

Rectifier Diode Module

Reverse Voltage : 1200 V - 1800 V

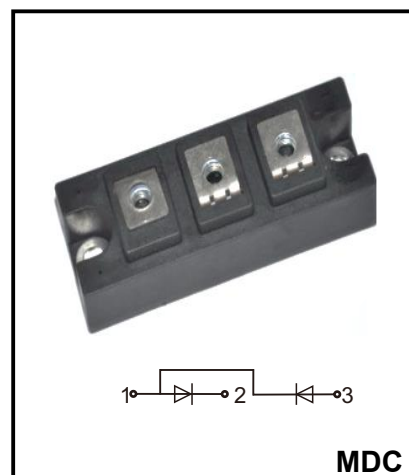
Forward Current : 200 A

Features

- ◆Industrial Standard Package
- ◆High Surge Current Capability
- ◆Low Leakage Current
- ◆Electrically Isolated by DBC Ceramic

Applications

- ◆Field Supply For DC Motors
- ◆DC supply for PWM inverter
- ◆Various Rectifiers



ABSOLUTE MAXIMUM RATINGS ($T_c=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	MDC200-12	MDC200-16	MDC200-18	Unit
V _{RRM}	Maximum Repetitive Peak Reverse Voltage		1200	1600	1800	V
V _{RMS}	Maximum RMS voltage		1300	1700	1900	V
V _{DC}	Maximum DC Blocking Voltage		1200	1600	1800	V
I _{F(AV)}	Average Forward current	Single phase, half wave, 180℃conduction, Tc= 100℃	200			A
I _{F(RMS)}	R.M.S. Forward current		314			
I _{FSM}	Non-Repetitive Surge	1/2 cycle, 50HZ, peak value Tj =150℃	7.50			KA
	Forward current	1/2 cycle, 60HZ, peak value Tj =150℃	7.55			
I ² t	I ² t(For Fusing)	1/2 cycle, 50HZ, peak value Tj =150℃	281			KA ² S
		1/2 cycle, 60HZ, peak value Tj =150℃	265			KA ² S
T _J	Junction Temperature		-40 to +150			℃
T _{STG}	Storage Temperature Range		-40 to +125			℃
V _{ISO}	Isolation Breakdown Voltage	Ac, 50Hz(R.M.S), t=1minute	2500			V
Torque	Module-to-Sink	Recommended(M6)	6.0			N.m
Torque	Module Electrodes	Recommended(M6)	6.0			N.m
R _{th(J-C)}	Junction-to-case Thermal Resistance		0.210			K /W
R _{th(C-H)}	case-to-Heatsink Thermal Resistance		0.08			K /W
Weight			230			g

ELECTRICAL AND THERMAL CHARACTERISTICS($T_c=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{RRM}	Max.Reverse Leakage current	$V_R=V_{RRM}, T_J=150^{\circ}\text{C}$	-	-	12	mA
V_{FM}	Forward Voltage	$I_F=600\text{A}$	-	-	1.35	V
V_{FO}	For power-loss calculations only			-	0.75	V
r_F	$T_J=150^{\circ}\text{C}$			-	0.88	mΩ

