

Power Schottky Rectifier

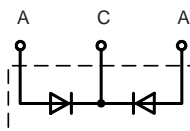
$$I_{FAV} = 2 \times 20 \text{ A}$$

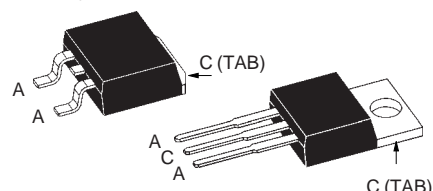
$$V_{RRM} = 25 \text{ V}$$

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

Preliminary Data

| V_{RSM} | V_{RRM} | Type |
|-----------|-----------|----------------|
| V | V | |
| 25 | 25 | DSSK 38-0025B |
| 25 | 25 | DSSK 38-0025BS |


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/ μs |
| 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 | $T_{VJ} = 25^\circ\text{C}$ $V_R = V_{RRM}$ | | 20 mA |
| | $T_{VJ} = 100^\circ\text{C}$ $V_R = V_{RRM}$ | | 80 mA |
| V_F | $I_F = 20 \text{ A}$; $T_{VJ} = 125^\circ\text{C}$ | | 0.40 V |
| | $I_F = 20 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$ | | 0.48 V |
| | $I_F = 40 \text{ A}$; $T_{VJ} = 125^\circ\text{C}$ | | 0.58 V |
| R_{thJC} | | | 1.4 KW |
| R_{thCH} | 0.5 | | KW |

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.