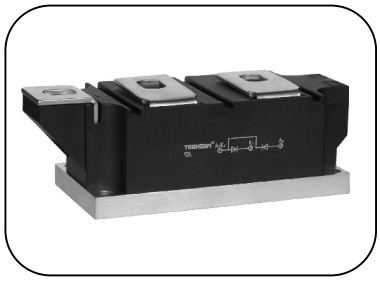


Features：

- **n** Isolated mounting base 3000V~
- **n** Pressure contact technology with Increased power cycling capability
- **n** Space and weight saving

Typical Applications

- **n** Various rectifiers
- **n** DC supply for PWM inverter

V_{RRM}	Type & Outline
800V	MDx500-08-416F3
1000V	MDx500-10-416F3
1200V	MDx500-12-416F3
1400V	MDx500-14-416F3
1600V	MDx500-16-416F3
1800V	MDx500-18-416F3
1800V	MD500-18-416F3G

MDx stands for any type of **MDC, MDA, MDK**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled, T_C=100°C	150			500	A
$I_{F(RMS)}$	RMS forward current					785	A
I_{RRM}	Repetitive peak current	at V_{RRM}	150			40	mA
I_{FSM}	Surge forward current	V_R=60%V_{RRM},t=10ms half sine,	150			16.0	kA
I^2t	I^2t for fusing coordination					1280	10^3A^2s
V_{FO}	Threshold voltage		150			0.75	V
r_F	Forward slope resistance					0.30	mΩ
V_{FM}	Peak forward voltage	I_{FM}=1500A	25			1.32	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled per chip				0.090	°C/W
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled per chip				0.024	°C/W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3000			V
F_m	Terminal connection torque(M10)			10		12	N·m
	Mounting torque(M6)			4.5		6.0	N·m
T_{vj}	Junction temperature			-40		150	°C
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1540		g
Outline	416F3						