CHARACTERISTIC CURVES

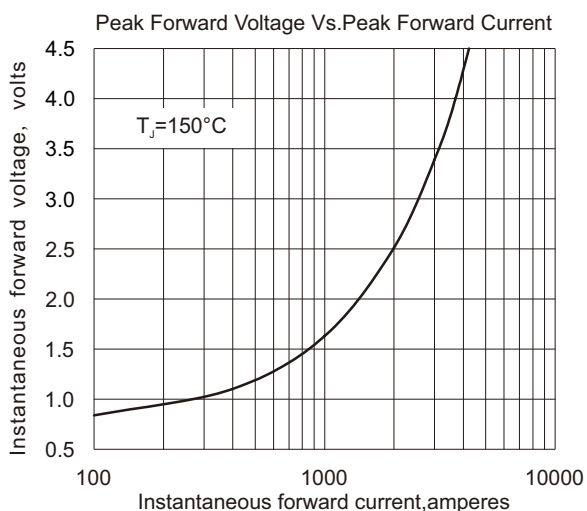


Fig.1

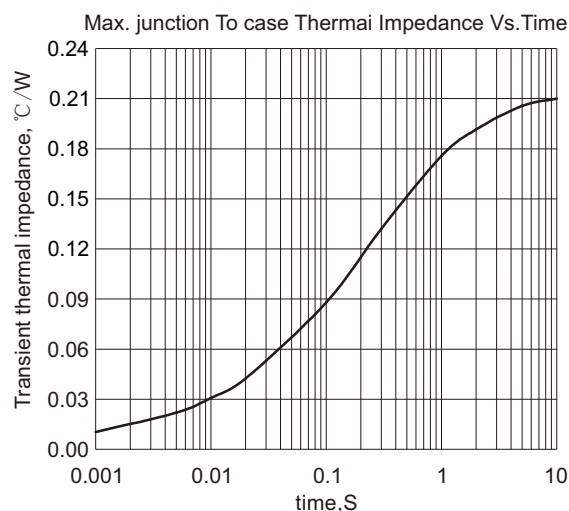


Fig.2

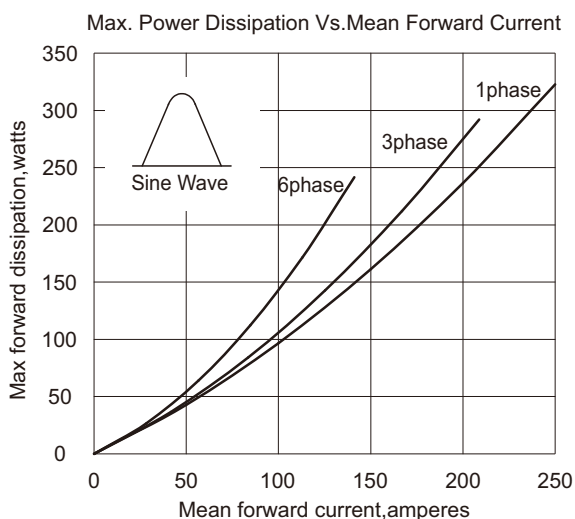


Fig.3

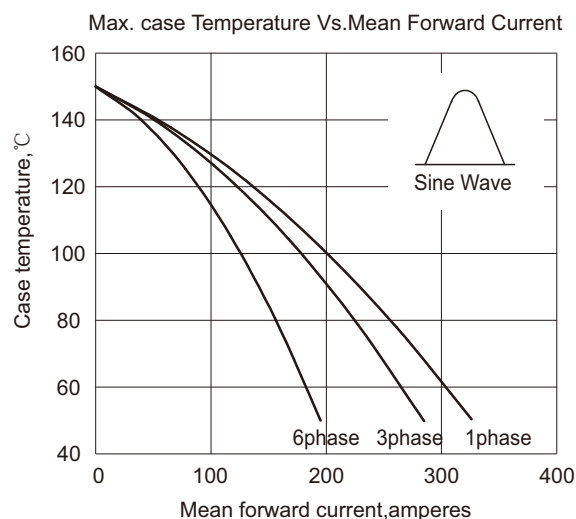


Fig.4

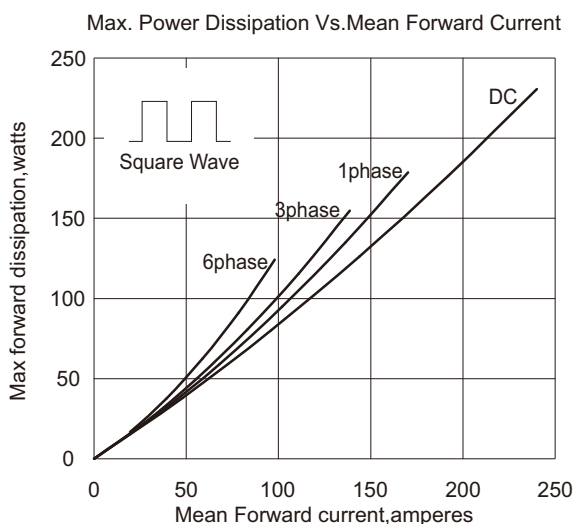


Fig.5

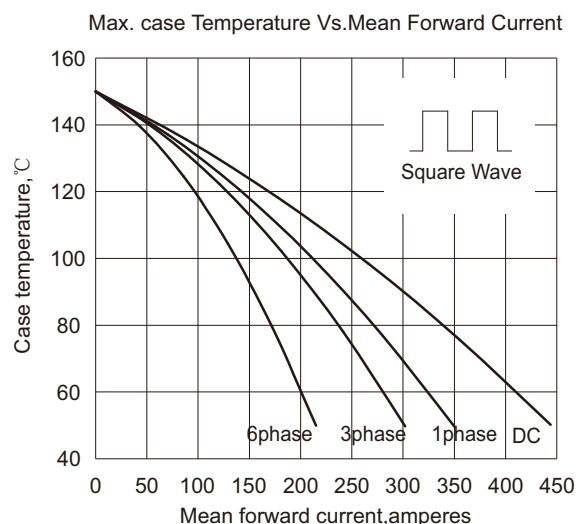


Fig.6

