

XI'AN IR-PERI



PRELIMINARY

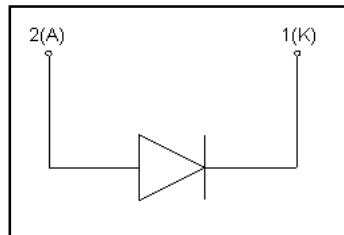
MZD600DD120S

Fast Recovery Epitaxial Diode INT -A -PAK

Soft-Fast™ Speed FRED

Features

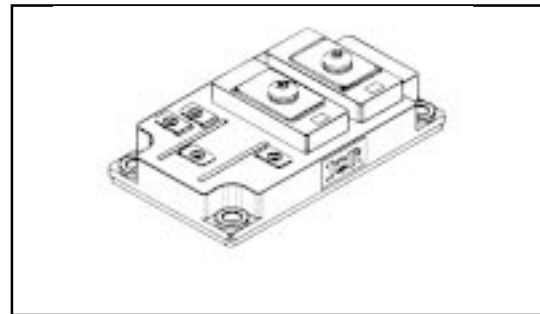
- International standard package
With DBC ceramic base plate
- Planar passivated chips
- Short recovery time
- Low switching losses
- Ultra-soft recovery behaviour
- Industry standard package
- UL recognition pending



<p>V_{RRM} = 1200V I_{FAVM} = 600 A t_{rr} = 450ns</p>

Benefits

- Antiparallel diode for high frequency switching devices
- Increased operating efficiency
- Direct mounting to heatsink
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners and welders
- Low voltage peaks for reduced protection circuits



Absolute Maximum Ratings

Symbol	Test Conditions	Max.	Units
V _{RSM} & V _{RRM}		1200	V
I _{FRMS}	T _C =75 °C	840	A
I _{FAVM}	T _C =75 °C; rectangular, d=0.5	600	A
I _{FRM}	t _p <10µs; rep. rating, pulse width limited by T _{VJM}	3300	A
I _{FSM}	T _{VJ} =45 °C; t=10ms (50 Hz),sine	6270	A
	t=8.3ms (60 Hz),sine	6990	A
	T _{VJ} =150 °C; t=10ms (50 Hz),sine	5700	A
	t=8.3ms (60 Hz),sine	6300	A
I ² t	T _{VJ} =45 °C; t=10ms (50 Hz),sine	15000	A ² s
	t=8.3ms (60 Hz),sine	15510	A ² s
	T _{VJ} =150 °C; t=10ms (50 Hz),sine	120000	A ² s
	t=8.3ms (60 Hz),sine	125550	A ² s
V _{ISOL}	RMS Isolation Voltage, Any Terminal To Case, t=1 min	2500	V
P _D	T _C =25 °C	2412	W
T _J	Operating Junction Temperature Range	-40 to +150	°C
T _{STG}	Storage Temperature Range	-40 to +125	