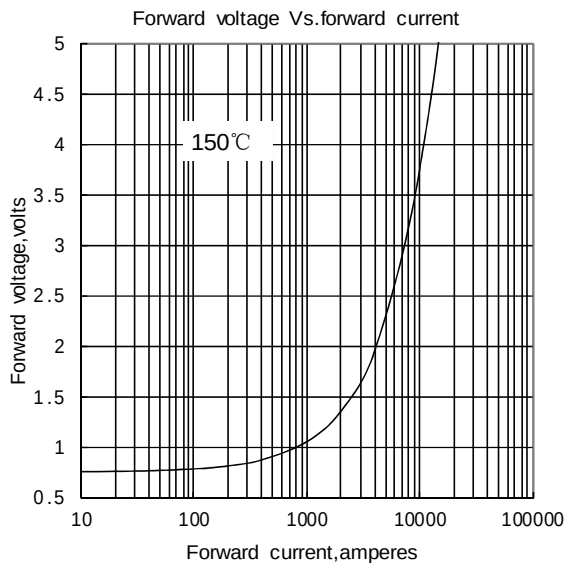


Fig.1

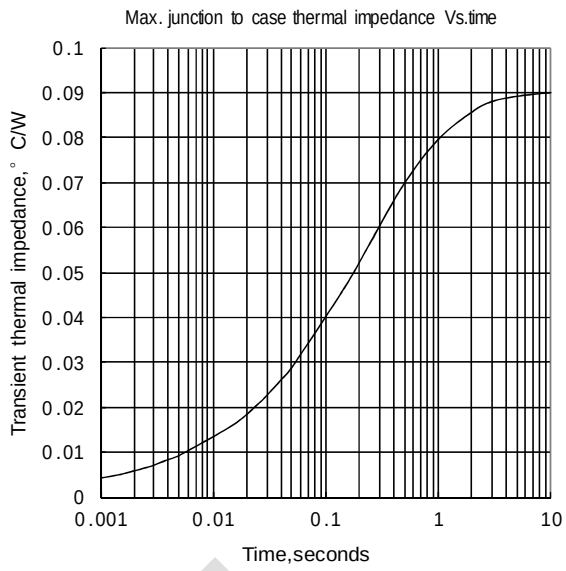


Fig.2

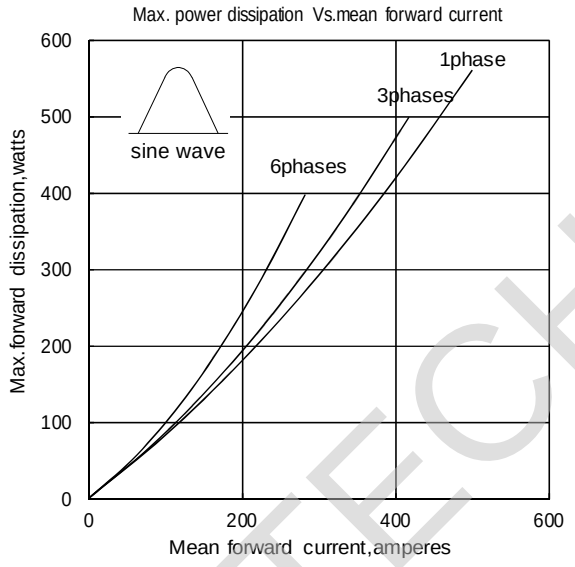


Fig.3

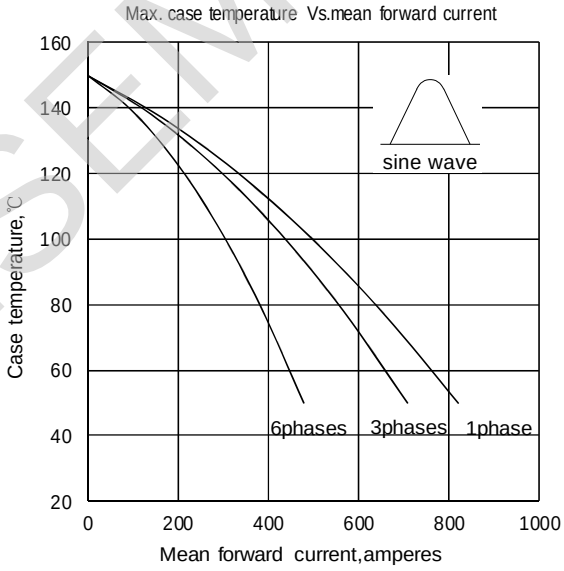


Fig.4

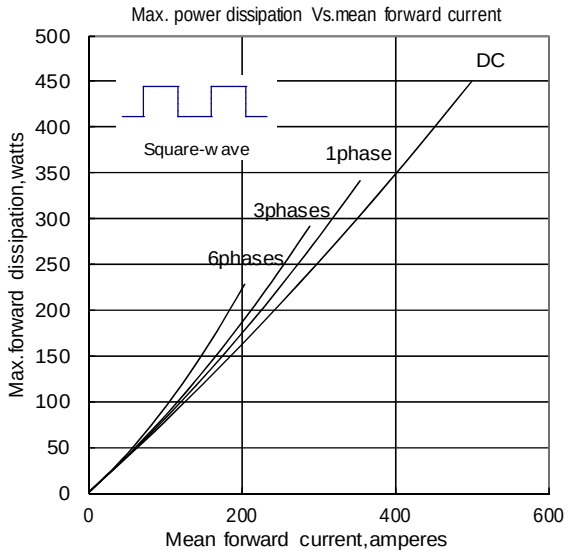


Fig.5

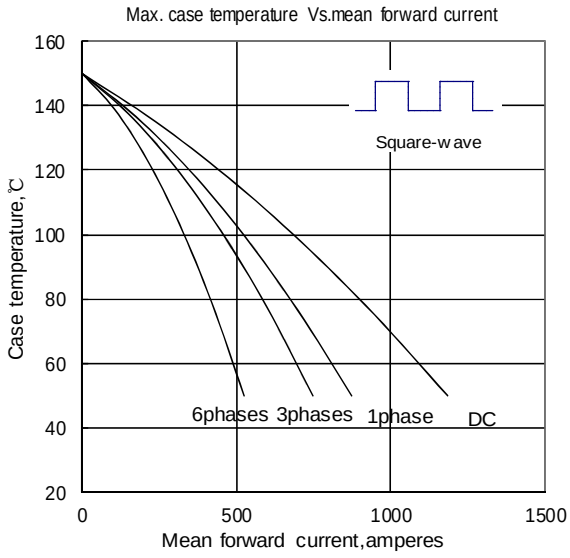


Fig.6

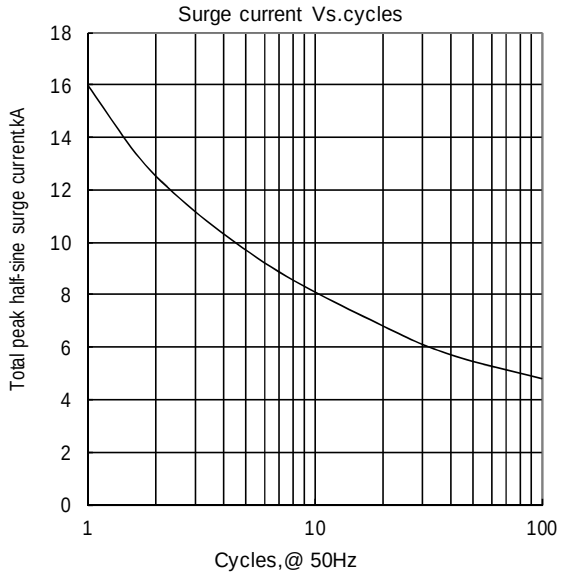


Fig.7

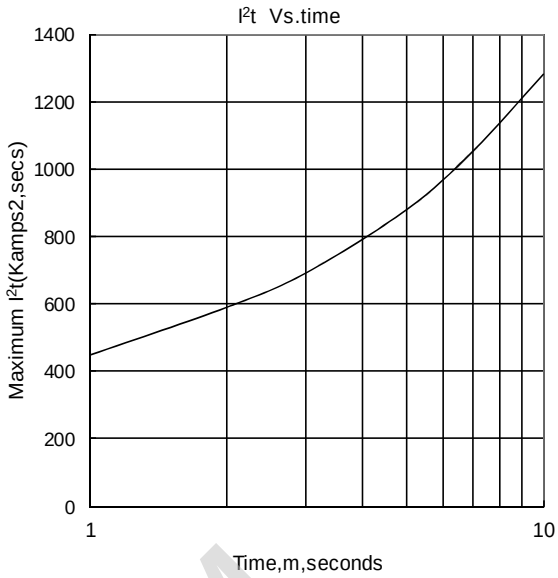
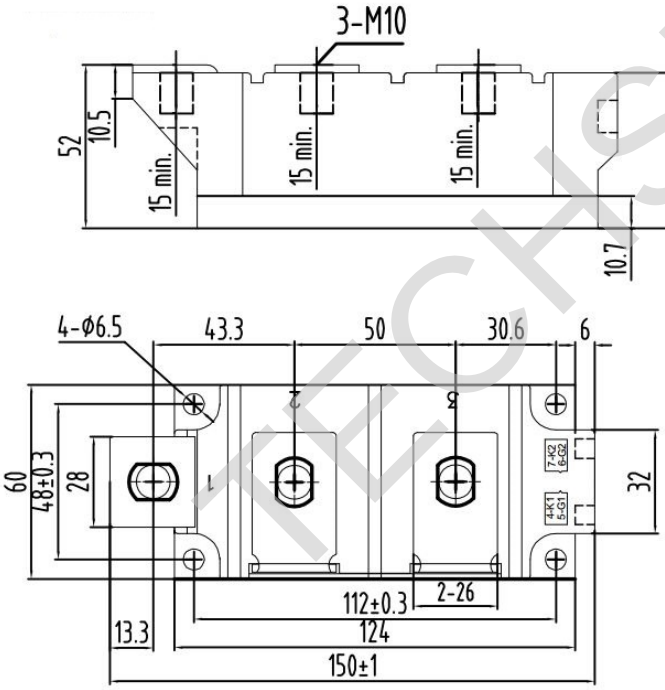
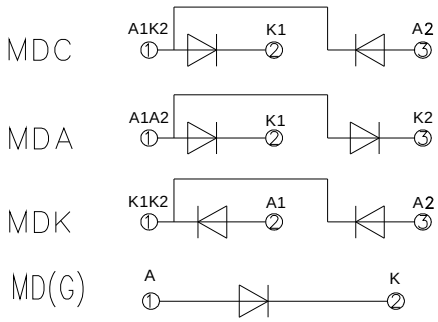


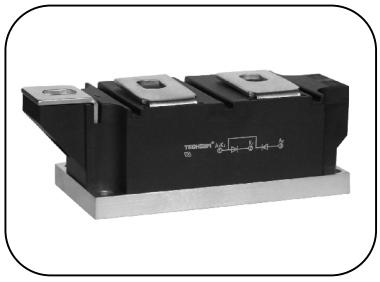
Fig.8

Outline:





Unmarked dimensional tolerance：±0.5mm



Features：

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Typical Applications：

- **n** Various rectifiers
- **n** DC supply for PWM inverter

V_{RRM}	Type & Outline
800V	MDx570-08-416F3
1000V	MDx570-10-416F3
1200V	MDx570-12-416F3
1400V	MDx570-14-416F3
1600V	MDx570-16-416F3
1800V	MDx570-18-416F3
1800V	MD570-18-416F3G

MDx stands for any type of **MDC, MDA, MDK**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled, T_C=100°C	150			570	A
$I_{F(RMS)}$	RMS forward current					895	A
I_{RRM}	Repetitive peak current	at V_{RRM}	150			40	mA
I_{FSM}	Surge forward current	V_R=60%V_{RRM}, t=10ms half sine,	150			18	kA
I^2t	I^2t for fusing coordination					1620	10^3A^2s
V_{FO}	Threshold voltage		150			0.75	V
r_F	Forward slope resistance					0.30	mΩ
V_{FM}	Peak forward voltage	I_{FM}=1710A	25			1.45	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled per chip				0.075	°C/W
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled per chip				0.024	°C/W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3000			V
F_m	Terminal connection torque(M10)			10		12	N·m
	Mounting torque(M6)			4.5		6.0	N·m
T_{vj}	Junction temperature			-40		150	°C
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1540		g
Outline	416F3						

