



**THE DATASHEET OF  
MEK150-04DA**



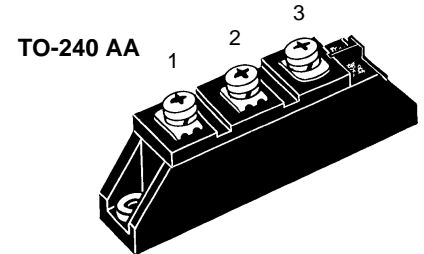
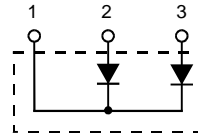
# Fast Recovery Epitaxial Diode (FRED) Module

## MEK 150-04 DA

$V_{RRM} = 400 \text{ V}$   
 $I_{FAV} = 150 \text{ A}$   
 $t_{rr} = 300 \text{ ns}$

Preliminary data

| $V_{RSM}$<br>V | $V_{RRM}$<br>V | Type         |
|----------------|----------------|--------------|
| 400            | 400            | MEK 150-04DA |



| Symbol     | Conditions  | Maximum Ratings |                  |
|------------|---|-----------------|------------------|
| $I_{FRMS}$ | $T_C = 100^\circ\text{C}$ ; rectangular, $d = 0.5$              | 200             | A                |
| $I_{FAVM}$ |   | 150             | A                |
| $I_{FSM}$  | $T_{VJ} = 45^\circ\text{C}$ ; $t = 10 \text{ ms}$ (50 Hz), sine | 1200            | A                |
| $T_{VJ}$   |   | -40...+150      | $^\circ\text{C}$ |
| $T_{VJM}$  |   | 175             | $^\circ\text{C}$ |
| $T_{stg}$  |   | -40...+150      | $^\circ\text{C}$ |
| $P_{tot}$  | $T_C = 25^\circ\text{C}$  | 360             | W                |
| $V_{ISOL}$ | 50/60 Hz, RMS; $I_{ISOL} \leq 1 \text{ mA}$                     | 3600            | V~               |
| $M_d$      | Mounting torque with screw M5                                   | 2.5-4/22-35     | Nm/lb.in.        |
|            | Terminal connection torque                                      | 2.5-4/22-35     | Nm/lb.in.        |
| Weight     | typical   | 90              | g                |

### Features

- International standard package with DCB ceramic base plate
- Planar passivated chips
- Short recovery time
- Low switching losses
- Soft recovery behaviour
- Isolation voltage 3600 V~
- UL registered E 72873

### Applications

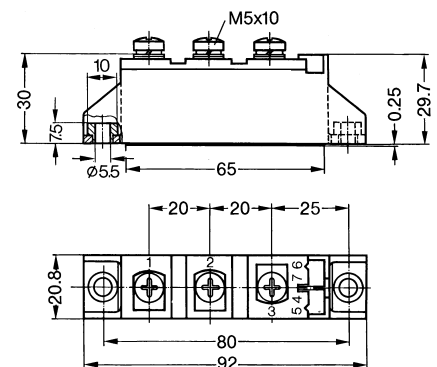
- Antiparallel diode for high frequency switching devices
- Free wheeling diode in converters and motor control circuits
- Inductive heating and melting
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners and welders

### Advantages

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



| Symbol     | Conditions   | Characteristic Values |      |
|------------|--|-----------------------|------|
|            |  | typ.                  | max. |
| $I_R$      | $T_{VJ} = 25^\circ\text{C}$ $V_R = V_{RRM}$<br>$T_{VJ} = 150^\circ\text{C}$ $V_R = V_{RRM}$                            | 2.0                   | mA   |
|            |  | 8.5                   | mA   |
| $V_F$      | $I_F = 300 \text{ A}$ ; $T_{VJ} = 150^\circ\text{C}$<br>$T_{VJ} = 25^\circ\text{C}$                                    | 1.4                   | V    |
|            |  | 1.6                   | V    |
| $R_{thJC}$ | 0.08   | 0.35                  | K/W  |
| $R_{thCH}$ |  | K/W                   |      |
| $I_{RM}$   | $V_R = 100 \text{ V}$ ; $I_F = 200 \text{ A}$ ; $-di_F/dt = 100 \text{ A}/\mu\text{s}$<br>$T_{VJ} = 100^\circ\text{C}$ | 11                    | 14 A |

### Dimensions in mm (1 mm = 0.0394")



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