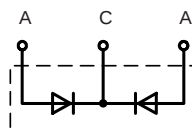


# Power Schottky Rectifier

## Preliminary Data

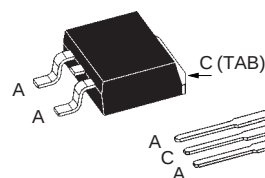
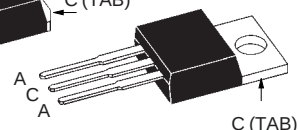
| $V_{RSM}$<br>V | $V_{RRM}$<br>V | Type           |
|----------------|----------------|----------------|
| 25             | 25             | DSSK 38-0025B  |
| 25             | 25             | DSSK 38-0025BS |



$$I_{FAV} = 2 \times 20 \text{ A}$$

$$V_{RRM} = 25 \text{ V}$$

$$V_F = 0.40 \text{ V}$$

**TO-263 AB**  
 (...S-Type)

**TO-220 AC**


A = Anode, C = Cathode, TAB = Cathode

| Symbol         | Conditions                                                                                     | Maximum Ratings |                  |
|----------------|------------------------------------------------------------------------------------------------|-----------------|------------------|
| $I_{FRMS}$     |                                                                                                | 35              | A                |
| $I_{FAV}$      | $T_C = 130^\circ\text{C}$ ; rectangular, $d = 0.5$                                             | 20              | A                |
| $I_{FAV}$      | $T_C = 130^\circ\text{C}$ ; rectangular, $d = 0.5$ ; per device                                | 40              | A                |
| $I_{FSM}$      | $T_{VJ} = 45^\circ\text{C}$ ; $t_p = 10 \text{ ms}$ (50 Hz), sine                              | 330             | A                |
| $E_{AS}$       | $I_{AS} = \text{tbd A}$ ; $L = 180 \mu\text{H}$ ; $T_{VJ} = 25^\circ\text{C}$ ; non repetitive | tbd             | mJ               |
| $I_{AR}$       | $V_A = 1.5 \cdot V_{RRM}$ typ.; $f = 10 \text{ kHz}$ ; repetitive                              | tbd             | A                |
| $(dv/dt)_{cr}$ |                                                                                                | tbd             | V/ $\mu\text{s}$ |
| $T_{VJ}$       |                                                                                                | -55...+150      | $^\circ\text{C}$ |
| $T_{VJM}$      |                                                                                                | 150             | $^\circ\text{C}$ |
| $T_{stg}$      |                                                                                                | -55...+150      | $^\circ\text{C}$ |
| $P_{tot}$      | $T_C = 25^\circ\text{C}$                                                                       | 90              | W                |
| $M_d$          | mounting torque                                                                                | 0.4...0.6       | Nm               |
| Weight         | typical                                                                                        | 2               | g                |

### Features

- International standard package
- Very low  $V_F$
- Extremely low switching losses
- Low  $I_{RM}$ -values
- Epoxy meets UL 94V-0

### Applications

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

### Advantages

- High reliability circuit operation
- Low voltage peaks for reduced protection circuits
- Low noise switching
- Low losses

Dimensions see Outlines.pdf

| Symbol                   | Conditions                                                                                                                                                       | Characteristic Values |             |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------|
|                          |                                                                                                                                                                  | typ.                  | max.        |
| $I_R$ ①                  | $T_{VJ} = 25^\circ\text{C}$ $V_R = V_{RRM}$<br>$T_{VJ} = 100^\circ\text{C}$ $V_R = V_{RRM}$                                                                      | 20<br>80              | mA<br>mA    |
| $V_F$                    | $I_F = 20 \text{ A}$ ; $T_{VJ} = 125^\circ\text{C}$<br>$I_F = 20 \text{ A}$ ; $T_{VJ} = 25^\circ\text{C}$<br>$I_F = 40 \text{ A}$ ; $T_{VJ} = 125^\circ\text{C}$ | 0.40<br>0.48<br>0.58  | V<br>V<br>V |
| $R_{thJC}$<br>$R_{thCH}$ | 0.5                                                                                                                                                              | 1.4                   | K/W<br>K/W  |

Pulse test: ① Pulse Width = 5 ms, Duty Cycle < 2.0 %  
 Data according to IEC 60747 and per diode unless otherwise specified

IXYS reserves the right to change limits, Conditions and dimensions.