

**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	MDST50-06-225H6
800V	MDST50-08-225H6
1000V	MDST50-10-225H6
1200V	MDST50-12-225H6
1400V	MDST50-14-225H6
1600V	MDST50-16-225H6
1800V	MDST50-18-225H6

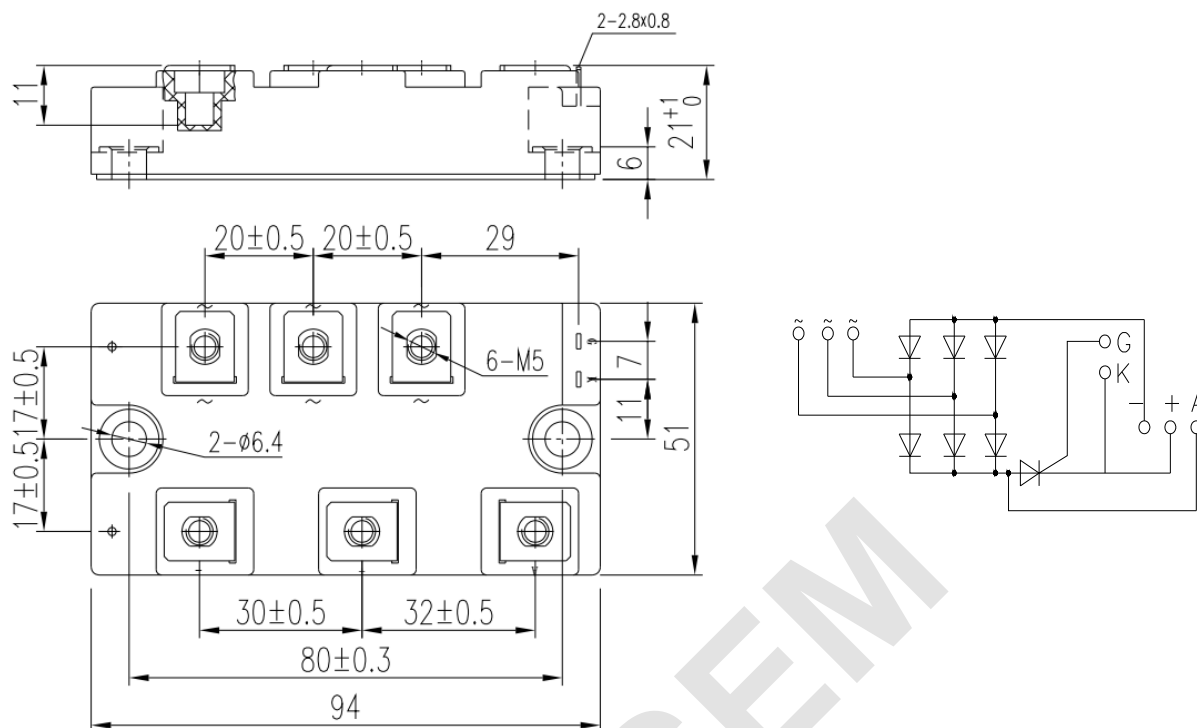
**Diode**

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			50	A
$V_{RRM}$	Repetitive peak reverse voltage	$t_p=10\text{ms}$	125	600		1800	V
$I_{RRM}$	Repetitive peak current	at $V_{RRM}$	125			8	mA
$I_{FSM}$	Surge forward current	10ms half sine wave	125			0.4	kA
$I^2t$	$I^2t$ for fusing coordination	$V_R=0$				0.8	$10^3\text{A}^2\text{s}$
$V_{FO}$	Threshold voltage		125			0.85	V
$r_F$	Forward slope resistance					4.30	m
$V_{FM}$	Peak forward voltage	$I_{FM}=50\text{A}$	25			1.20	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled, per chip				0.30	$^{\circ}\text{C}/\text{W}$
$R_{th(c-h)}$	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(M5)			2.5		4.0	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				220		g
Outline	225H6						

## Thyristor

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T <sub>J</sub> (°C)	VALUE			UNIT
				Min	Type	Max	
I <sub>T(AV)</sub>	Mean on-state current	180° half sine wave 50Hz Single side cooled, T <sub>c</sub> =100°C	125			50	A
V <sub>DRM</sub> V <sub>RDM</sub>	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms	125	600		1800	V
I <sub>DRM</sub> I <sub>RDM</sub>	Repetitive peak current	at V <sub>DRM</sub> at V <sub>RDM</sub>	125			15	mA
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave	125			0.4	kA
I <sup>2</sup> t	I <sup>2</sup> t for fusing coordination	V <sub>R</sub> =60%V <sub>RDM</sub>					0.8
V <sub>TO</sub>	Threshold voltage		125			0.85	V
r <sub>T</sub>	On-state slope resistance						4.3
I <sub>GT</sub>	Gate trigger current	V <sub>A</sub> =12V, I <sub>A</sub> =1A	25	30		200	mA
V <sub>GT</sub>	Gate trigger voltage			0.6		2.5	V
I <sub>H</sub>	Holding current			10		250	V
I <sub>L</sub>	Latching current					1000	mA
V <sub>GD</sub>	Non-trigger gate voltage	V <sub>DM</sub> =67%V <sub>DRM</sub>	125			0.30	V
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =150A				1.55	V
dv/dt	Critical rate of rise of off-state voltage	V <sub>DM</sub> =67%V <sub>DRM</sub>	125			500	V/μs
R <sub>th(j-c)</sub>	Thermal resistance Junction to case	Single side cooled, per chip				0.80	°C /W
R <sub>th(c-h)</sub>	Thermal resistance case to heatsink	Single side cooled, per chip				0.13	°C /W
V <sub>iso</sub>	Isolation voltage	50Hz, R.M.S, t=1min, I <sub>iso</sub> :1mA(MAX)		3000			V
F <sub>m</sub>	Terminal connection torque(M5)			2.5		4.0	N·m
	Mounting torque(M6)			4.5		6.0	N·m
T <sub>vj</sub>	Junction temperature			-40		125	°C
T <sub>stg</sub>	Stored temperature			-40		125	°C
W <sub>t</sub>	Weight				220		g
Outline	225H6						

Outline :



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