

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	
	600V	MKx300-06-405F3
800V	MKx300-08-405F3	MHx300-08-405F3
1000V	MKx300-10-405F3	MHx300-10-405F3
1200V	MKx300-12-405F3	MHx300-12-405F3
1400V	MKx300-14-405F3	MHx300-14-405F3
1600V	MKx300-16-405F3	MHx300-16-405F3
1800V	MKx300-18-405F3	MHx300-18-405F3

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 =55°C	125			300	A	
I _{T(RMS)}	RMS on-state current					471	A	
I _{DRM} I _{RRM}	Repetitive peak current	at V _{DRM} at V _{RRM}	125			50	mA	
I _{TSM}	Surge on-state current	10ms half sine wave V _R =60%V _{RRM}	125			5.60	kA	
I ² t	I ² t for fusing coordination					160	A ² s*10 ³	
V _{TO}	Threshold voltage		125			1.50	V	
r _T	On-state slope resistance					0.75	mW	
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	
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	
			25	6		16	μs	
I _{GT}	Gate trigger current	V _A =12V, I _A =1A	25			30	mA	
V _{GT}	Gate trigger voltage					0.8	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				0.110	°C /W	
R _{th(c-h)}	Thermal resistance case to heatsink	Single side cooled per chip				0.040	°C /W	
V _{iso}	Isolation voltage	50Hz, R.M.S, t=1min, I _{iso} :1mA(MAX)				2500	V	
F _m	Terminal connection torque(M8)					10.0	N·m	
	Mounting torque(M6)					4.5	N·m	
T _{vj}	Junction temperature					-40	125	°C
T _{stg}	Stored temperature					-40	125	°C
W _t	Weight					1060	g	
Outline	405F3							