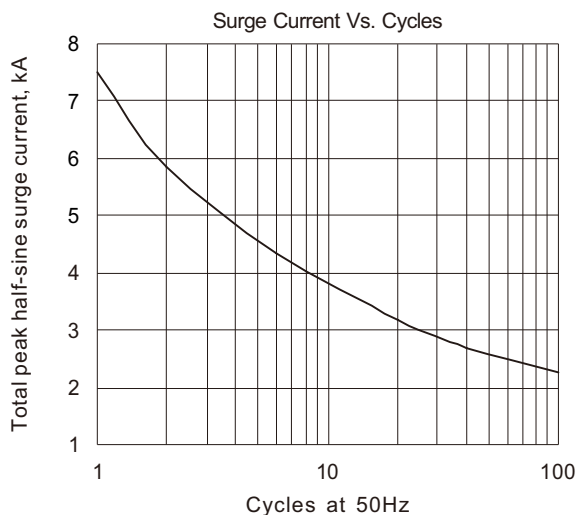


Fig.7

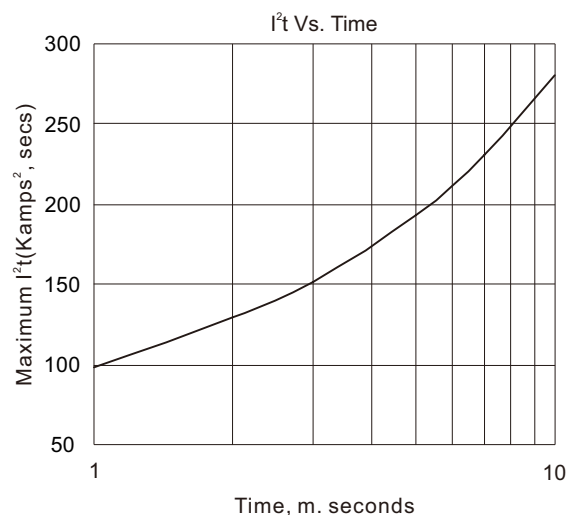


Fig.8

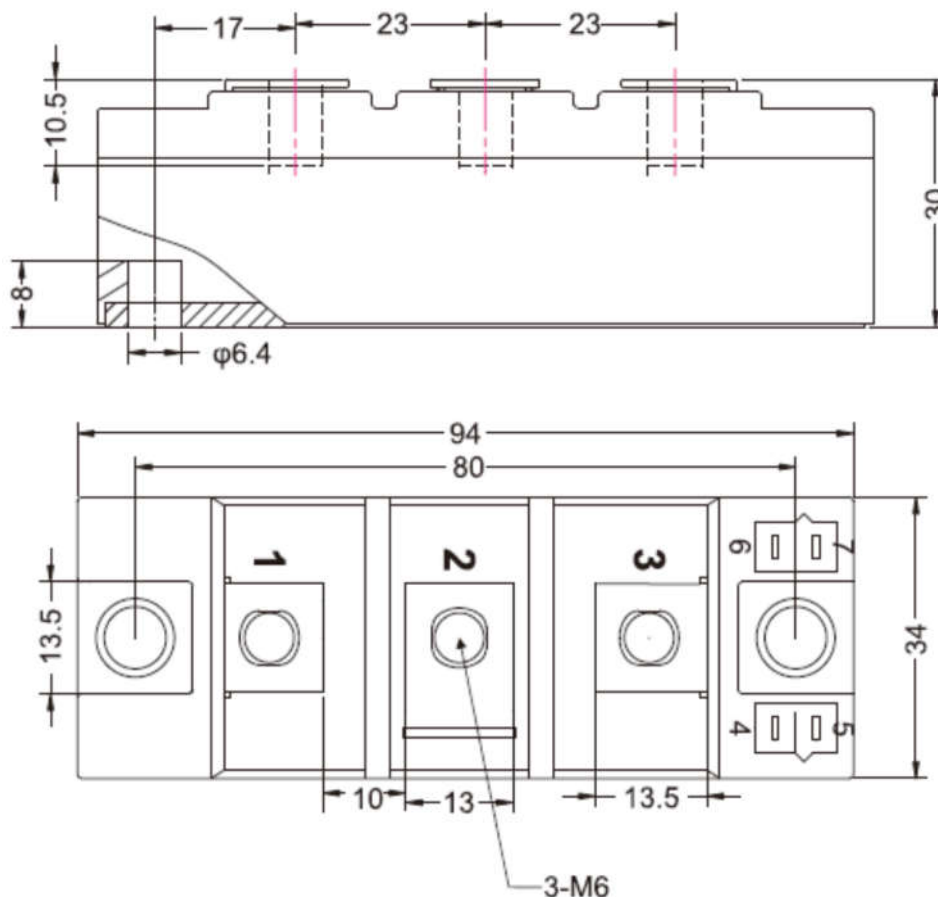
Ordering information

Model name	Package	Unit Weight	Base Quantity
MDC200-XX	MDC	8.11oz(230g)	10pcs/ Box

Package Dimensions

MDC

unit: Millimeter



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