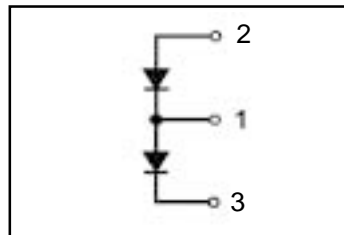


## Features

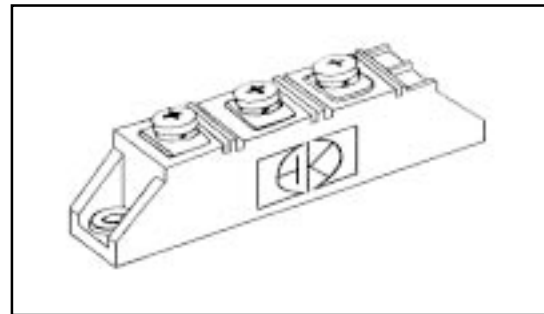
- International standard package  
With DBC ceramic base plate
- Planar passivated chips
- High surge capability
- UL recognition pending



**VRRM =1200V- 1800V**  
**IFAVM =2x40A**  
**IFRMS=2x65A**

## 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
VRRM		1200,1400,1600,1800	V
IFRMS	T <sub>VJM</sub> =150 °C	65	A
IFAVM	T <sub>c</sub> =85 °C;180° sine	40	A
	T <sub>c</sub> =100 °C;180° sine	36	A
IFSM	T <sub>VJ</sub> =45 °C; t=10ms (50 Hz),sine	750	A
	V <sub>R</sub> =0 t=8.3ms (60 Hz),sine	850	A
	T <sub>VJ</sub> =150 °C; t=10ms (50 Hz),sine	580	A
	V <sub>R</sub> =0 t=8.3ms (60 Hz),sine	680	A
I <sup>2</sup> t	T <sub>VJ</sub> =45 °C; t=10ms (50 Hz),sine	2100	A <sup>2</sup> s
	V <sub>R</sub> =0 t=8.3ms (60 Hz),sine	2400	A <sup>2</sup> s
	T <sub>VJ</sub> =150 °C; t=10ms (50 Hz),sine	1700	A <sup>2</sup> s
	V <sub>R</sub> =0 t=8.3ms (60 Hz),sine	1900	A <sup>2</sup> s
V <sub>ISOL</sub>	RMS Isolation Voltage, Any Terminal To Case, t=1 min	2500	V
T <sub>VJ</sub>		-40 to +150	°C
T <sub>VJM</sub>		150	
T <sub>STG</sub>		-40 to +125	

# MDC40TA120/180P

## Thermal / Mechanical Characteristics

	Parameter	Typ.	Max.	Units
R <sub>θJS</sub>	Thermal Resistance, Junction-to- Sink DC	-	0.6	
R <sub>θJC</sub>	Thermal Resistance, Junction-to- Case DC	-	0.5	°C/W
R <sub>θCS</sub>	Thermal Resistance, Case-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 <sub>R</sub>	Diode Leaking Current	-	-	1	mA	T <sub>VJ</sub> =25 °C V <sub>R</sub> =V <sub>RRM</sub>
		-	-	10	mA	T <sub>VJ</sub> =125 °C V <sub>R</sub> =V <sub>RRM</sub>
V <sub>F</sub>	Diode Forward Voltage	-	-	1.38	V	I <sub>F</sub> =80A; T <sub>VJ</sub> =25 °C
V <sub>TO</sub>	For power-loss calculations only	-	-	0.8	V	T <sub>VJ</sub> =125 °C
r <sub>T</sub>		-	-	5.9	mΩ	
Q <sub>S</sub>				90	μC	T <sub>VJ</sub> =125 °C; I <sub>F</sub> =50A,
I <sub>RM</sub>				11	A	-di/dt=0.6A/μs

## Voltage Ratings

Voltage Code	V <sub>RRM</sub> (V)	V <sub>RSM</sub> (V)	I <sub>RRM</sub> T <sub>J</sub> =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

