Schottky Diode

High Performance Schottky Diode
Low Loss and Soft Recovery
Common Cathode

Part number
DSB 20 I 15 PA

Features / Advantages:
- Very low Vf
- Extremely low switching losses
- low Irm values
- Improved thermal behaviour
- High reliability circuit operation
- Low voltage peaks for reduced protection circuits
- Low noise switching

Applications:
- Rectifiers in switch mode power supplies (SMPS)
- Free wheeling diode in low voltage converters

Package:
- Housing: TO-220
- Industry standard outline
- Epoxy meets UL 94V-0
- RoHS compliant

Symbol | Definition | Conditions | Ratings | Unit
--- | --- | --- | --- | ---
V_{RRM} | max. repetitive reverse voltage | T_{VJ} = 25°C | max. | 15 | V
I_r | reverse current | V_r = 15V | typ. | 10 | μA
V_F | forward voltage | I_F = 20A | max. | 0.48 | V
I_F | forward current | I_F = 40A | typ. | 0.60 | V
I_{FAV} | average forward current | rectangular, d = 0.5 | max. | 0.39 | V
V_{FB} | threshold voltage | T_{VJ} = 150°C | min. | 0.23 | V
R_{EJC} | thermal resistance junction to case | | typ. | 1.75 | kΩ
T_{VJ} | virtual junction temperature | T_c = 130°C | typ. | -55 | °C
P_{tot} | total power dissipation | T_c = 25°C | max. | 70 | W
I_{FRRM} | max. forward surge current | t = 10 ms (50 Hz), sine | max. | 160 | A
C_j | junction capacitance | V_r = tbd V, f = 1 MHz | max. | tbd | pF

IXYS reserves the right to change limits, conditions and dimensions.
Data according to IEC 60747 and per diode unless otherwise specified.
symbol | definition | conditions | ratings
---|---|---|---
I_{RMS} | RMS current per pin | | 35 | A
R_{thCH} | thermal resistance case to heatsink | | 0.50 | K/W
T_{stg} | storage temperature | | -55 | 150 | °C
Weight | | | 2 | g
M_0 | mounting torque | | 0.4 | 0.8 | Nm
F_C | mounting force with clip | | 20 | 60 | N

1) I_{RMS} is typically limited by: 1. pin-to-chip resistance; or by 2. current capability of the chip.
In case of 1, a common cathode/anode configuration and a non-isolated backside, the whole current capability can be used by connecting the backside.

Product Marking

Marking on product: abcdef
Logo: IXYS
Date Code: YYYY
Assembly Code: XXXXX

Part number

D = Diode
S = Schottky Diode
B = ultra low VF
20 = Current Rating [A]
I = Common Cathode
15 = Reverse Voltage [V]
PA = TO-220AC (2)

Ordering | Part Name | Marking on Product | Delivering Mode | Base Qty | Code Key
---|---|---|---|---|---
Standard | DSB 20 I 15 PA | DSB20I15PA | Tube | | |

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Outlines TO-220

<table>
<thead>
<tr>
<th>Dim.</th>
<th>Millimeter</th>
<th>Inches</th>
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