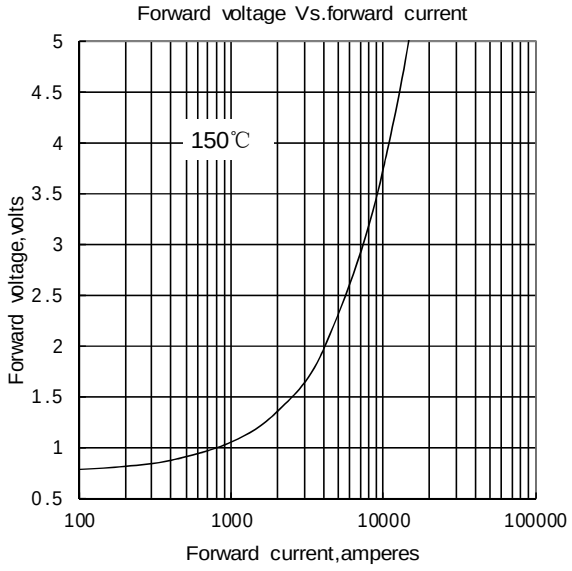


Fig.1

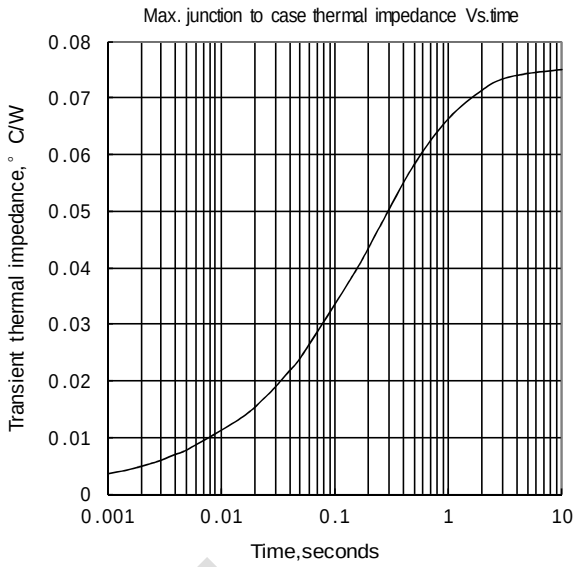


Fig.2

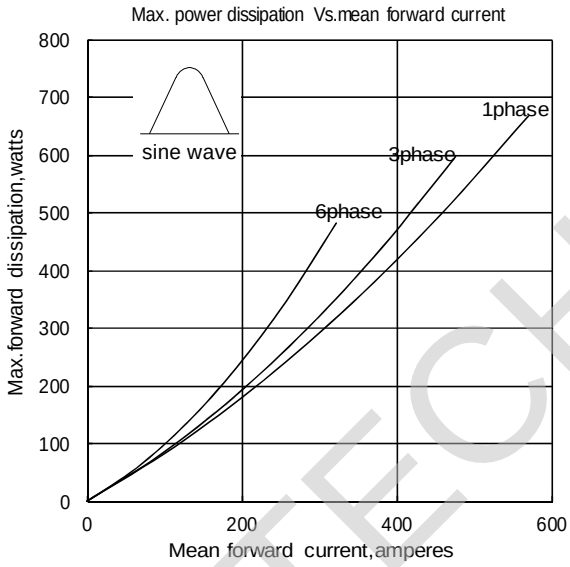


Fig.3

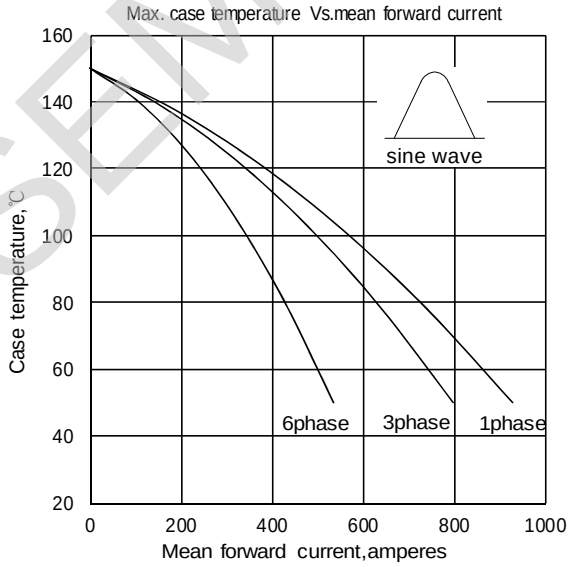


Fig.4

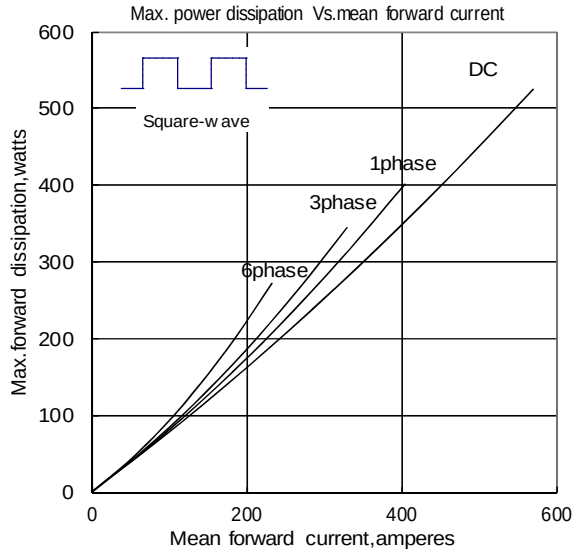


Fig.5

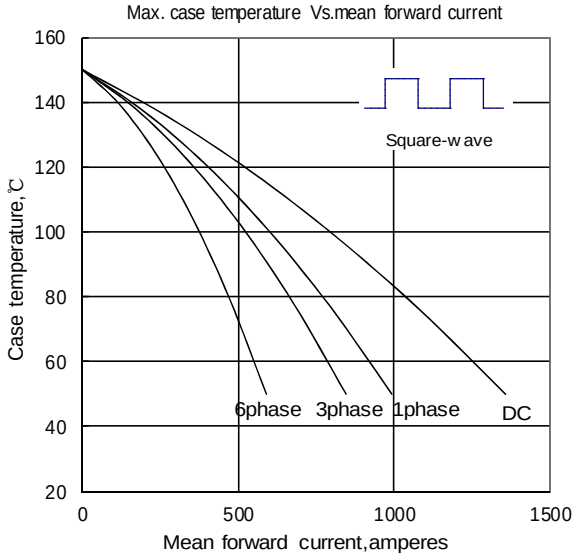


Fig.6

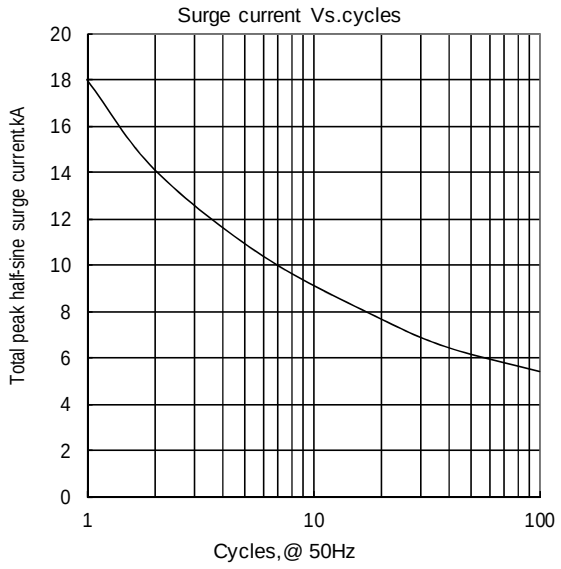


Fig.7

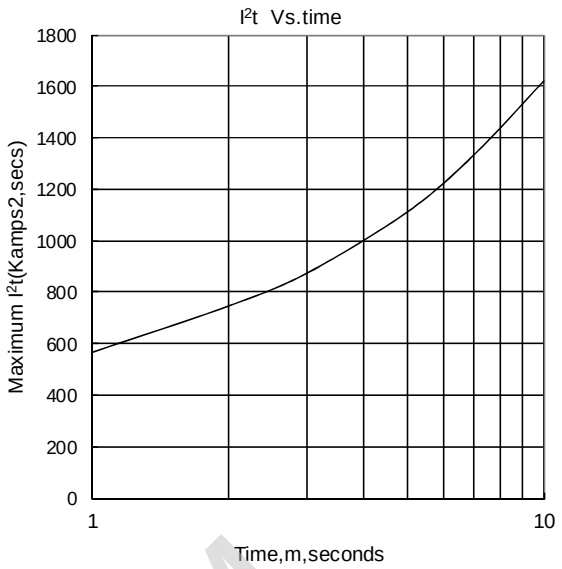
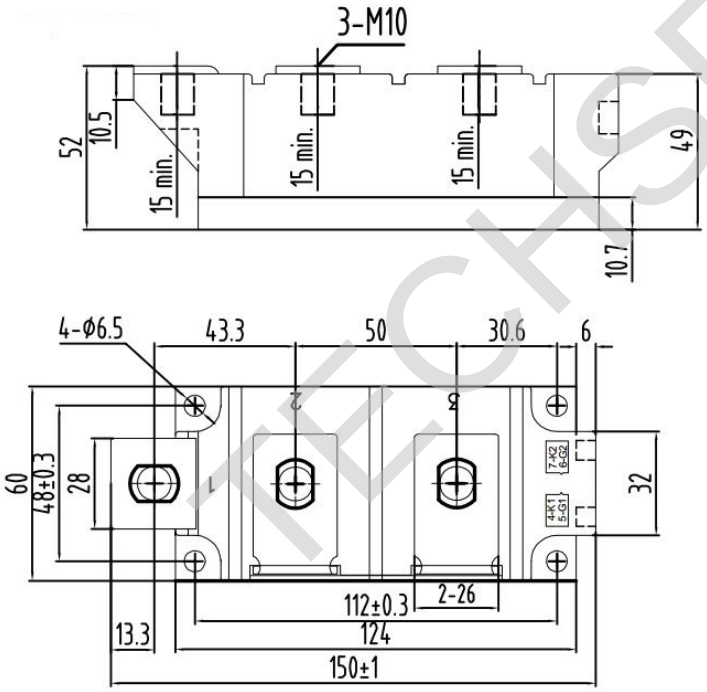
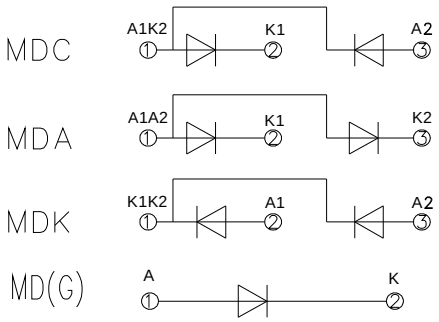


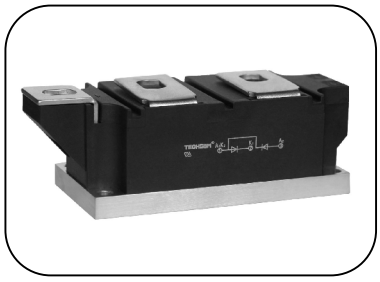
Fig.8

Outline:





Unmarked dimensional tolerance：±0.5mm



Features：

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- **n** Various rectifiers
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1600V	MDx600-16-416F3
1800V	MDx600-18-416F3
1800V	MD600-18-416F3G

MDx stands for any type of **MDC, MDA, MDK**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled, T_C=100°C	150			600	A
$I_{F(RMS)}$	RMS forward current					942	A
I_{RRM}	Repetitive peak current	at V_{RRM}	150			45	mA
I_{FSM}	Surge forward current	V_R=60%V_{RRM}, t=10ms half sine,	150			19.0	kA
I^2t	I^2t for fusing coordination					1805	10^3A^2s
V_{FO}	Threshold voltage		150			0.75	V
r_F	Forward slope resistance					0.28	mΩ
V_{FM}	Peak forward voltage	I_{FM}=1800A	25			1.50	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled per chip				0.065	°C/W
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled per chip				0.024	°C/W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3000			V
F_m	Terminal connection torque(M10)			10		12	N·m
	Mounting torque(M6)			4.5		6.0	N·m
T_{vj}	Junction temperature			-40		150	°C
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1540		g
Outline	416F3						

