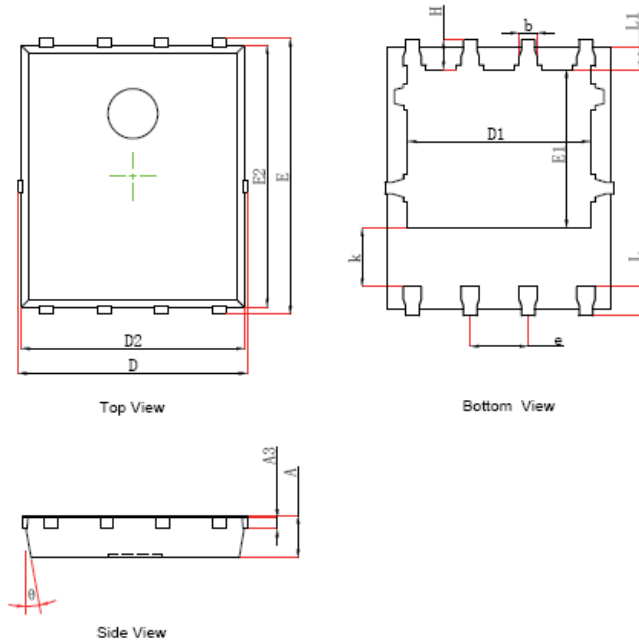
Figure 3: Typical Junction Capacitance



# Schottky Barrier Rectifier

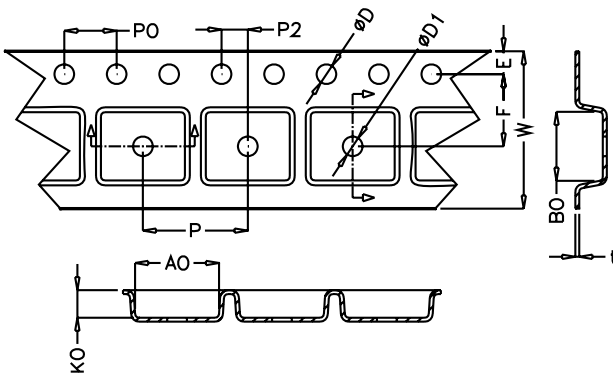
## DST3060DJF, 30A, 60V, PDFN5x6-8L, Single

### Dimensions- PDFN5x6-8L



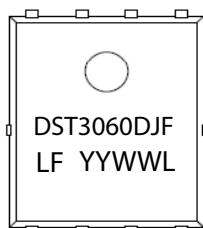
| Symbol | Millimeters |       |
|--------|-------------|-------|
|        | Min         | Max   |
| A      | 0.900       | 1.000 |
| A3     | 0.254 REF   |       |
| D      | 4.944       | 5.096 |
| E      | 5.974       | 6.126 |
| D1     | 3.910       | 4.110 |
| E1     | 3.375       | 3.575 |
| D2     | 4.824       | 4.976 |
| E2     | 5.674       | 5.826 |
| k      | 1.190       | 1.390 |
| b      | 0.350       | 0.450 |
| e      | 1.27 TYP    |       |
| L      | 0.559       | 0.711 |
| L1     | 0.424       | 0.576 |
| H      | 0.574       | 0.726 |
| θ      | 10°         | 12°   |

### Carrier Tape & Reel Specification



| Symbol | Millimeters |       |
|--------|-------------|-------|
|        | Min         | Max   |
| A0     | 6.20        | 6.40  |
| B0     | 5.20        | 5.40  |
| D      | 1.50        | 1.60  |
| D1     | 1.5         | 1.75  |
| E      | 1.65        | 1.85  |
| F      | 5.45        | 5.55  |
| K0     | 1.00        | 1.20  |
| P      | 7.90        | 8.10  |
| P0     | 3.90        | 4.10  |
| P2     | 1.95        | 2.05  |
| W      | 11.90       | 12.30 |
| t      | 0.23        | 0.27  |

### Part Numbering and Marking System



DST = Component Type  
 30 = Forward Current (30A)  
 60 = Reverse Voltage (60V)  
 DJF = Package Type  
 LF = Littelfuse  
 YY = Year  
 WW = Week  
 L = Lot Number

### Packing Options

| Part Number | Marking    | Packing Mode   | M.O.Q |
|-------------|------------|----------------|-------|
| DST3060DJF  | DST3060DJF | 3000pcs / reel | 3000  |

# Mouser Electronics

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