FEATURE

1). Isolated mounting base 2500V~
2). Pressure contact technology with Increased power cycling capability
3). Space and weight saving

TYPICAL APPLICATION

1). AC/DC Motor drives
2). Various rectifiers
3). DC supply for PWM inverter

TYPE & Outline	V_{DSM},V_{RSM}	V_{DRM},V_{RRM}
MTC600-08	900V	800V
MTC600-10	1100V	1000V
MTC600-12	1300V	1200V
MTC600-14	1500V	1400V
MTC600-16	1700V	1600V
MTC600-18	1900V	1800V

Voltage Ratings

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			600	A
$I_{T(RMS)}$	RMS on-state current		125			942	A
I_{DRM}	Repetitive peak current	at V_{DRM}	125			45	mA
I_{RRM}		at V_{RRM}					
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			16	KA
I^2t	I^2T for fusing coordination					1280	A^2S*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.28	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1800A	25			2.18	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≤0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		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				0.054	°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_{isc}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M10)				12		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight	1473					g
Outline							

PERFORMANCE CURVES FIGURE

Peak On-state Voltage Vs.Peak On-state Current

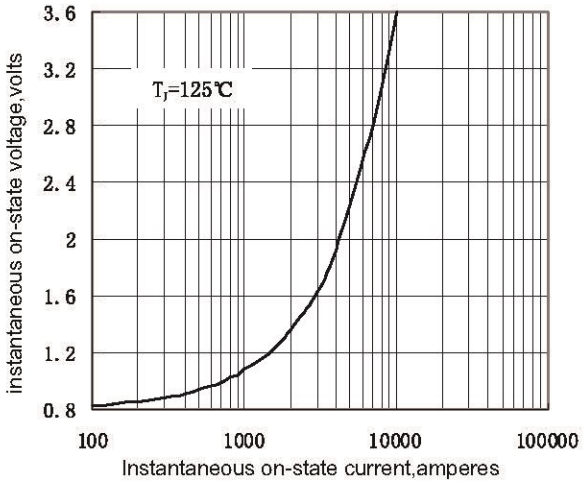

Fig.1

Max. junction To case Thermai Impedance Vs.Time

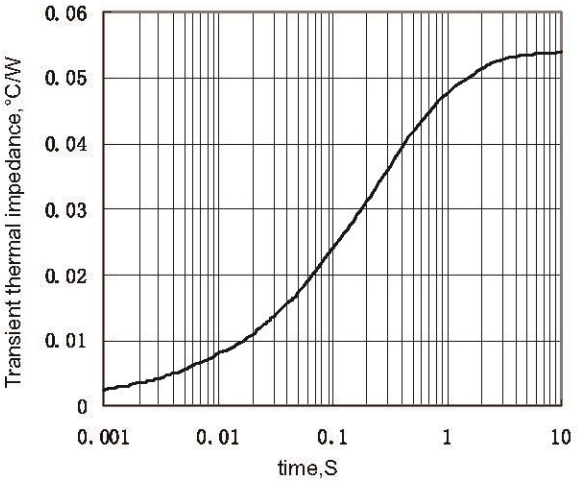

Fig.2

Max. Power Dissipation Vs.Mean On-state Current

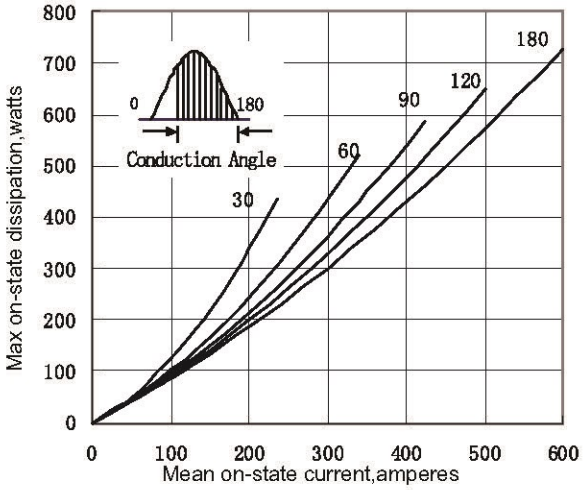

Fig.3

Max. case Temperature Vs.Mean On-state Current

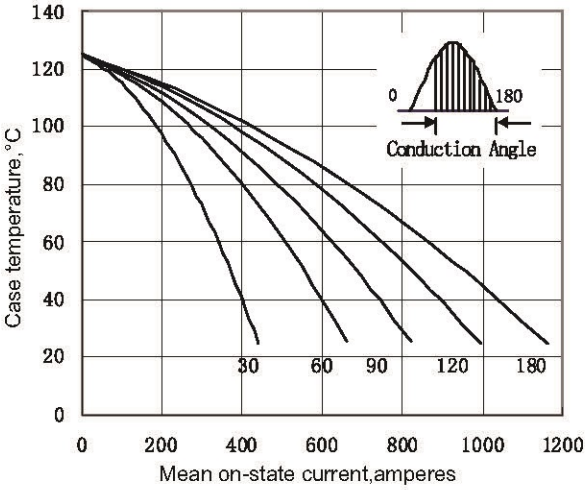

Fig.4

Max. Power Dissipation Vs.Mean On-state Current

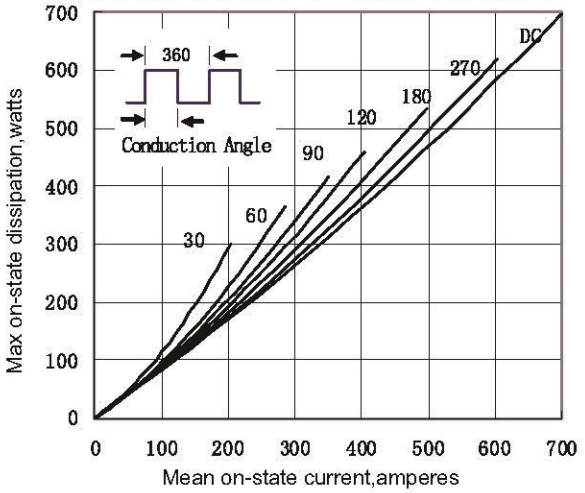

Fig.5

Max. case Temperature Vs.Mean On-state Current

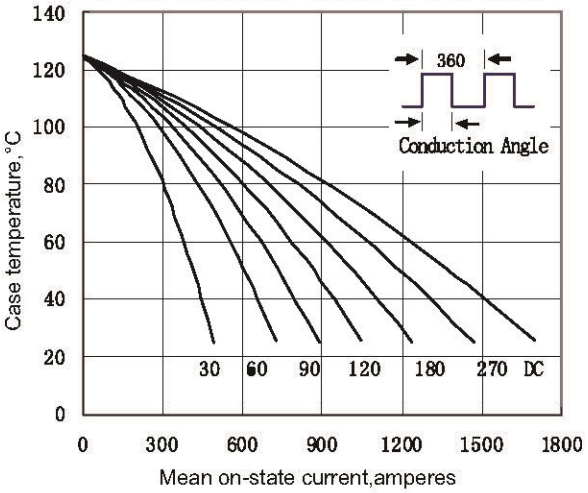

Fig.6

Surge Current Vs.Cycles

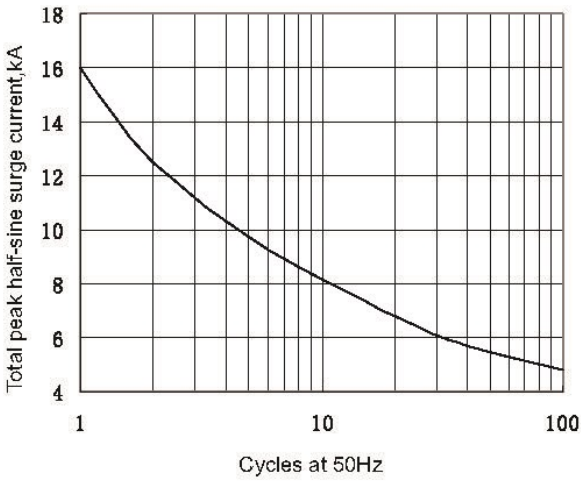

Fig.7

I^2t Vs.Time

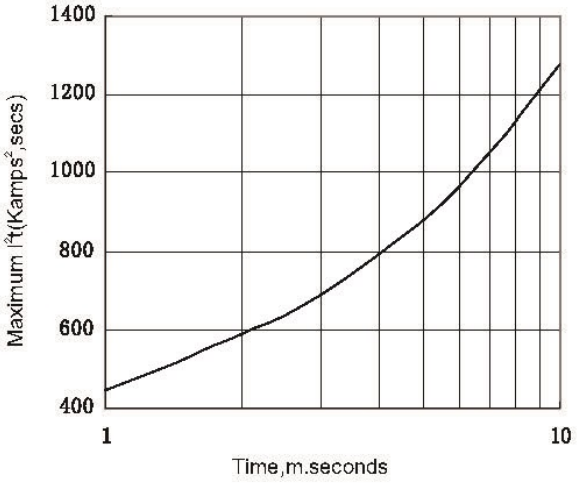

Fig.8

Gate characteristic at 25°C junction temperature

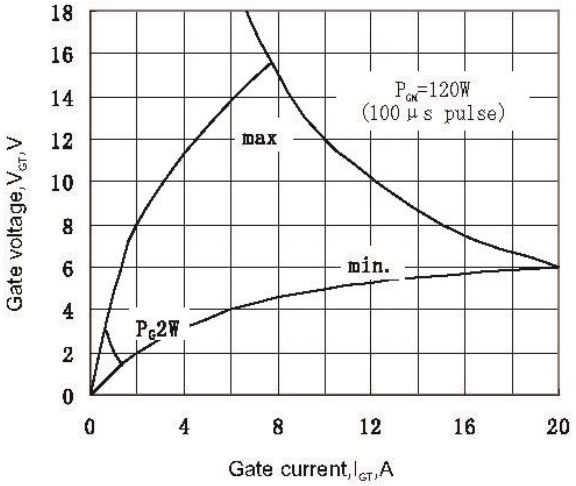

Fig.9

Gate Trigger Zone at varies temperature

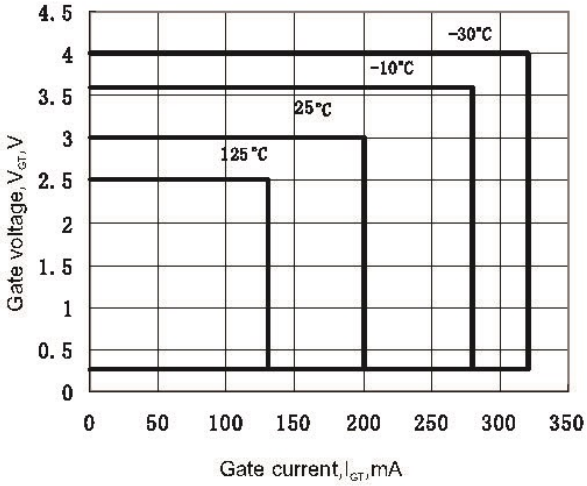

Fig.10

OUTLINE