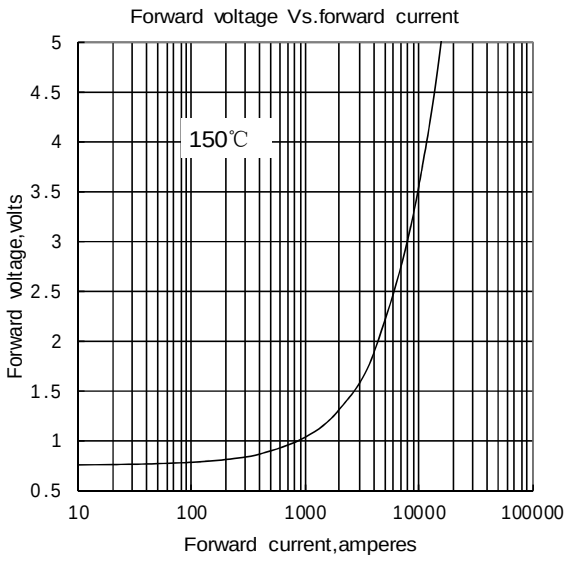


Fig.1

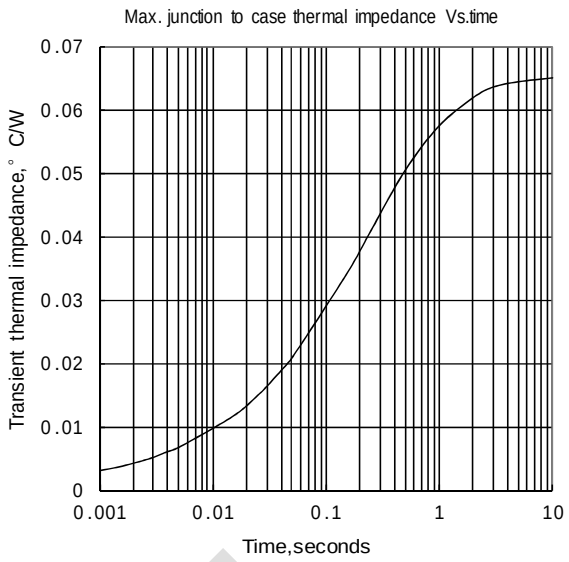


Fig.2

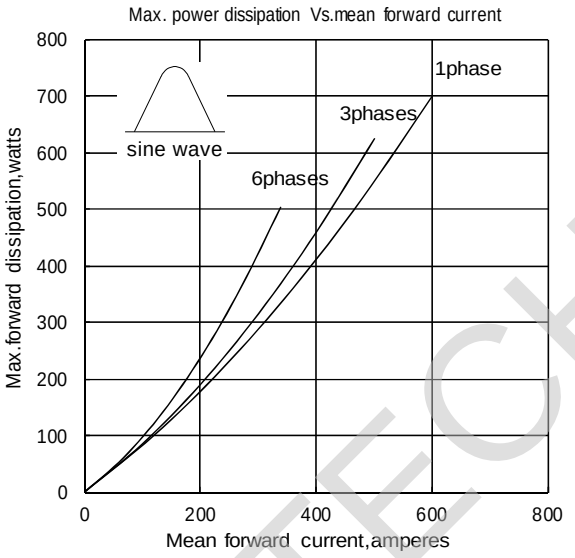


Fig.3

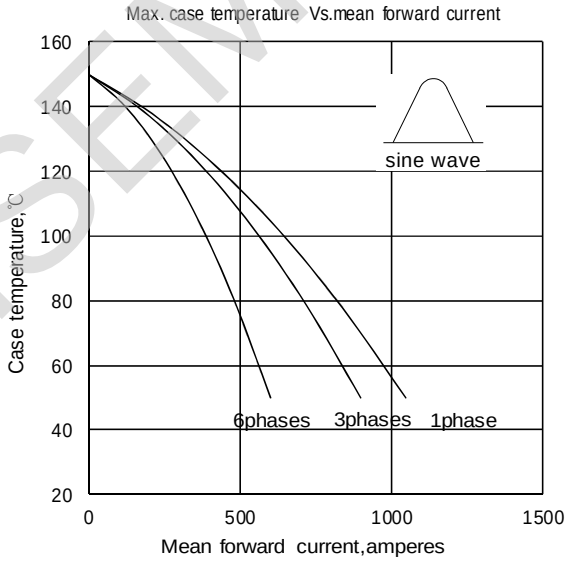


Fig.4

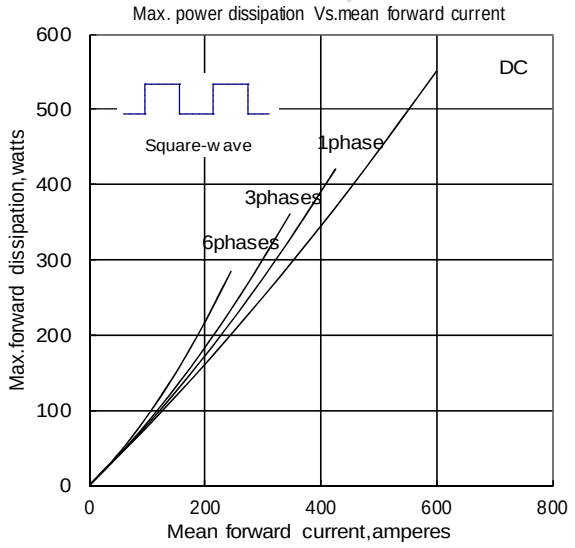


Fig.5

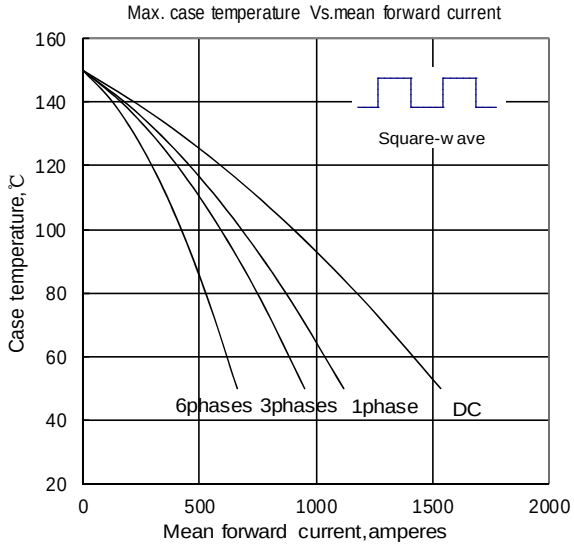


Fig.6

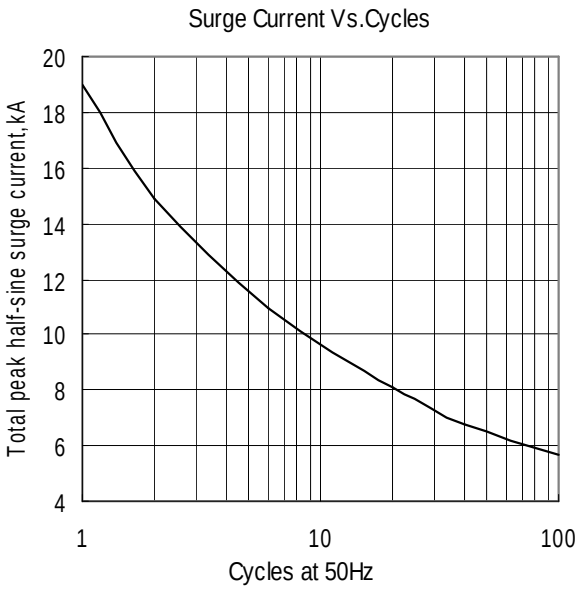


Fig.7

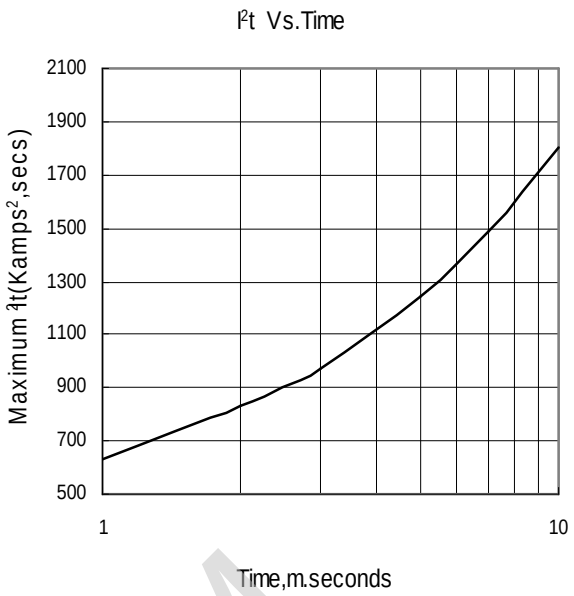
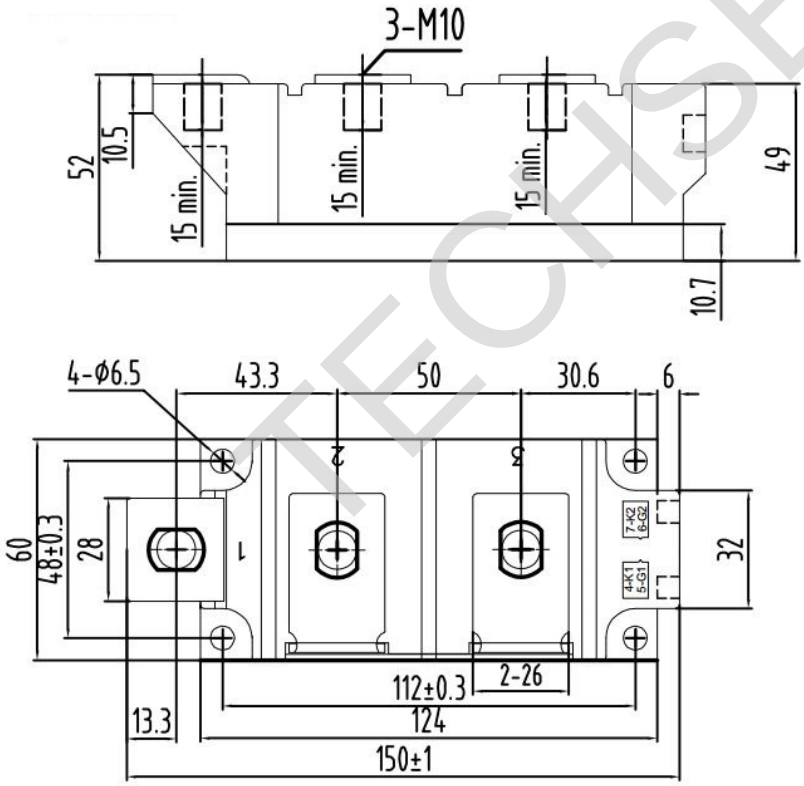
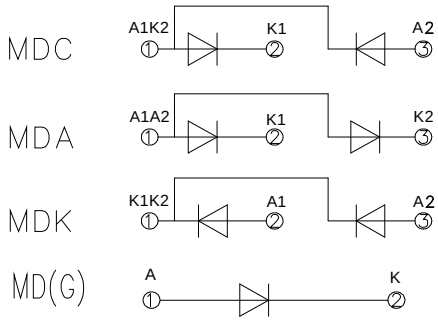


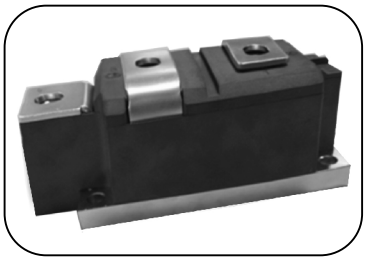
Fig.8

Outline:





Unmarked dimensional tolerance：±0.5mm



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1400V	MDx800-14-410F3
1600V	MDx800-16-410F3
1800V	MDx800-18-410F3
1800V	MD800-18-410F3G

