XI'AN IR-PERI
Company

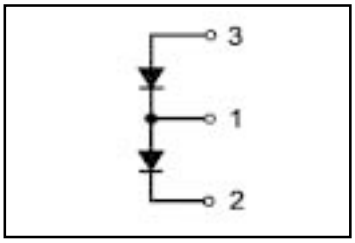
PRELIMINARY

MDC110TA120/180

Diode Modules Add -A -PAK

Features

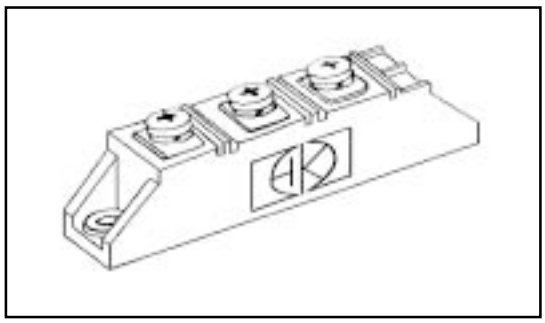
- International standard package
  With DBC ceramic base plate
- Planar passivated chips
- High surge capability
- UL recongnition pending



V_{RRM} =1200V- 1800V
I_{FAVM} =2x110A
I_{FRMS}=2x180A

Benefits

- Supplies for DC power equipment
- DC supply for PWM inverter
- Field supply for DC motors
- Battery DC power supplies



Absolute Maximum Ratings

Symbol	Test Conditions	Max.	Units
V_{RRM}		1200,1400,1600,1800	V
I_{FRMS}	T_{VJM}=150 °C	180	A
I_{FAVM}	T_C=85 °C;180° sine	110	A
	T_C=100 °C;180° sine	95	A
I_{FSM}	T_{VJ}=45 °C; t=10ms (50 Hz),sine	1700	A
	V_R=0 t=8.3ms (60 Hz),sine	1950	A
	T_{VJ}=150 °C; t=10ms (50 Hz),sine	1540	A
	V_R=0 t=8.3ms (60 Hz),sine	1800	A
I^2t	T_{VJ}=45 °C; t=10ms (50 Hz),sine	14400	A^2s
	V_R=0 t=8.3ms (60 Hz),sine	15700	A^2s
	T_{VJ}=150 °C; t=10ms (50 Hz),sine	11800	A^2s
	V_R=0 t=8.3ms (60 Hz),sine	13400	A^2s
V_{ISOL}	RMS Isolation Voltage, Any Terminal To Case, t=1 min	2500	V
T_{VJ}		-40 to +150	°C
T_{VJM}		150	
T_{STG}		-40 to +125	

Termal / Mechanical Characteristics

	Parameter	Typ.	Max.	Units
$R_{\theta JS}$	Termal Resistance, Junction-to- Sink DC	-	0.275	
$R_{\theta JC}$	Termal Resistance, Junction-to- Case DC	-	0.175	°C/W
$R_{\theta CS}$	Termal Resistance, Csar-to- Sink- Module	0.1	-	
	Mouting Torque, Case-to-Heatsink	-	4.0	N.m
	Mouting Torque, Case-to-Terminal 1,2 & 3	-	3.0	
	Weight of Module	100	-	g

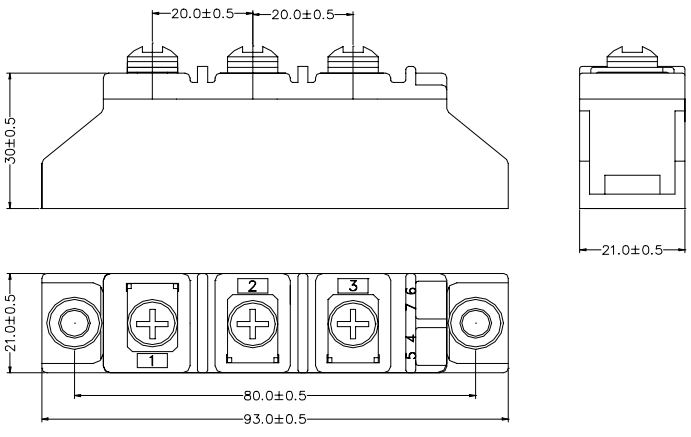
Electrical Characteristics (unless otherwise specified)

	Parameter	Min.	Typ.	Max.	Units	Conditions
I_R	Diode Leaking Current	-	-	1	mA	T_{VJ}=25 °C V_R=V_{RRM}
		-	-	15	mA	T_{VJ}=150 °C V_R=V_{RRM}
V_F	Diode Forward Voltage	-	-	1.5	V	I_F=200A; T_{VJ}=25 °C
V_{TO}	For power-loss calculations only	-	-	0.8	V	
r_T		-	-	2.3	mΩ	T_{VJ}=125 °C
Q_S				170	μC	T_{VJ}=125 °C;I_F=50A,
I_{RM}				45	A	-di/dt=0.6A/μs

Voltage Ratings

Voltage Code	V_{RRM}(V)	V_{RSM}(V)	I_{RRM} T_J=25 °C(mA)
120	1200	1300	1.0
140	1400	1500	1.0
160	1600	1700	1.0
180	1800	1900	1.0

Case Outline - a-a-pak



Dimensions are shown in millimeters