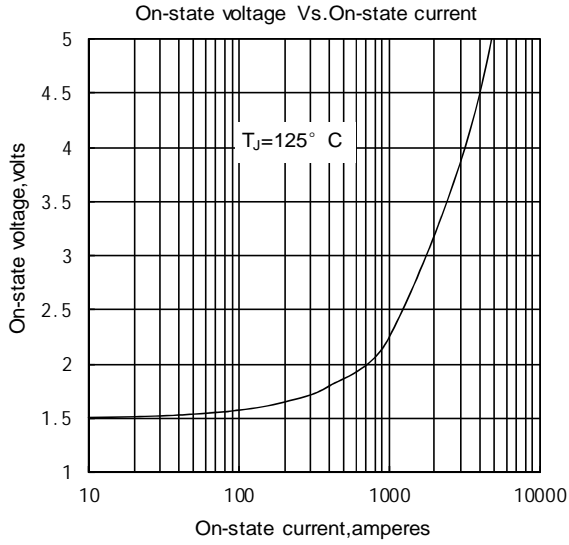


Fig.1

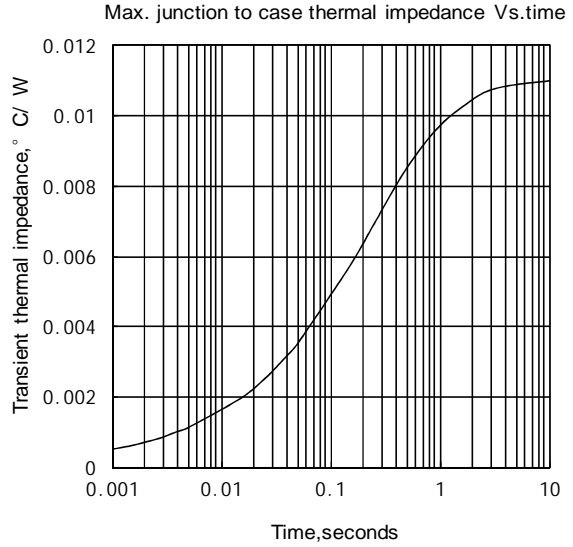


Fig.2

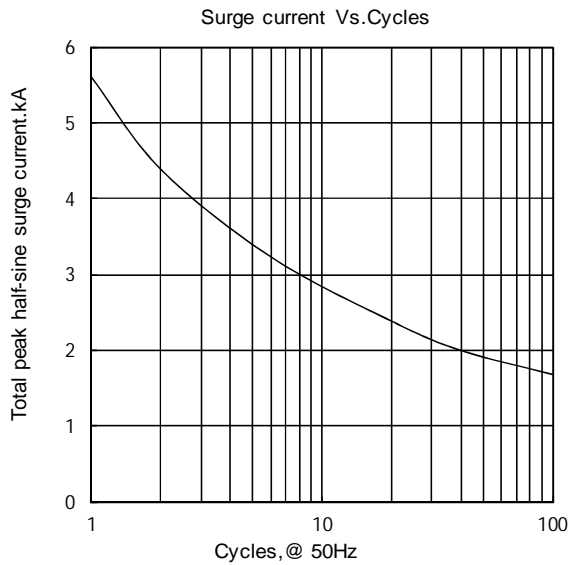


Fig.3

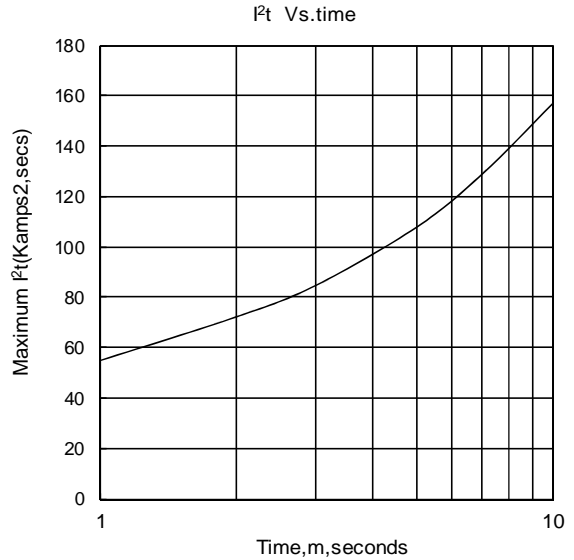


Fig.4

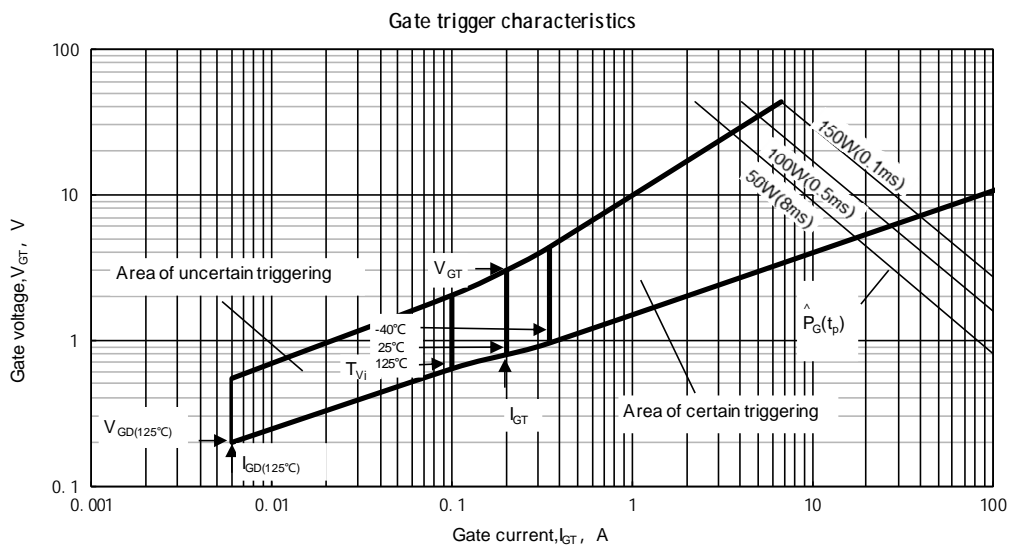
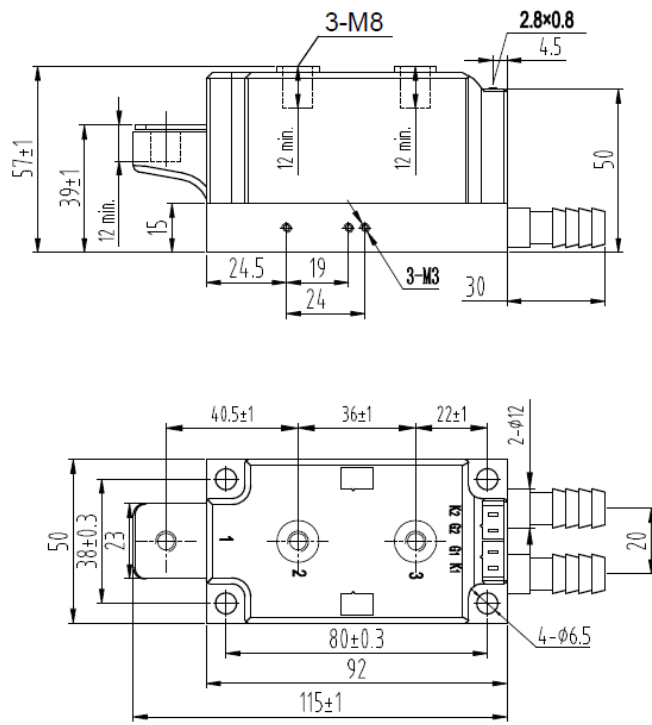


Fig.5

Outline:



Unmarked dimensional tolerance: ±0.5mm

TECHSEM reserves the right to change specifications without notice.

