

**Features:**

- Isolated mounting base 2500V~
- Simple design, Module and SCR rectifier bridge, Small volume, light weight

Typical Applications:

- Supplies for DC power equipment
- Field supply for DC motors
- Inverter welder

V_{DRM}, V_{RRM}	Type & Outline
600V	MDST200-06-421H6
800V	MDST200-08-421H6
1000V	MDST200-10-421H6
1200V	MDST200-12-421H6
1400V	MDST200-14-421H6
1600V	MDST200-16-421H6
1800V	MDST200-18-421H6

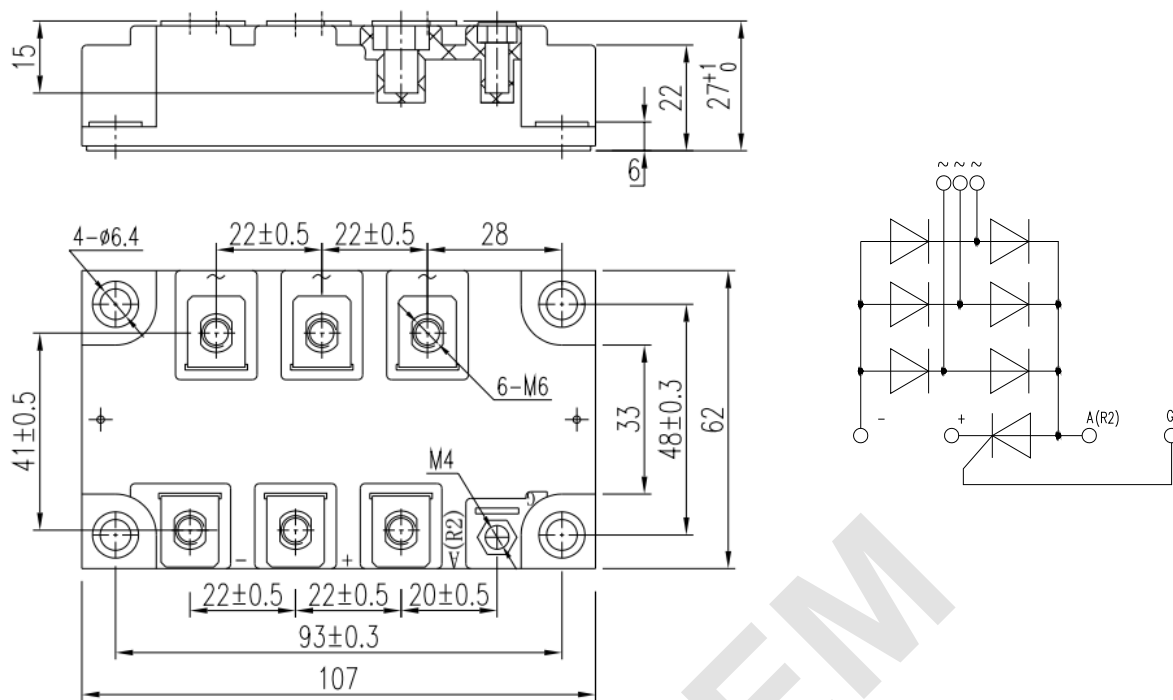
Diode

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_j(^{\circ}\text{C})$	VALUE			UNIT
				Min	Type	Max	
I_D	DC output current	Three-phase full wave rectifying circuit, $T_C=100^{\circ}\text{C}$	125			200	A
V_{RRM}	Repetitive peak reverse voltage	$t_p=10\text{ms}$	125	600		1600	V
I_{RRM}	Repetitive peak current	at V_{RRM}	125			8	mA
I_{FSM}	Surge forward current	10ms half sine wave	125			1.5	kA
I^2t	I^2t for fusing coordination	$V_R=0$				11.25	$\text{A}^2\text{s} \cdot 10^3$
V_{FO}	Threshold voltage		125			0.85	V
r_F	Forward slope resistance					1.20	m
V_{FM}	Peak forward voltage	$I_{FM}=200\text{A}$	25			1.50	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled, per chip				0.10	$^{\circ}\text{C}/\text{W}$
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled, per chip				0.07	$^{\circ}\text{C}/\text{W}$
V_{iso}	Isolation voltage	50Hz, R.M.S, $t=1\text{min}$, $I_{iso}: 1\text{mA}(\text{max})$		3000			V
F_m	Terminal connection torque(M6)			4.5		6.0	N·m
	Mounting torque(M6)			4.5		6.0	N·m
T_{vj}	Junction temperature			-40		125	$^{\circ}\text{C}$
T_{stg}	Stored temperature			-40		125	$^{\circ}\text{C}$
W_t	Weight				340		g
Outline	421H6						

Thyristor

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T _j (°C)	VALUE			UNIT
				Min	Type	Max	
I _{T(AV)}	Mean on-state current	180° half sine wave 50Hz Single side cooled, T _c =100°C	125			200	A
V _{DRM} V _{R_{RRM}}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms	125	600		1600	V
I _{DRM} I _{R_{RRM}}	Repetitive peak current	at V _{DRM} at V _{R_{RRM}}	125			40	mA
I _{TSM}	Surge on-state current	10ms half sine wave	125			1.5	kA
I ² t	I ² t for fusing coordination	V _R =60%V _{R_{RRM}}				11.25	A ² s*10 ³
V _{To}	Threshold voltage		125			0.85	V
r _T	On-state slope resistance					1.2	m
I _{GT}	Gate trigger current		25	30		200	mA
V _{GT}	Gate trigger voltage	V _A =12V, I _A =1A		0.6		2.5	V
I _H	Holding current			10		250	mA
I _H	Holding current			10		250	mA
V _{GD}	Non-trigger gate voltage	V _{DM} =67%V _{DRM}	125			0.30	V
V _{TM}	Peak on-state voltage	I _{TM} =600A				1.75	V
dv/dt	Critical rate of rise of off-state voltage	V _{DM} =67%V _{DRM}	125			500	V/μs
R _{th(j-c)}	Thermal resistance Junction to case	Single side cooled, per chip				0.12	°C/W
R _{th(c-h)}	Thermal resistance case to heatsink	Single side cooled, per chip				0.10	°C/W
V _{iso}	Isolation voltage	50Hz, R.M.S, t=1min, I _{iso} : 1mA(MAX)		3000			V
F _m	Terminal connection torque(M6)			4.5		6.0	N·m
	Terminal connection torque(M4)			1.5		2.5	N·m
	Mounting torque(M6)			4.5		6.0	N·m
T _{vj}	Junction temperature			-40		125	°C
T _{stg}	Stored temperature			-40		125	°C
W _t	Weight				340		g
Outline	421H6						

Outline:



Unmarked dimensional tolerance: $\pm 0.5\text{mm}$