

**Features:**

- n Isolated mounting base 2500V~
- n Pressure contact technology with Increased power cycling capability
- n Space and weight saving

Typical Applications

- n Inverter
- n Inductive heating
- n Chopper

V _{DRM} , V _{RRM}	Type & Outline	
800V	MKx300-08-416F3	MHx300-08-416F3
1000V	MKx300-10-416F3	MHx300-10-416F3
1200V	MKx300-12-416F3	MHx300-12-416F3
1400V	MKx300-14-416F3	MHx300-14-416F3
1600V	MKx300-16-416F3	MHx300-16-416F3
1800V	MKx300-18-416F3	MHx300-18-416F3

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 =85°C	125			300	A
I _{T(RMS)}	RMS on-state current					417	A
I _{DRM} I _{RRM}	Repetitive peak current	at V _{DRM} at V _{RRM}	125			80	mA
I _{TSM}	Surge on-state current	10ms half sine wave	125			7.3	kA
I ² t	I ² t for fusing coordination	V _R =60%V _{RRM}				266	A ² s*10 ³
V _{TO}	Threshold voltage		125			0.90	V
r _T	On-state slope resistance					0.74	mΩ
V _{TM}	Peak on-state voltage	I _{TM} =900A	25			2.20	V
dv/dt	Critical rate of rise of off-state voltage	V _{DM} =67%V _{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A t _r ≤0.5μs Repetitive	125			200	A/μs
Q _{rr}	Recovery charge	I _{TM} =300A, t _p =4000μs, di/dt=-20A/μs, V _R =100V	125		650		μC
t _q	Circuit commutated turn-off time	I _{TM} =300A, t _p =4000μs, V _R =100V dv/dt=30V/μs, di/dt=-20A/μs	125	20		40	μs
I _{GT}	Gate trigger current	V _A =12V, I _A =1A	25	30		200	mA
V _{GT}	Gate trigger voltage			0.8		3.0	V
I _H	Holding current			10		200	mA
V _{GD}	Non-trigger gate voltage	V _{DM} =67%V _{DRM}	125			0.2	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				0.020	°C/W
V _{iso}	Isolation voltage	50Hz, R.M.S, t=1min, I _{isc} :1mA(MAX)		2500			V
F _m	Terminal connection torque(M10)			10.0		12.0	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				1490		g
Outline	416F3						

