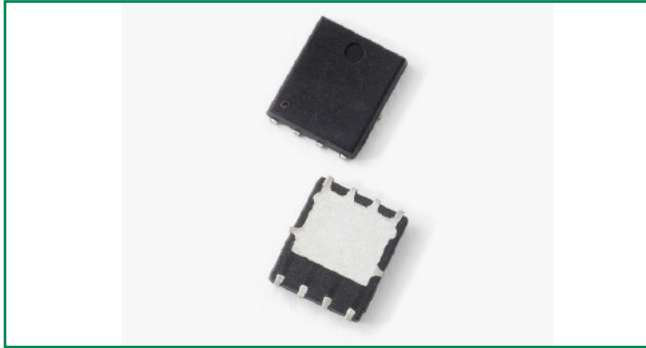
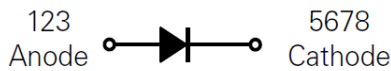


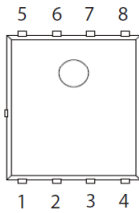
DST2060DJF



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 lower V_F products.

It is suitable for high frequency switching mode power supply, free-wheeling diodes 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 @ $T_C = 80^\circ\text{C}$ rectangular wave form | 20 | A |
| Peak One Cycle Non-Repetitive Surge Current (per diode) | I_{FSM} | 8.3 ms, half Sine pulse | 150 | A |

Electrical Characteristics

| Parameters | Symbol | Test Conditions | Max | Unit |
|-----------------------------------|----------|--|------|------|
| Forward Voltage Drop (per diode)* | V_{F1} | @20A, Pulse, $T_J = 25^\circ\text{C}$ | 0.75 | V |
| | V_{F2} | @20A, Pulse, $T_J = 125^\circ\text{C}$ | 0.70 | |
| Reverse Current (per diode)* | I_{R1} | @ $V_R = \text{rated } V_R, T_J = 25^\circ\text{C}$ | 1 | mA |
| | I_{R2} | @ $V_R = \text{rated } V_R, T_J = 125^\circ\text{C}$ | 40 | |