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SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled, T_C=100°C	150			800	A
$I_{F(RMS)}$	RMS forward current					1256	A
I_{RRM}	Repetitive peak current	at V_{RRM}	150			45	mA
I_{FSM}	Surge forward current	V_R=60%V_{RRM}, t=10ms half sine	150			22.0	kA
I^2t	I^2t for fusing coordination					2420	10^3A^2s
V_{FO}	Threshold voltage		150			0.80	V
r_F	Forward slope resistance					0.18	mΩ
V_{FM}	Peak forward voltage	I_{FM}=2400A	25			1.60	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled per chip				0.050	°C/W
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled per chip				0.020	°C/W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3000			V
F_m	Terminal connection torque(M12)			12		16	N·m
	Mounting torque(M8)			10		12	N·m
T_{vj}	Junction temperature			-40		150	°C
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				3310		g
Outline	410F3						

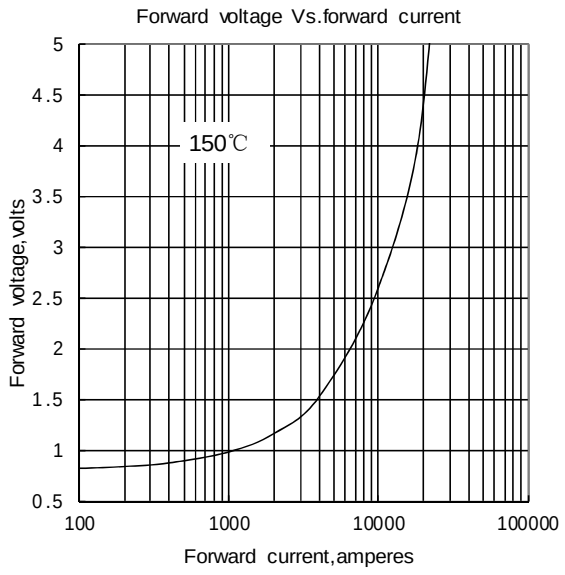


Fig.1

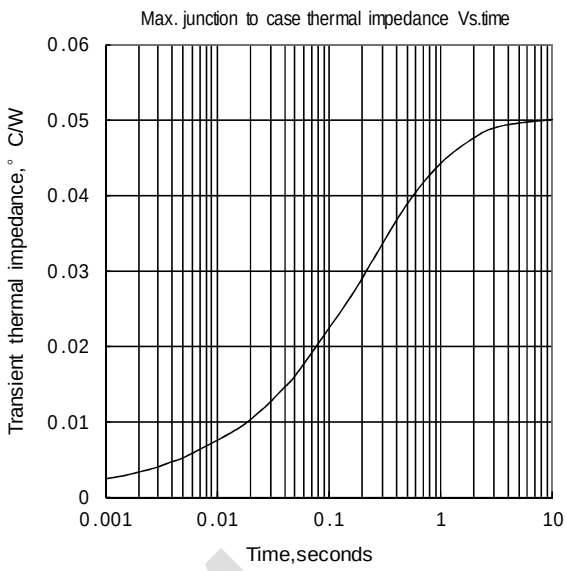


Fig.2

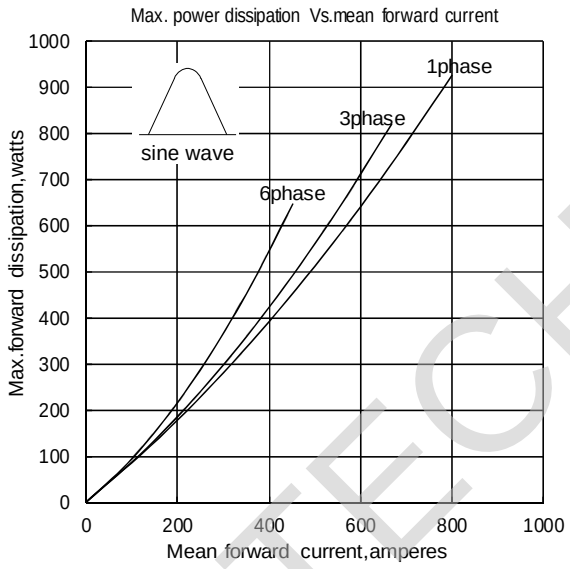


Fig.3

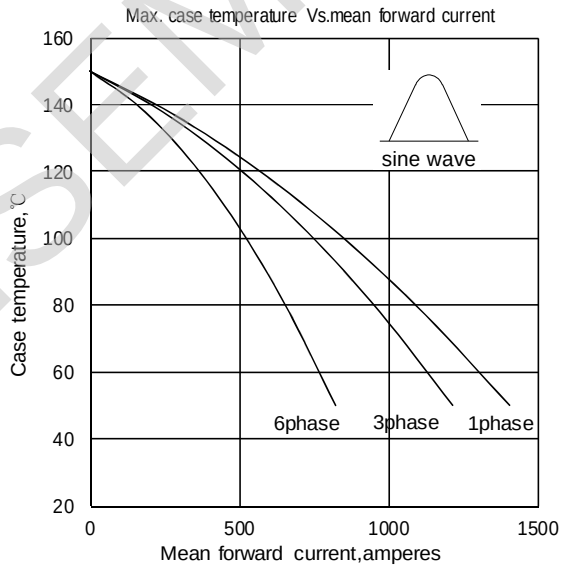


Fig.4

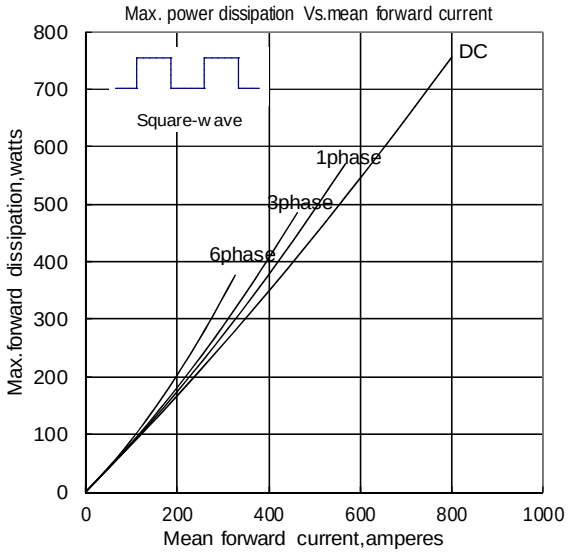


Fig.5

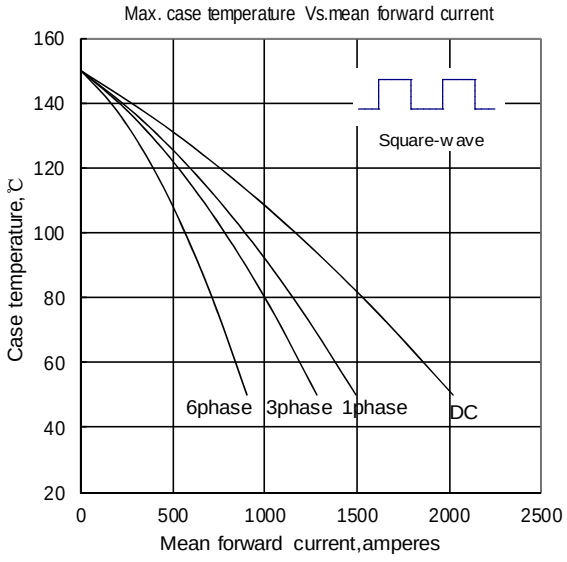


Fig.6

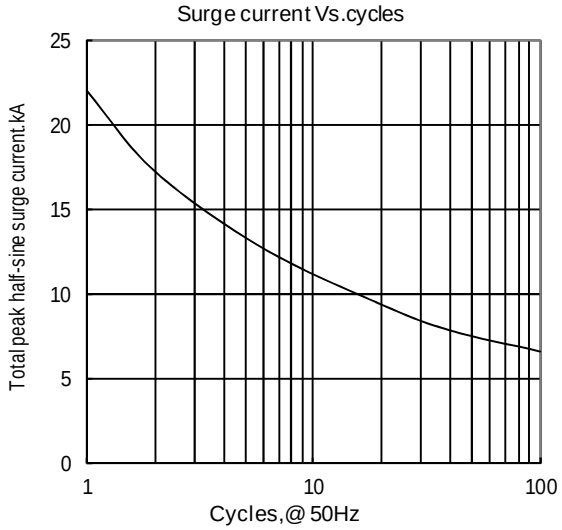


Fig.7

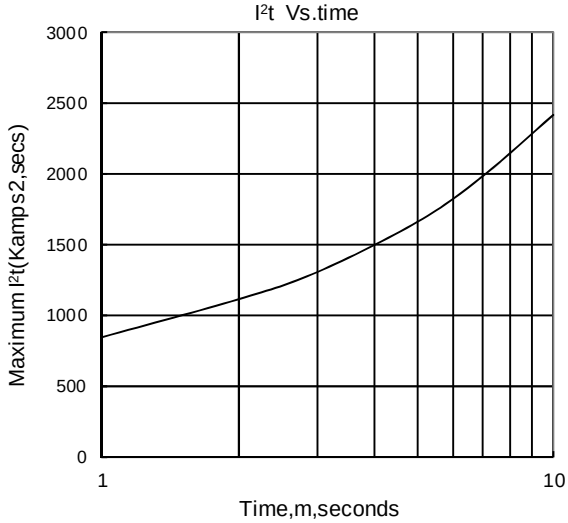
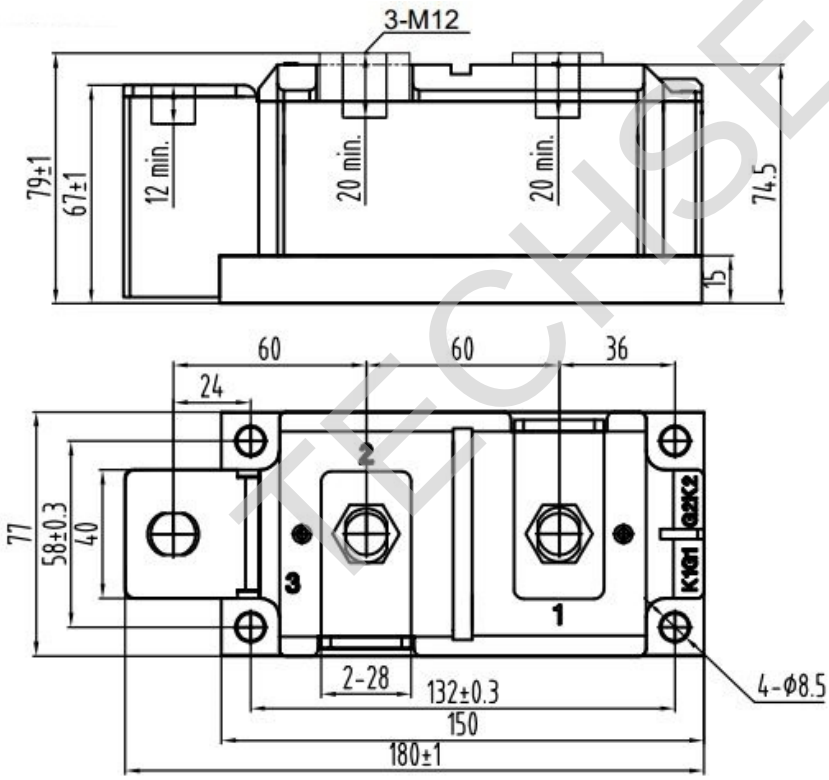
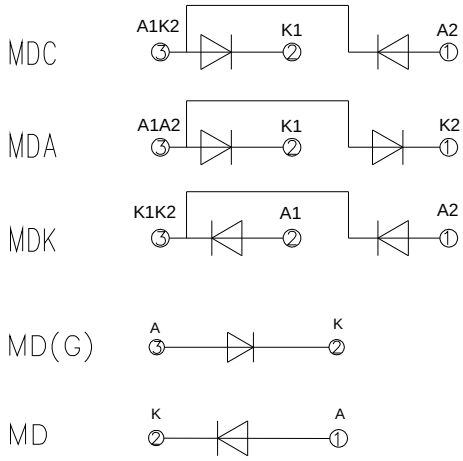


