

PRELIMINARY
 Notice: This is not a final specification.
 Some parametric limits are subject to change.

MITSUBISHI FAST RECOVERY DIODE MODULE

RM400DY-66S

HIGH POWER, HIGH SPEED SWITCHING USE
 INSULATED TYPE

HVDi (High Voltage Diode) Module

RM400DY-66S



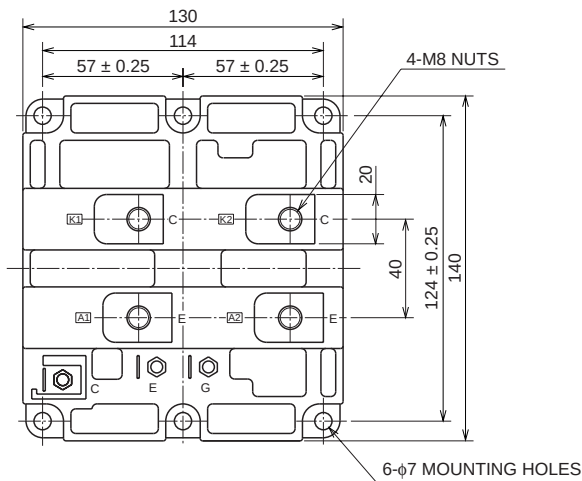
- IDC 400A
- VRRM 3300V
- Insulated type
- 2-elements in a pack

APPLICATION

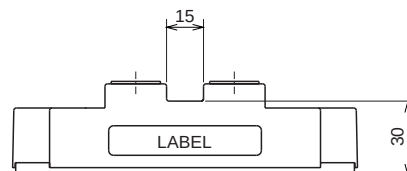
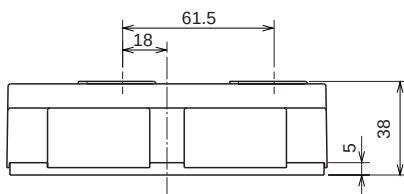
3-level inverters, 3-level converters, DC choppers.

OUTLINE DRAWING & CIRCUIT DIAGRAM

Dimensions in mm



CIRCUIT DIAGRAM



Aug.1998

ABSOLUTE MAXIMUM RATINGS ($T_j = 25^\circ\text{C}$)

Symbol	Parameter	Voltage class	Unit
		66	
VRRM	Repetitive peak reverse voltage	3300	V
VDRM	Non-repetitive peak reverse voltage	3300	V
VR(DC)	Reverse DC voltage	2200	V

Symbol	Parameter	Conditions	Ratings	Unit
Idc	DC current	$T_c = 25^\circ\text{C}$	400	A
IfMS	Surge (non-repetitive) forward current	1 cycle of half wave 60Hz, peak value, $T_j = 25^\circ\text{C}$ start, $V_{RM} = 0V$	3200	A
I^2t	I^2t for fusing	Value of one cycle surge current, $t_w = 8.3\text{ms}$, $T_j = 25^\circ\text{C}$ start	4.27×10^4	A^2s
T_j	Junction temperature	—	$-40 \sim +150$	$^\circ\text{C}$
T_{stg}	Storage temperature	—	$-40 \sim +125$	$^\circ\text{C}$
V_{iso}	Isolation Voltage	Main terminal to case, 60Hz, sinusoidal, AC, 1min, rms	6000	V
—	Mounting torque	Main terminals screw : M6	6.67 ~ 8.24	$\text{N} \cdot \text{m}$
—		Mounting screw : M6	2.84 ~ 3.43	$\text{N} \cdot \text{m}$
—	Weight	Typical value	1.5	kg

ELECTRICAL CHARACTERISTICS ($T_j = 25^\circ\text{C}$)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
IRRM	Repetitive reverse current	VRRM applied, $V_{RM} = V_{RRM}$	—	—	3	mA
VFM	Forward voltage	$I_{FM} = 400\text{A}$, $t_w \leq 1\text{ms}$	—	3.30	4.29	V
t_{rr}	Reverse recovery time	$I_{FM} = 400\text{A}$, $dI_F/dt = -800\text{A}/\mu\text{s}$,	—	—	1.20	μs
Q_{rr}	Reverse recovery charge	$V_R = 1650\text{V}$	—	100	—	μC
$R_{th(j-c)}$	Thermal resistance	Junction to case (Per 1/2 module)	—	—	0.072	$^\circ\text{C}/\text{W}$
$R_{th(c-f)}$	Contact thermal resistance	Case to fin, thermal grease applied (Per 1/2 module)	—	0.036	—	$^\circ\text{C}/\text{W}$