* Pulse Width < 300 μs , Duty Cycle < 2%

Thermal-Mechanical Specifications

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

Figure 1: Typical Forward Characteristics

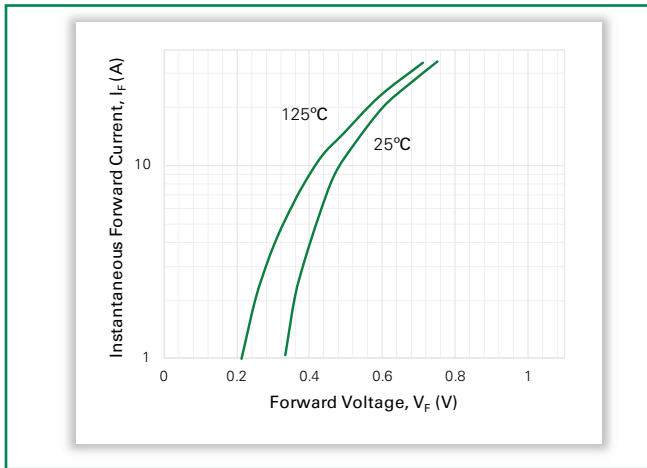


Figure 2: Typical Reverse Characteristics

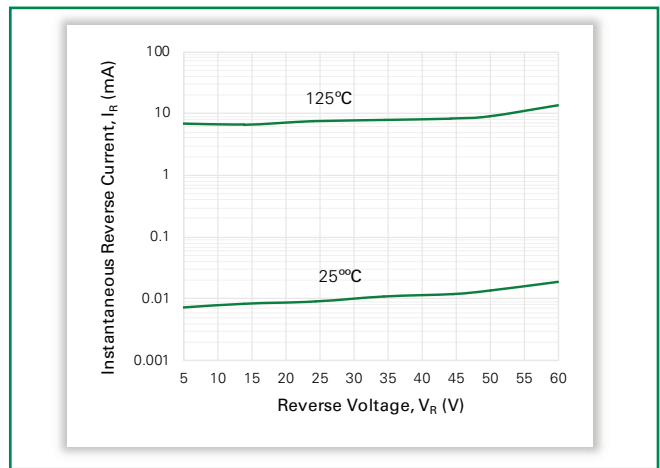
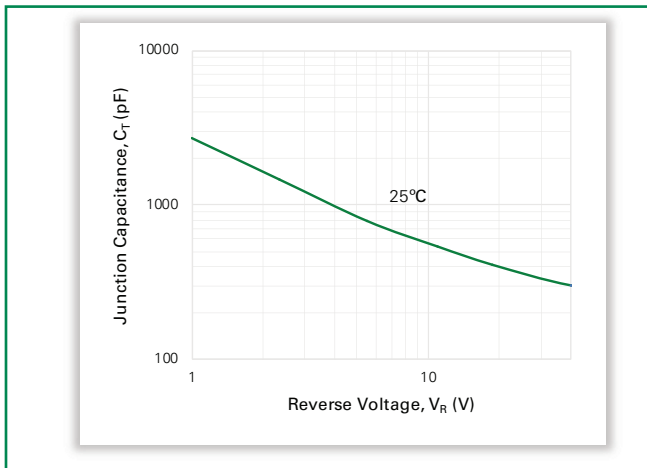
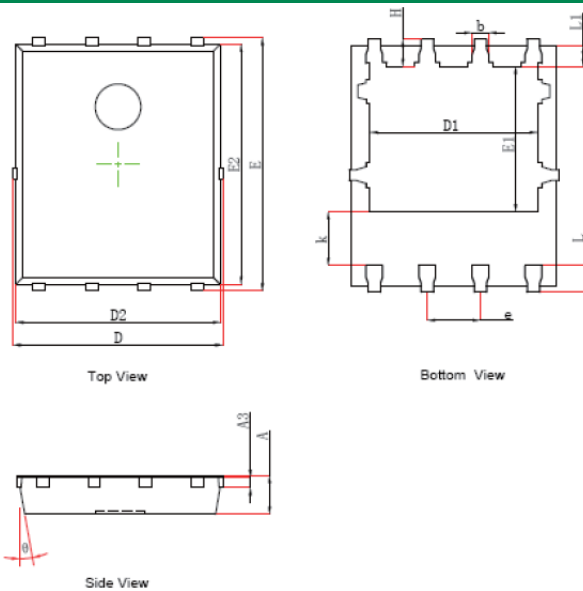


Figure 3: Typical Junction Capacitance

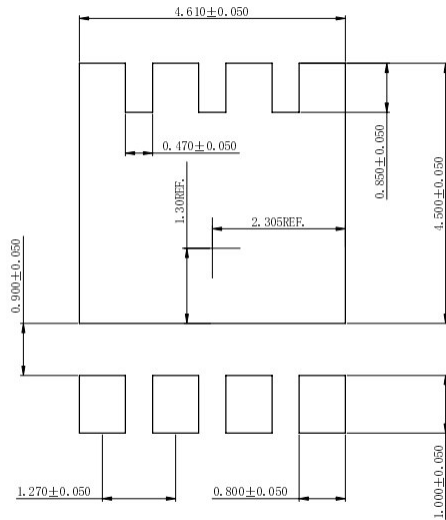


Dimensions-PDFNWB5x6-8L



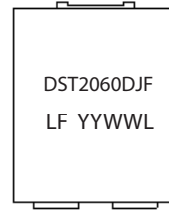
| Symbol | Millimeters | |
|--------|-------------|-------|
| | Min | Max |
| A | 0.900 | 1.000 |
| A3 | 0.254 REF | |
| D | 4.944 | 5.096 |
| E | 5.974 | 6.126 |
| D1 | 3.910 | 4.110 |
| E1 | 3.375 | 3.575 |
| D2 | 4.824 | 4.976 |
| E2 | 5.674 | 5.826 |
| k | 1.190 | 1.390 |
| b | 0.350 | 0.450 |
|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

Soldering Footprint



Dimensions: Millimeters

Part Numbering and Marking System

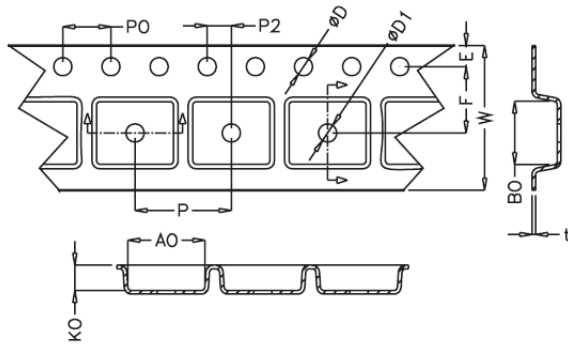


- DST = Device Type
- 20 = Forward Current (20A)
- 60 = Reverse Voltage (60V)
- DJF = Package Type
- LF = Littelfuse
- YY = Year
- WW = Week
- L = Lot Number

Packing Options

| Part Number | Marking | Packing Mode | M.O.Q |
|-------------|------------|----------------|-------|
| DST2060DJF | DST2060DJF | 3000pcs / Reel | 3000 |

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 |