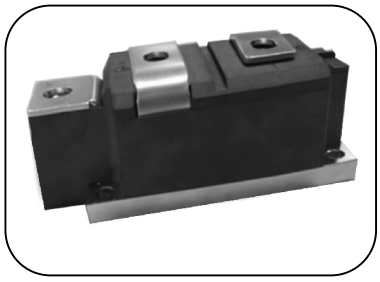
Fig.8

Outline:





Unmarked dimensional tolerance：±0.5mm



Features：

- Isolated mounting base 3000V~
- Pressure contact technology with Increased power cycling capability
- Space and weight saving

Typical Applications

- Various rectifiers
- DC supply for PWM inverter

V_{RRM}	Type & Outline
800V	MDx1000-08-412F3
1000V	MDx1000-10-412F3
1200V	MDx1000-12-412F3
1400V	MDx1000-14-412F3
1600V	MDx1000-16-412F3
1800V	MDx1000-18-412F3
1800V	MD1000-18-412F3G

MDx stands for any type of **MDC, MDA, MDK**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled, T_C=100°C	150			1000	A
$I_{F(RMS)}$	RMS forward current					1570	A
I_{RRM}	Repetitive peak current	at V_{RRM}	150			50	mA
I_{FSM}	Surge forward current	V_R=60%V_{RRM},t=10ms half sine,	150			28	kA
I^2t	I^2t for fusing coordination					3920	10^3A^2s
V_{FO}	Threshold voltage		150			0.70	V
r_F	Forward slope resistance					0.138	mΩ
V_{FM}	Peak forward voltage	I_{FM}=3000A	25			1.44	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled per chip				0.048	°C/W
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled per chip				0.020	°C/W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3000			V
F_m	Terminal connection torque(M12)			12		16	N·m
	Mounting torque(M8)			10		12	N·m
T_{vj}	Junction temperature			-40		150	°C
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				3660		g
Outline	412F3						

