

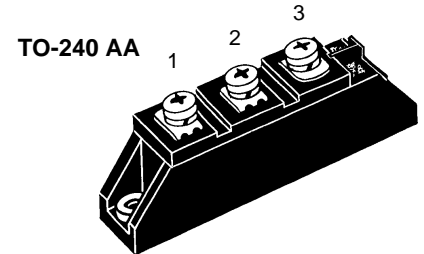
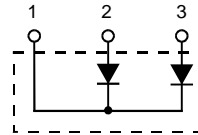
Fast Recovery Epitaxial Diode (FRED) Module

MEK 150-04 DA

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

Preliminary data

V_{RSM} V	V_{RRM} 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	$T_{VJ} = 25^\circ\text{C}$ $V_R = V_{RRM}$ $T_{VJ} = 150^\circ\text{C}$ $V_R = V_{RRM}$	2.0	mA
		8.5	mA
V_F	$I_F = 300 \text{ A}$; $T_{VJ} = 150^\circ\text{C}$ $T_{VJ} = 25^\circ\text{C}$	1.4	V
		1.6	V
R_{thJC}	0.08	0.35	K/W
R_{thCH}		K/W	
I_{RM}	$V_R = 100 \text{ V}$; $I_F = 200 \text{ A}$; $-di_F/dt = 100 \text{ A}/\mu\text{s}$ $T_{VJ} = 100^\circ\text{C}$	11	14

Dimensions in mm (1 mm = 0.0394")