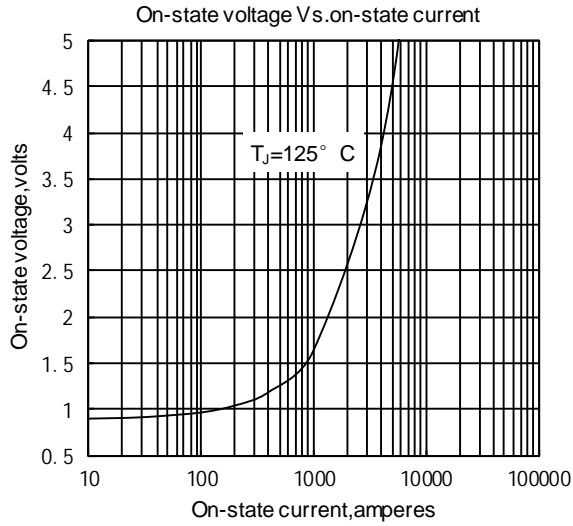


Fig.1

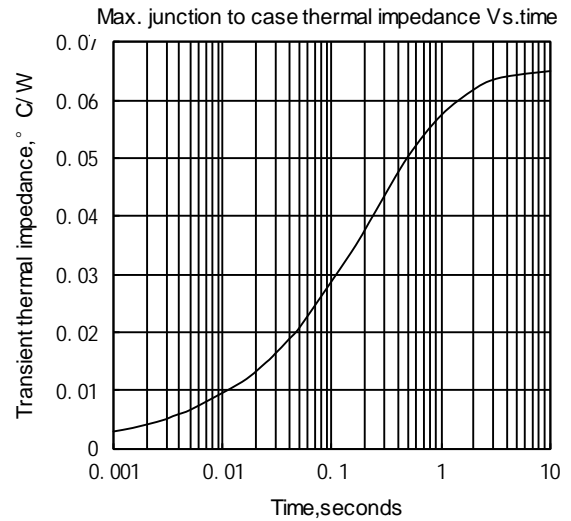


Fig.2

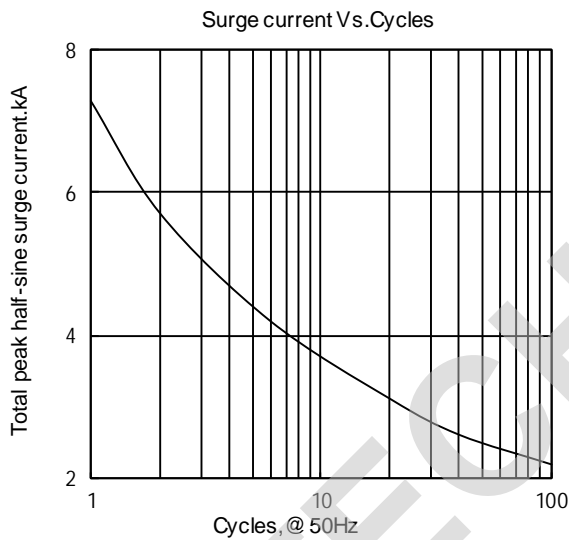


Fig.3

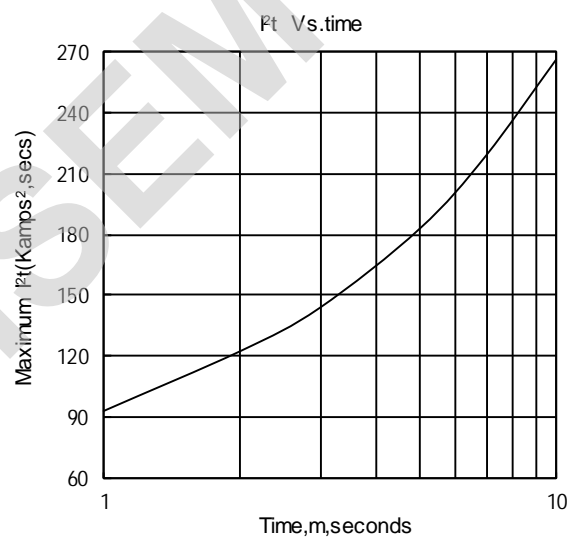


Fig.4

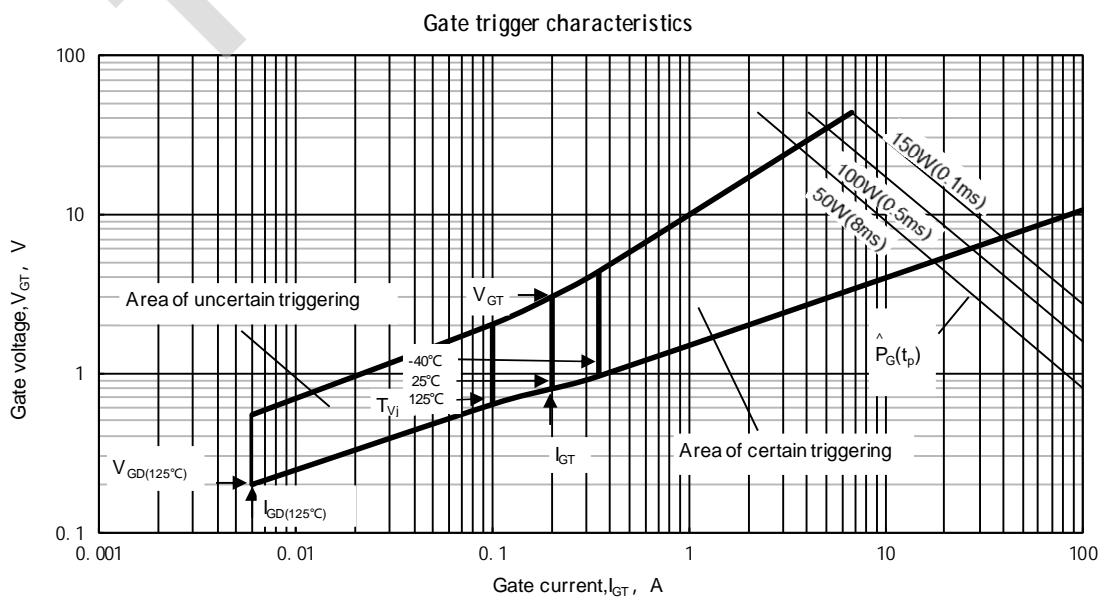
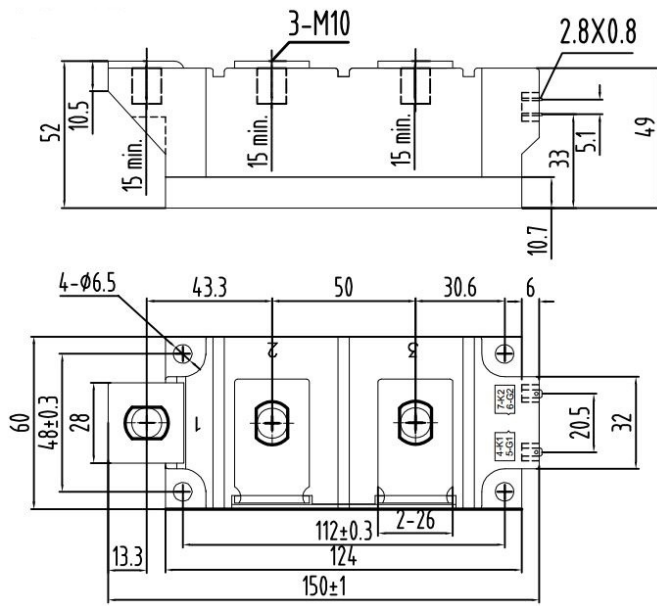


Fig.5

Outline:



Unmarked dimensional tolerance: ± 0.5mm

TECHSEM reserves the right to change specifications without notice.