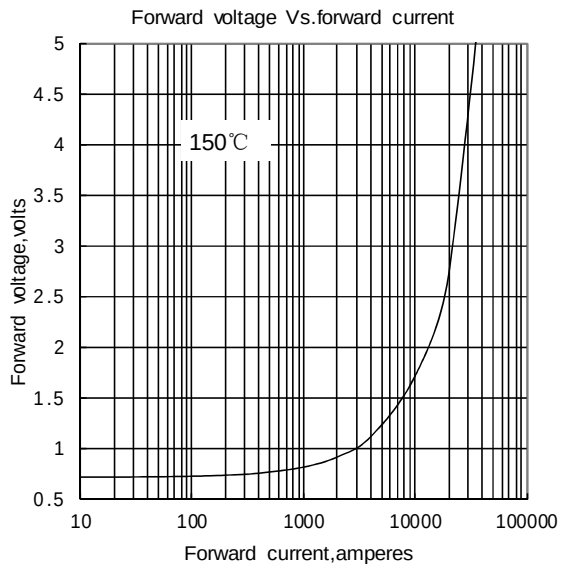


Fig.1

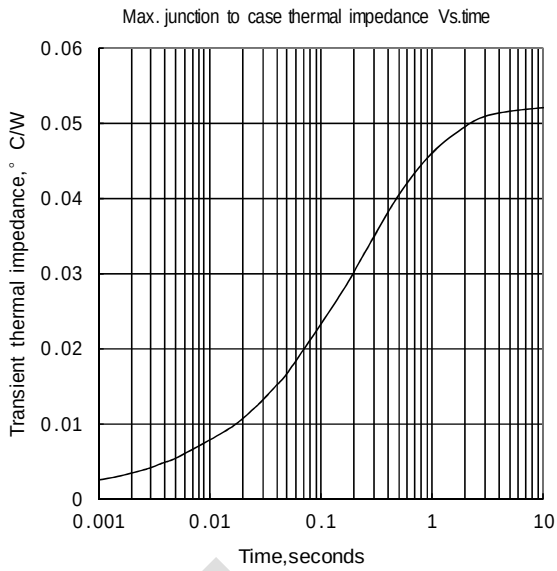


Fig.2

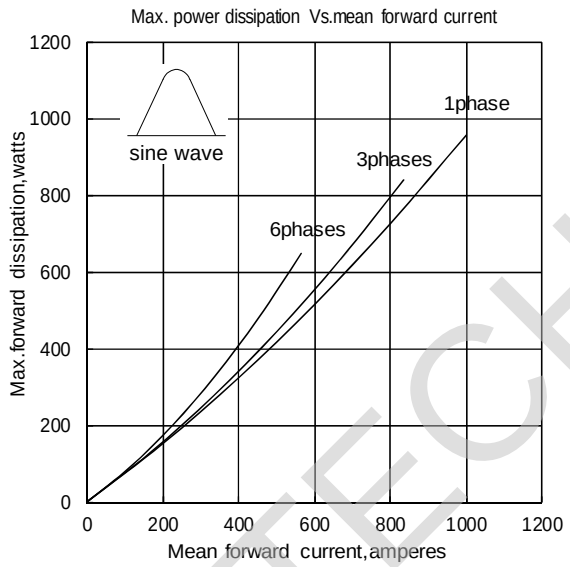


Fig.3

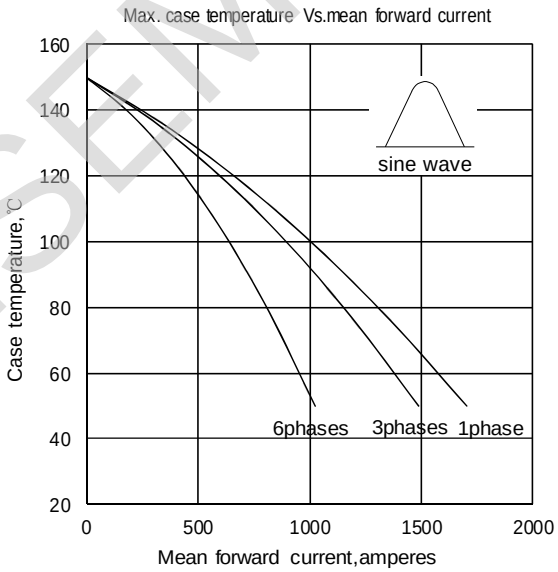


Fig.4

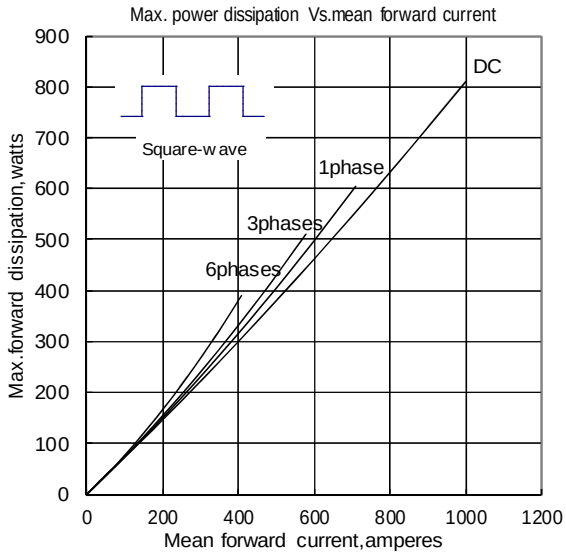


Fig.5

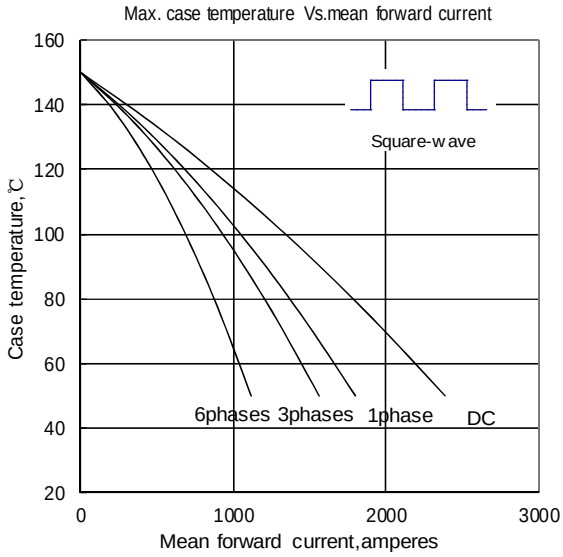


Fig.6

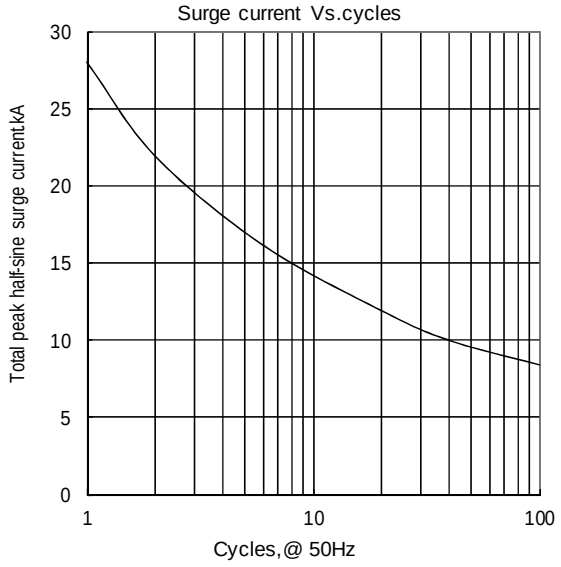


Fig.7

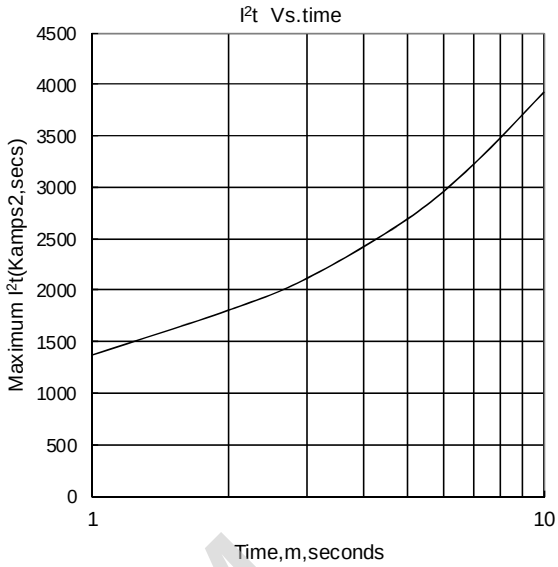
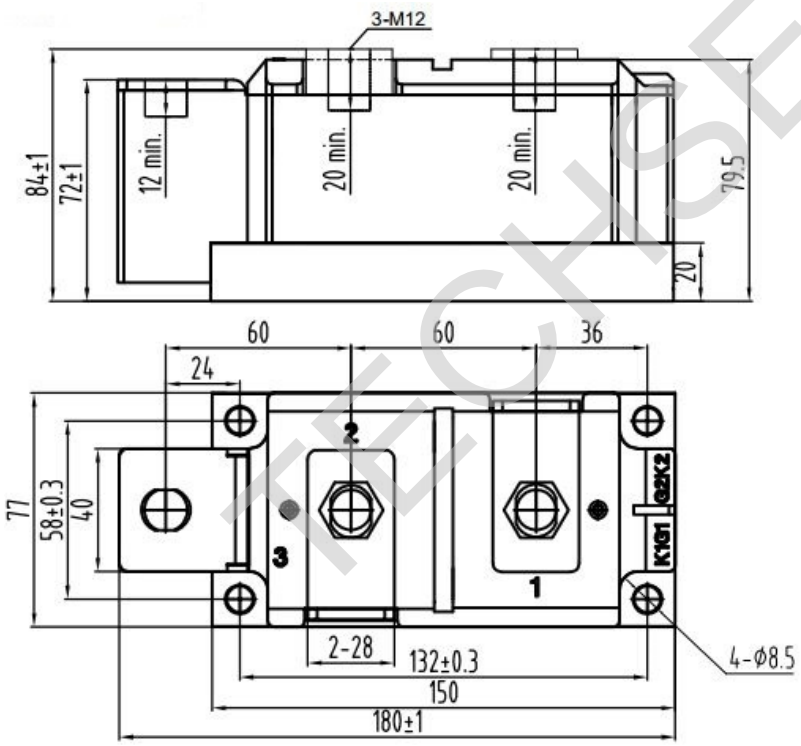
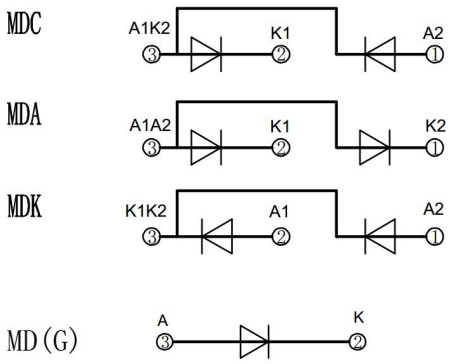


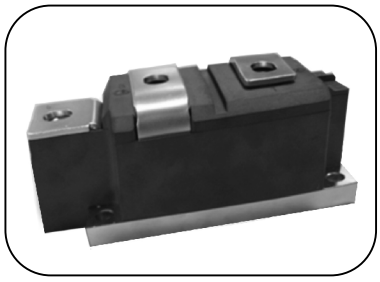
Fig.8

Outline:





Unmarked dimensional tolerance：±0.5mm



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Typical Applications

- Various rectifiers
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V_{RRM}	Type & Outline
800V	MDx1200-08-412F3
1000V	MDx1200-10-412F3
1200V	MDx1200-12-412F3
1400V	MDx1200-14-412F3
1600V	MDx1200-16-412F3
1800V	MDx1200-18-412F3
1800V	MD1200-18-412F3G

MDx stands for any type of **MDC, MDA, MDK**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled, T_C=85°C	150			1200	A
$I_{F(RMS)}$	RMS forward current					1884	A
I_{RRM}	Repetitive peak current	at V_{RRM}	150			50	mA
I_{FSM}	Surge forward current	V_R=60%V_{RRM},t=10ms half sine,	150			34	kA
I^2t	I^2t for fusing coordination					4500	10^3A^2s
V_{FO}	Threshold voltage		150			0.70	V
r_F	Forward slope resistance					0.138	mΩ
V_{FM}	Peak forward voltage	I_{FM}=3000A	25			1.44	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled per chip				0.048	°C/W
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled per chip				0.020	°C/W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3000			V
F_m	Terminal connection torque(M12)			12		16	N·m
	Mounting torque(M8)			10		12	N·m
T_{vj}	Junction temperature			-40		150	°C
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				3660		g
Outline	412F3						

