

FRD Full Bridge Module

VRRM = 600V
IFAV = 120A(2x60A)
VF = 1.6V
TRR = 100ns

Product Application:

- Switch mode Power Supply
- Inverters
- Free Wheeling Diode
- Motor Controllers
- Converters
- Inverters
- Snubber Diode
- PFC

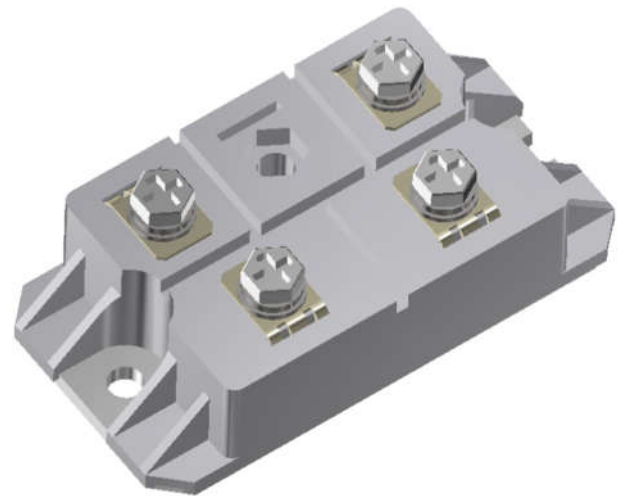
Product Features:

- Ultrafast Recovery Times
- Soft Recovery Characteristics
- Popular Module Package
- Low Forward Voltage
- Low Leakage Current
- Avalanche Energy Rated

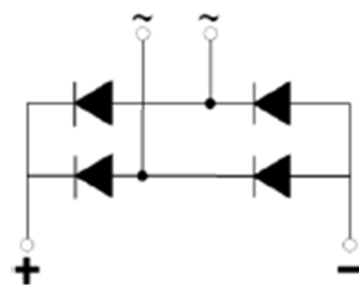
Product Benefits:

- Low Losses
- Low Noise Switching
- Cooler Operation
- Higher Reliability Systems
- Increased System Power Density

Package:



Circuit diagram



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MAXIMUM RATINGS

All Ratings: Tc = 25° C unless otherwise specified.

Symbol	Characteristic / Test Conditions	TYP	UNIT
VR	Maximum D.C. Reverse Voltage	600	Volts
VRRM	Maximum Peak Repetitive Reverse Voltage		
IF(AV)	Maximum Average Forward Current (Tc = 100°C, Duty Cycle = 0.5)	120	Amps
IFSM	Non-Repetitive Forward Surge Current (TJ = 25°C, 8.3ms)	1800	
TJ , TSTG	Operating and Storage Temperature Range	-55 to 150	° C
TL	Lead Temperature for 10 Sec	260	

STATIC ELECTRICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions		MFDB120A60		UNIT
			TYP	MAX	
VF	Forward Voltage	IF = 60A, Tj = 25°C	1.6	1.8	Volts
		IF = 60A, Tj = 150°C	1.3	1.5	
IRM	Maximum Reverse Leakage Current	VR = 600V, Tj =25°C		10	μ A
		VR = 600V, Tj =150°C		500	
Trr	Reverse Recovery Time	IF=0.5A IRM=1A IRR=0.25A TC=25°C	100	120	ns
		IF=0.5A IRM=1A IRR=0.25A TC=125°C	200	240	

THERMAL AND MECHANICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions	MFDB120A60	UNIT
RθJC	Junction-to-Case Thermal Resistance	0.35	°C/W
WT	Package Weight	150	g
Torque	Maximum Mounting Torque	5	N.m

