IXYS

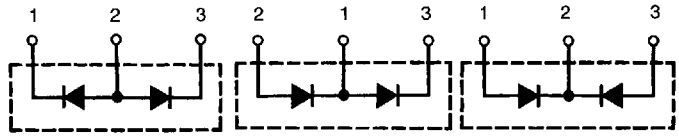
Fast Recovery Epitaxial Diode (FRED) Modules

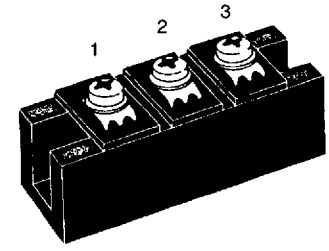
MEA 160-06DA
MEE 160-06DA
MEK 160-06DA

I_{FAVM} = 162 A
V_{RRM} = 600 V
t_{rr} = 250 ns

Preliminary data

V_{RSM} V	V_{RRM} V	Type
600	600	MEA 160-06DA
		MEE 160-06DA
		MEK 160-06DA





Symbol	Test Conditions	Maximum Ratings	
I_{FRMS}	T_{VJ} = 125°C; T_S = 65°C	229	A
I_{FAVM} ①	T_{VJ} = 125°C; T_S = 65°C; rectangular, d = 0.5	162	A
I_{FM}	T_{VJ} = 125°C; T_S = 65°C	650	A
I_{FSM}	T_{VJ} = 45°C; t = 10 ms (50 Hz), sine	1200	A
	t = 8.3 ms (60 Hz), sine	1280	A
	T_{VJ} = 150°C; t = 10 ms (50 Hz), sine	1080	A
	t = 8.3 ms (60 Hz), sine	1190	A
$\int i^2dt$	T_{VJ} = 45°C t = 10 ms (50 Hz), sine	7200	A^2s
	t = 8.3 ms (60 Hz), sine	6800	A^2s
	T_{VJ} = 150°C; t = 10 ms (50 Hz), sine	5800	A^2s
	t = 8.3 ms (60 Hz), sine	5900	A^2s
T_{VJ}		-40...+150	°C
T_{stg}		-40...+125	°C
T_{Smax}		110	°C
P_{tot}	T_S = 25°C; T_{VJ} = 150°C	500	W
V_{ISOL}	50/60 Hz, RMS t = 1 min	3000	V~
	$I_{ISOL} \leq$ 1 mA t = 1 s	3600	V~
M_d	Mounting torque (M6)	2.25-2.75/20-25	Nm/lb.in.
	Terminal connection torque (M6)	4.5-5.5/40-48	Nm/lb.in.
d_S	Creeping distance on surface	12.7	mm
d_A	Strike distance through air	9.6	mm
a	Maximum allowable acceleration	50	m/s^2
Weight		150	g

Symbol	Test Conditions	Characteristic Values typ.	max.	
I_R	T_{VJ} = 25°C $V_R = V_{RRM}$		12	mA
	T_{VJ} = 25°C $V_R = 0.8 \cdot V_{RRM}$		3	mA
	T_{VJ} = 125°C $V_R = 0.8 \cdot V_{RRM}$		60	mA
V_F	I_F = 150 A; T_{VJ} = 125°C		1.20	V
	T_{VJ} = 25°C		1.42	V
	I_F = 260 A; T_{VJ} = 125°C		0.87	V
	T_{VJ} = 25°C		1.56	V
V_{T0}	For power-loss calculations only		0.87	V
r_T	T_{VJ} = 125°C; I_{F1} = 150 A; I_{F2} = 260 A		1.98	mΩ
R_{thJS}			0.228	K/W
t_{rr}	I_F = 150 A, V_R = 300 V, -di/dt = 400 A/µs; T_{VJ} = 100°C	250		ns
I_{RM}	T_{VJ} = 25°C		28	A
	T_{VJ} = 100°C		42	A

① I_{FAVM} rating includes reverse blocking losses at T_{VJM}, V_R = 0.6 V_{RRM}, duty cycle d = 0.5
Data according to DIN/IEC 747
IXYS reserves the right to change limits, test conditions and dimensions

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

Dimensions in mm (1 mm = 0.0394")