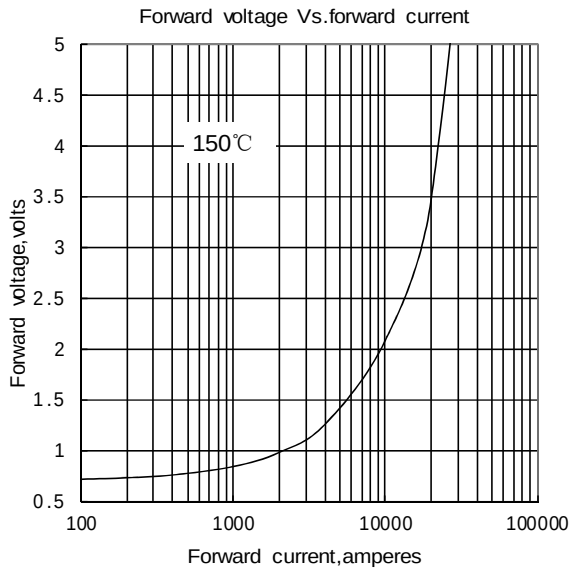


Fig.1

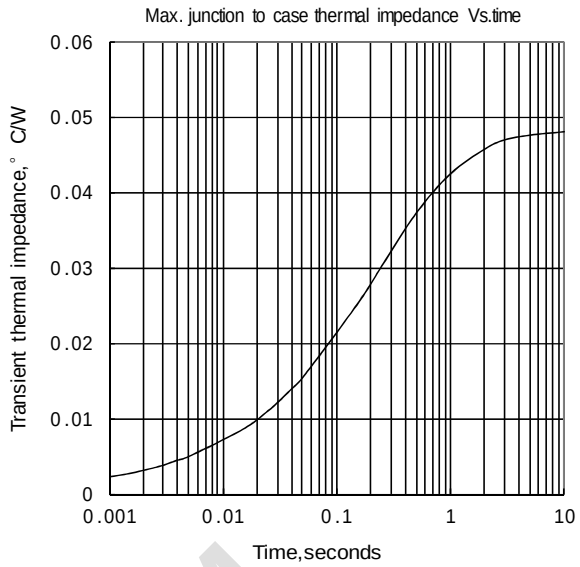


Fig.2

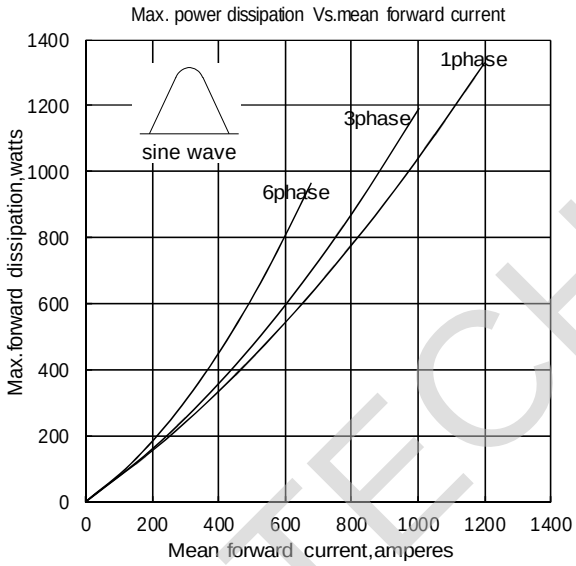


Fig.3

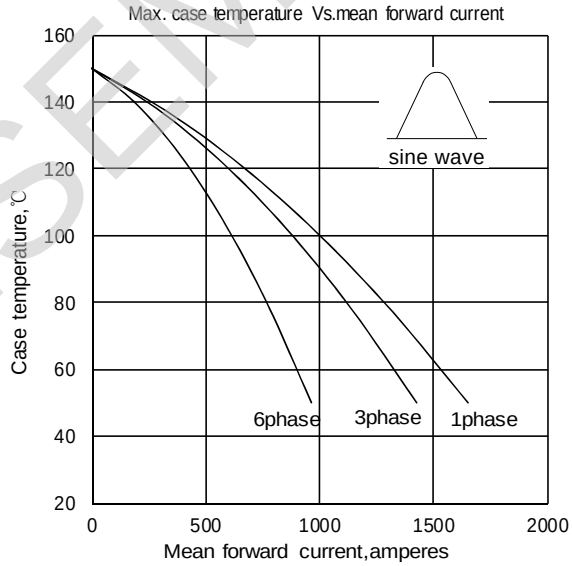


Fig.4

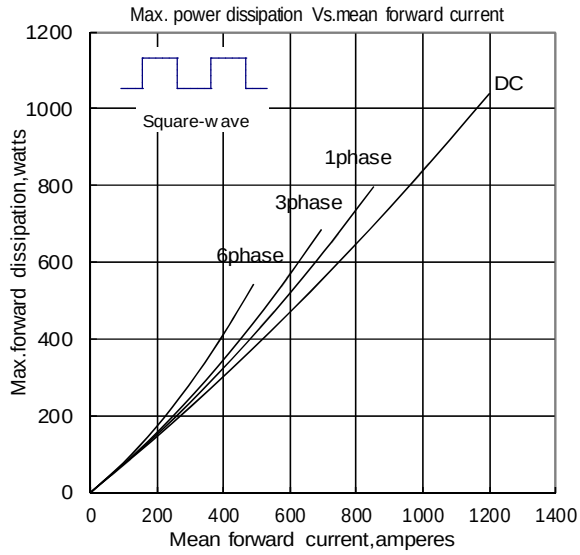


Fig.5

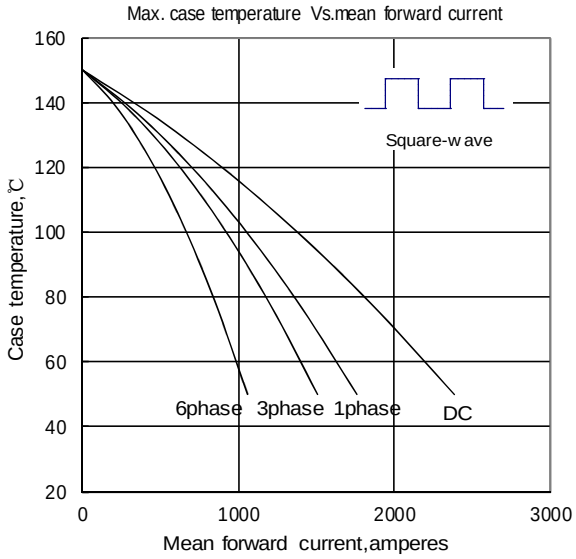


Fig.6

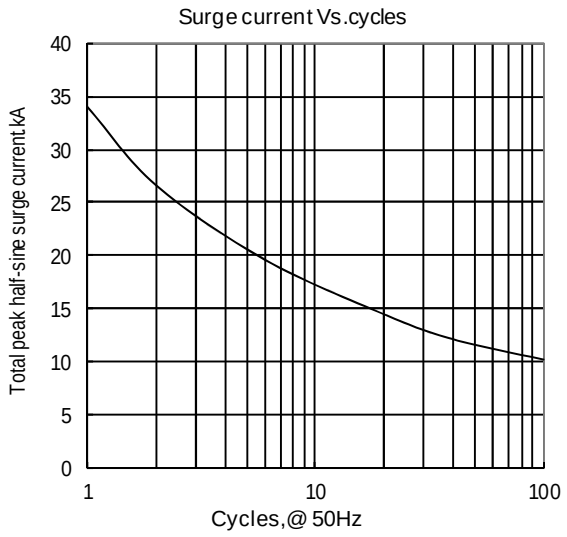


Fig.7

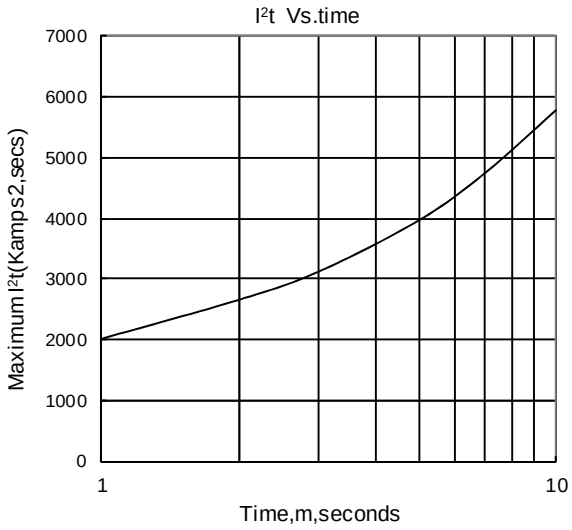
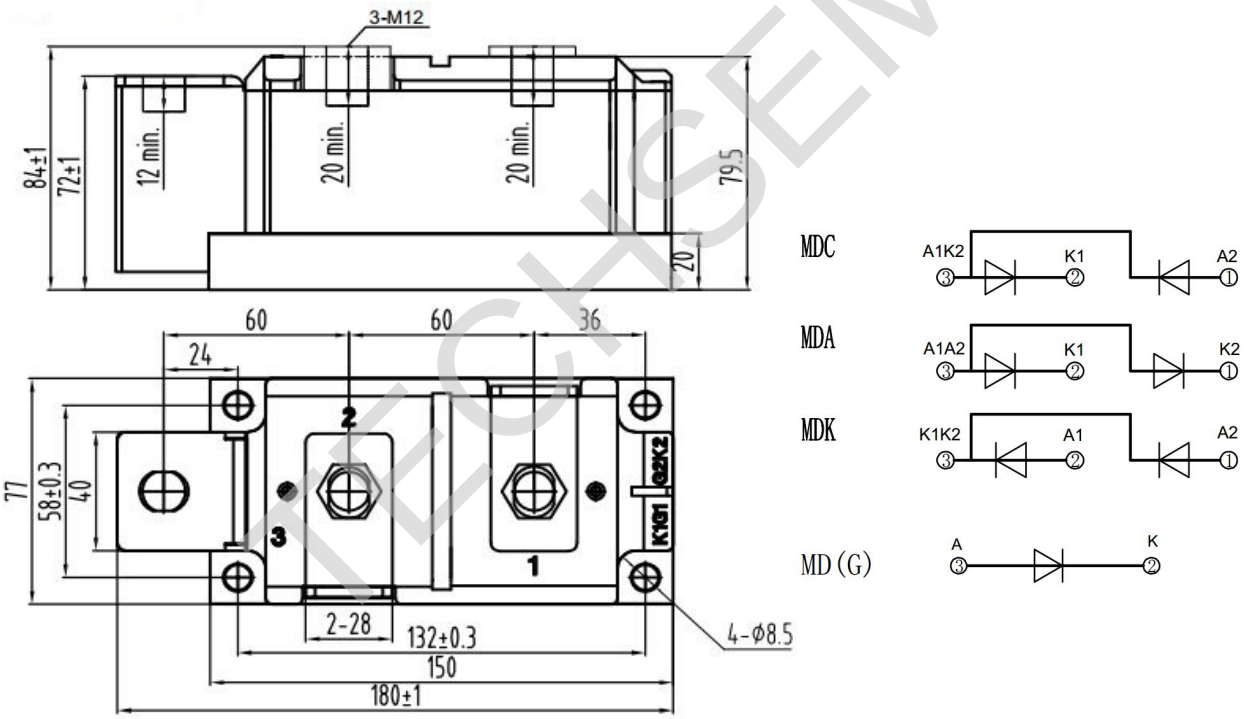


Fig.8

Outline:



Unmarked dimensional tolerance：±0.5mm