TYPICAL PERFORMANCE CURVES

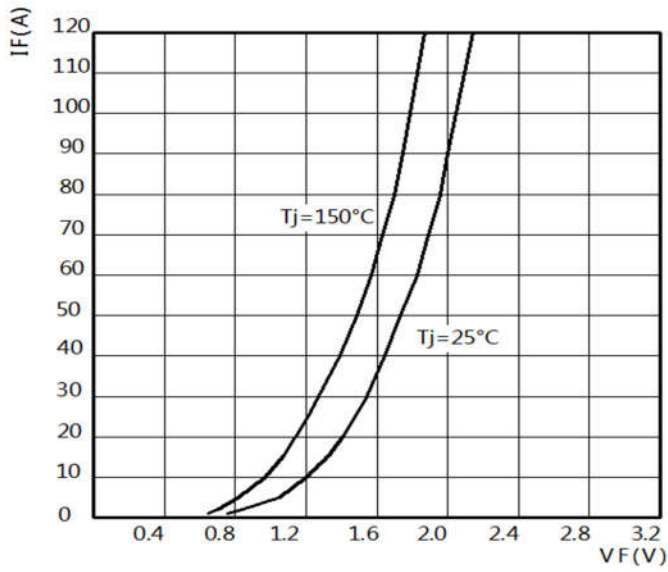


FIGURE 1. FORWARD CURRENT vs FORWARD VOLTAGE

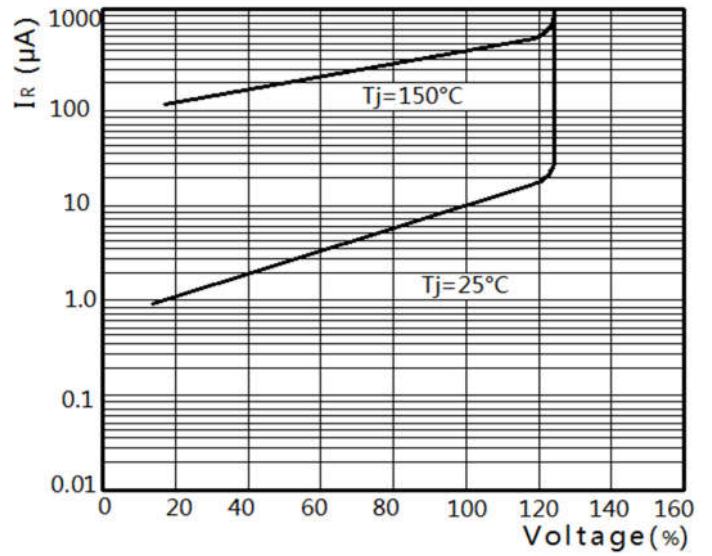


FIGURE 2. REVERSE CURRENT vs REVERSE VOLTAGE

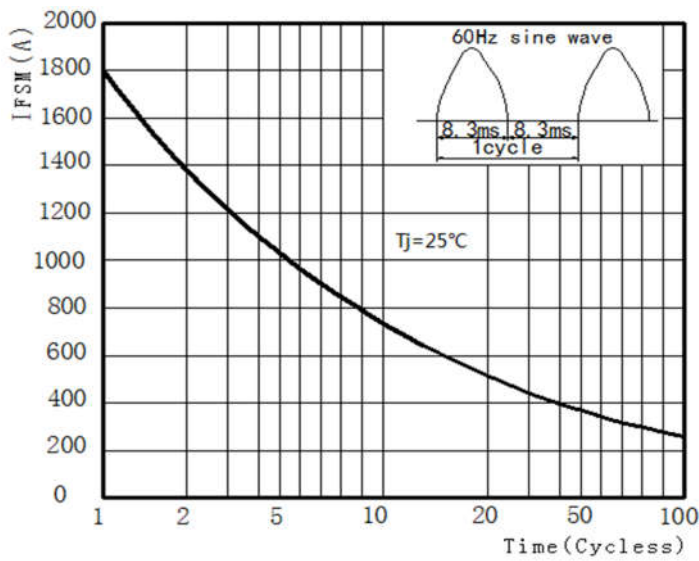


FIGURE 3. Peak Surge Forward Capability

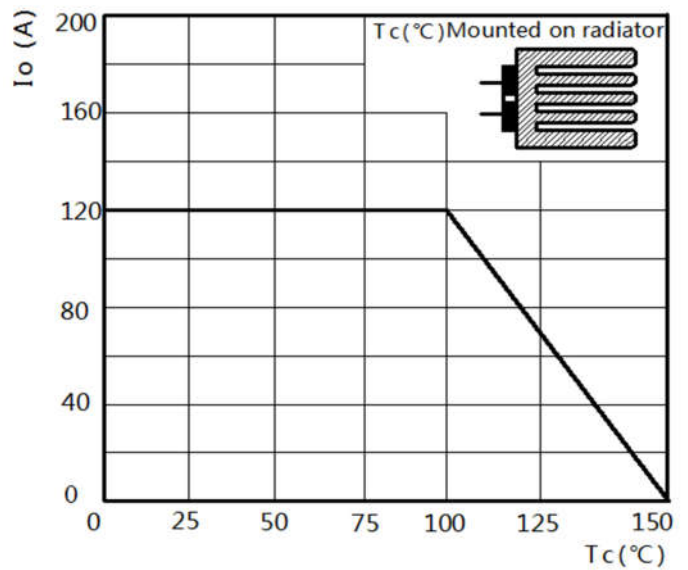
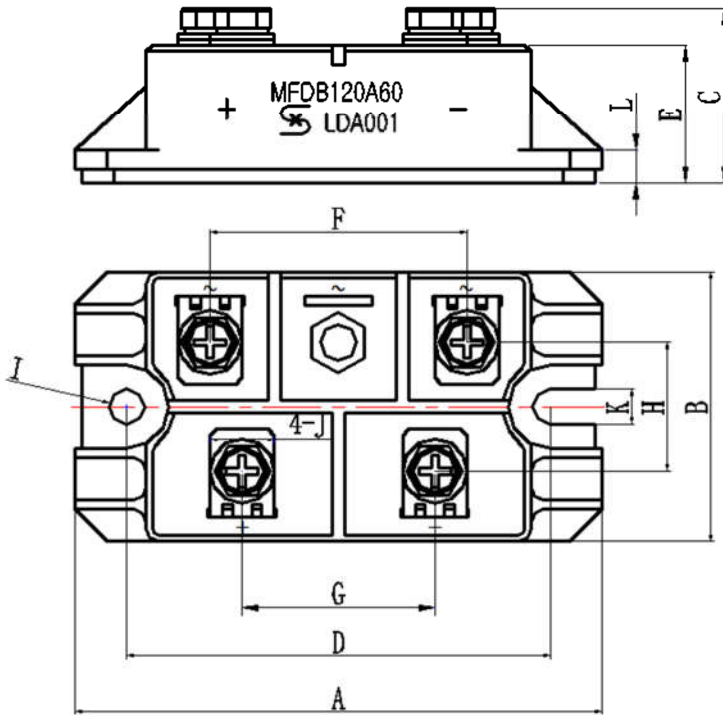



FIGURE 4. CURRENT DERATING CURVE

Dimensioned drawing



Dim.	Millimeter		Inches	
	min	max	min	max
A	81.5	82.5	3.209	3.248
B	41.5	42.5	1.634	1.673
C	27.5	28.5	1.047	1.087
D	65.5	66.5	2.579	2.618
E	21.3	22.3	0.839	0.878
F	39.7	40.3	1.563	1.587
G	29.7	30.3	1.169	1.193
H	19.7	20.3	0.776	0.799
I	5.2	5.8	0.205	0.228
J	9.8	10.2	0.386	0.402
K	5.3	5.7	0.209	0.224
L	4.5	5.5	0.177	0.217

Marking

MFDB120A60
 LDA001

Share Logo year month Flow code Specific Device Code