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## Schottky Barrier Rectifier

DSTF3060C, $2 \times 15$ A, 60V, ITO-220AB, Common Cathode
DSTF3060C


## Pin out



## Description

Littelfuse DST series Ultra Low $\bigvee_{F}$ Schottky Barrier Rectifier is designed to meet the general requirements of commercial and industry applications by providing high temperature, low leakage and lower $\mathrm{V}_{\mathrm{F}}$ 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


## Applications

- Switching mode power
supply
- Free-Wheeling diodes
- Polarity Protection Diodes
- Guard ring for enhanced ruggedness and long term reliability
- Common cathode configuration in ITO220AB package
- DC/DC converters


## Maximum Ratings

| Parameters | Symbol | Test Conditions | Max | Unit |
| :---: | :---: | :---: | :---: | :---: |
| Peak Inverse Voltage | $\mathrm{V}_{\text {RWM }}$ | - | 60 | V |
| Average Forward Current | $\mathrm{I}_{\text {FIAV) }}$ | $50 \%$ duty cycle $@ T_{C}=60^{\circ} \mathrm{C}$ <br> rectangular wave form | 15 (per leg) | A |
|  | 30 (total device) | A |  |  |
| Peak One Cycle Non-Repetitive Surge <br> Current (per leg) | $\mathrm{I}_{\text {FSM }}$ | 8.3 ms, half Sine pulse | 170 | A |

## Electrical Characteristics

| Parameters | Symbol | Test Conditions | Typ | Max | Unit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Forward Voltage Drop (per leg) * | $V_{F 1}$ | @7.5A, Pulse, $\mathrm{T}_{\mathrm{j}}=25^{\circ} \mathrm{C}$ | 0.48 | - | V |
|  |  | @15A, Pulse, $\mathrm{T}_{j}=25^{\circ} \mathrm{C}$ | 0.59 | 0.70 |  |
|  | $V_{\text {F2 }}$ | @7.5A, Pulse, $\mathrm{T}_{\mathrm{J}}=125^{\circ} \mathrm{C}$ | 0.41 | - |  |
|  |  | @15A, Pulse, $\mathrm{T}_{\mathrm{J}}=125^{\circ} \mathrm{C}$ | 0.55 | 0.65 |  |
| Reverse Current (per leg) * | $\mathrm{I}_{\mathrm{R} 1}$ | $@ V_{R}=$ rated $\mathrm{V}_{\mathrm{R}} \mathrm{T}_{\mathrm{J}}=25^{\circ} \mathrm{C}$ | 0.024 | 1.2 | mA |
|  | $\mathrm{I}_{\text {R2 }}$ | $@ V_{R}=$ rated $V_{R} T_{j}=125^{\circ} \mathrm{C}$ | 14 | 45 |  |
| Junction Capacitance (per leg) | $\mathrm{C}_{\text {T }}$ | $@ V_{R}=5 \mathrm{~V}, \mathrm{~T}_{\mathrm{C}}=25^{\circ} \mathrm{C} \mathrm{r}_{\text {fSI }} \mathrm{G}=1 \mathrm{MHz}$ | 712 | - | pF |
| RSM Isolation Voltage$\begin{gathered} (\mathrm{t}=1.0 \text { second, } \mathrm{R} . \mathrm{H} .<=30 \%, \\ \mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C} \text { ) } \end{gathered}$ | $\mathrm{V}_{\text {ISO }}$ | Clip mounting, the epoxy body away from the heatsink edge by more than $0.110^{\prime \prime}$ along the lead direction. | - | 4500 | V |
|  |  | Clip mounting, the epoxy body is inside the heatsink. | - | 3500 |  |
|  |  | Screw mounting, the epoxy body is inside the heatsink. | - | 1500 |  |

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

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Thermal-Mechanical Specifications

| Parameters | Symbol | Test Conditions | Max | Unit |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Junction Temperature | $\mathrm{T}_{\mathrm{J}}$ |  | -55 to +150 | ${ }^{\circ} \mathrm{C}$ |  |
| Storage Temperature | $\mathrm{T}_{\text {stg }}$ |  | -55 to +150 | ${ }^{\circ} \mathrm{C}$ |  |
| Thermal Resistance Junction to <br> Case (per leg) | $\mathrm{R}_{\text {thjc }}$ | DC operation | 6.0 | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |  |
| Approximate Weight | wt |  | 2 | g |  |
| Case Style | ITO-220AB |  |  |  |  |

Figure 1:Typical Forward Characteristics


Figure 2: Typical Reverse Characteristics


Figure 3:Typical Junction Capacitance


Dimensions- ITO-220AB


| Symbol | Millimeters |  |  |
| :---: | :---: | :---: | :---: |
|  | Min | Typ | Max |
| A | 4.30 | 4.50 | 4.70 |
| A1 | 1.10 | 1.30 | 1.50 |
| A2 | 2.80 | 3.00 | 3.20 |
| A3 | 2.50 | 2.70 | 2.90 |
| b | 0.50 | 0.60 | 0.75 |
| b1 | 1.10 | 1.20 | 1.35 |
| b2 | 1.50 | 1.60 | 1.75 |
| b3 | 1.20 | 1.30 | 1.45 |
| b4 | 1.60 | 1.70 | 1.85 |
| c | 0.55 | 0.60 | 0.75 |
| D | 14.80 | 15.00 | 15.20 |
| E | 9.96 | 10.16 | 10.36 |
| e |  | 2.55 |  |
| e1 |  | 5.10 |  |
| H1 | 6.50 | 6.70 | 6.90 |
| L | 12.70 | 13.20 | 13.70 |
| L1 | 1.60 | 1.80 | 2.00 |
| L2 | 0.80 | 1.00 | 1.20 |
| L3 | 0.60 | 0.80 | 1.00 |
| ØP1 | 3.30 | 3.50 | 3.70 |
| ØP2 | 2.99 | 3.19 | 3.39 |
| Q | 2.50 | 2.70 | 2.90 |
| $\theta 1$ |  | $5^{\circ}$ |  |
| $\theta 2$ |  | $4^{\circ}$ |  |
| $\theta 3$ |  | $10^{\circ}$ |  |
| $\theta 4$ |  | $5^{\circ}$ |  |
| $\theta 5$ |  | $5^{\circ}$ |  |

## Packing Options

| Part Number | Marking | Packing Mode | M.O.0 |
| :---: | :---: | :---: | :---: |
| DSTF3060C | DSTF3060C | 50pcs /Tube | 1000 |

Tube Specification


Part Numbering and Marking System