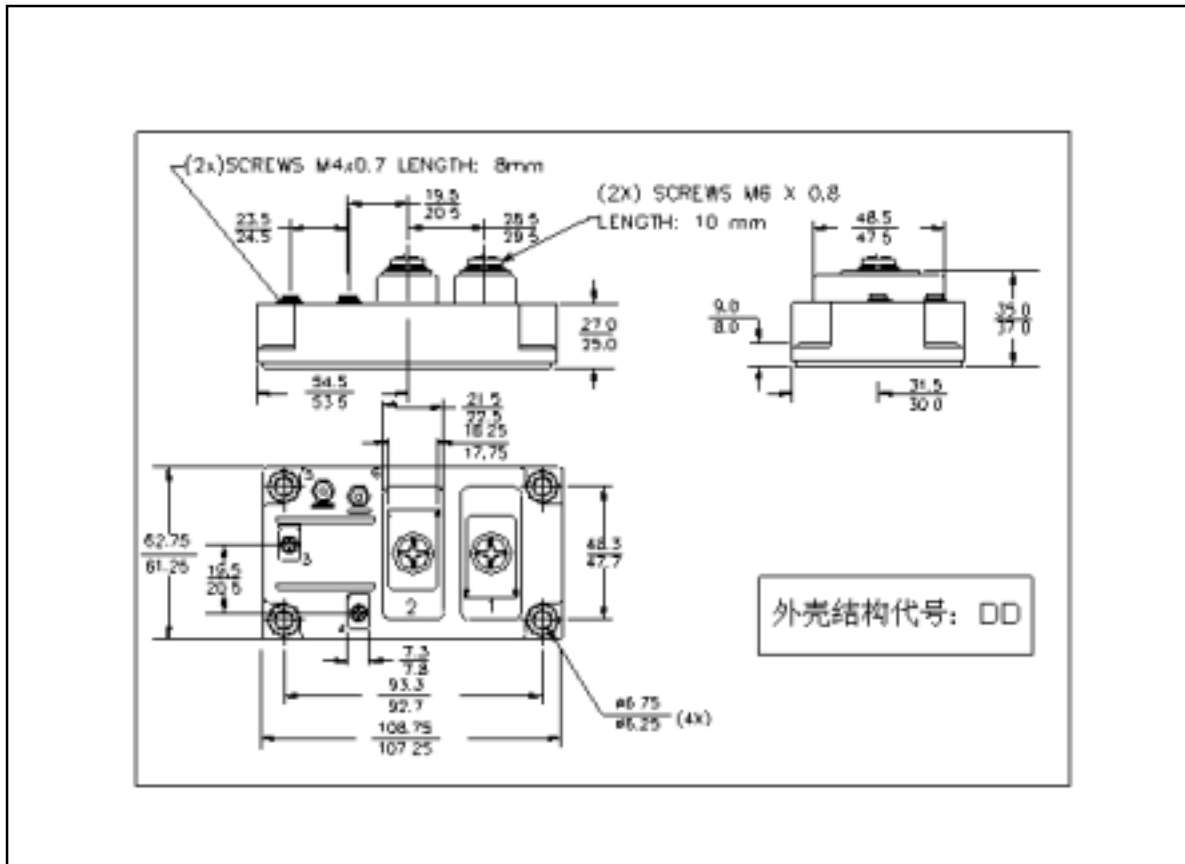
Thermal / Mechanical Characteristics

	Parameter	Typ.	Max.	Units
R _{θJS}	Thermal Resistance, Junction-to- Sink DC	-	0.051	
R _{θJC}	Thermal Resistance, Junction-to- Case DC	-	0.09	°C/W
R _{θCS}	Thermal Resistance, Case-to- Sink- Module	0.035	-	
	Mouting Torque, Case-to-Heatsink	-	4.0	N.m
	Mouting Torque, Case-to-Terminal 1,2 & 3	-	3.0	
	Weight of Module	400	-	g

Electrical Characteristics (unless otherwise specified)

	Parameter	Min.	Typ.	Max.	Units	Conditions
V _{RRM}	Reverse Breakdown Voltage	1200	-	-	V	I _R =20mA
I _R	Diode Leaking Current	-	-	20	mA	T _{VJ} =25°C V _R =V _{RRM}
		-	-	5	mA	T _{VJ} =25°C V _R =0.8V _{RRM}
		-	-	120	mA	T _{VJ} =125°C V _R =0.8V _{RRM}
V _F	Diode Forward Voltage	-	-	1.60	V	I _F =300A; T _{VJ} =125°C
		-	-	1.87	V	T _{VJ} = 25°C
		-	-	1.90	V	I _F =400A; T _{VJ} =125°C
		-	-	2.24	V	T _{VJ} = 25°C
V _{TO}	For power-loss calculations only	-	-	1.18	V	
r _T		-	-	1.15	mΩ	
trr@T _{VJ} =100°C	Diode Reverse Recovery Time	-	450	500	ns	I _F =550A
I _{RM} @T _{VJ} = 25°C	Diode Peak Reverse Current	-	-	165	A	V _R =600V
I _{RM} @T _{VJ} =100°C	Diode Peak Reverse Current	-	-	247	A	-di/dt=800A/μs

Case Outline



XIAN IR-PERI CO.,LTD.

94 Zhuque St. Xian 710061, China

Telephone 029-85215895 85217206 85271867

Fax 029-85215896

Email webmaster@irperi.com

Internet www.irperi.com