

**Features:**

- n Isolated mounting base 3000V~
- n Solder joint technology with increased power cycling capability
- n Space and weight saving

Typical Applications:

- n AC/DC Motor drives
- n Various rectifiers
- n DC supply for PWM inverter

V_{DRM}, V_{RRM}	Type & Outline
600V	MTC182-06-229H3/229H3B
800V	MTC182-08-229H3/229H3B
1000V	MTC182-10-229H3/229H3B
1200V	MTC182-12-229H3/229H3B
1400V	MTC182-14-229H3/229H3B
1600V	MTC182-16-229H3/229H3B
1800V	MTC182-18-229H3/229H3B

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_j(^{\circ}\text{C})$	VALUE			UNIT	
				Min	Type	Max		
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled, $T_c=85^{\circ}\text{C}$	125			182	A	
$I_{T(RMS)}$	RMS on-state current		125			286	A	
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA	
I_{TSM}	Surge on-state current	10ms half sine wave $V_R=60\%V_{RRM}$	125			4.0	kA	
I^2t	I^2t for fusing coordination					80	$\text{A}^2\text{s} \times 10^3$	
V_{TO}	Threshold voltage		125			0.83	V	
r_T	On-state slope resistance					1.30	m Ω	
V_{TM}	Peak on-state voltage	$I_{TM}=550\text{A}$	25			1.80	V	
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=67\%V_{DRM}$	125			1000	V/ μs	
di/dt	Critical rate of rise of on-state current	Gate source 1.5A $t_r \leq 0.5\mu\text{s}$ Repetitive	125			200	A/ μs	
I_{GT}	Gate trigger current	$V_A=12\text{V}, I_A=1\text{A}$	25			30	mA	
V_{GT}	Gate trigger voltage					0.6	2.5	V
I_H	Holding current					10	250	mA
I_L	Latching current						1000	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				0.16	$^{\circ}\text{C}/\text{W}$	
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled per chip				0.08	$^{\circ}\text{C}/\text{W}$	
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(M6)					2.5	N·m	
	Mounting torque(M6)					4.5	N·m	
T_{vj}	Junction temperature					-40	$^{\circ}\text{C}$	
T_{stg}	Stored temperature					-40	$^{\circ}\text{C}$	
W_t	Weight					165	g	
Outline	229H3, 229H3B							

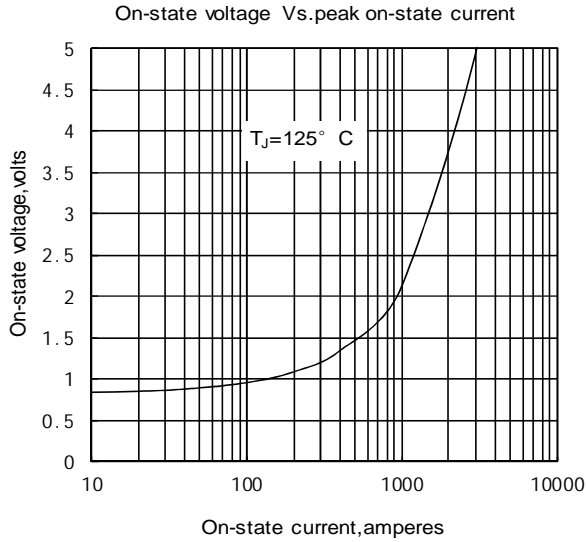


Fig1

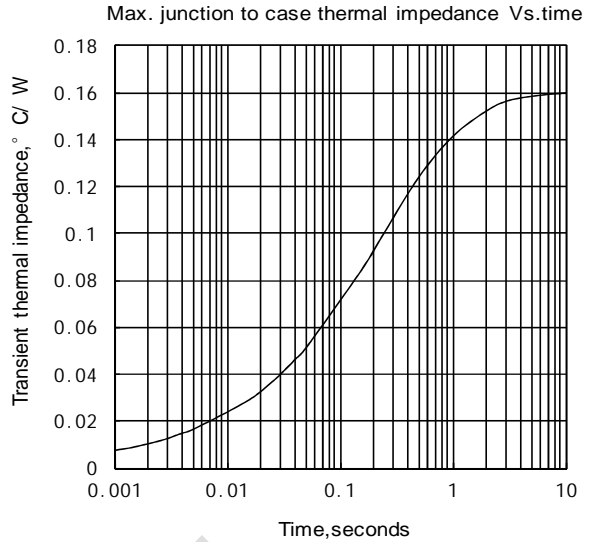


Fig2

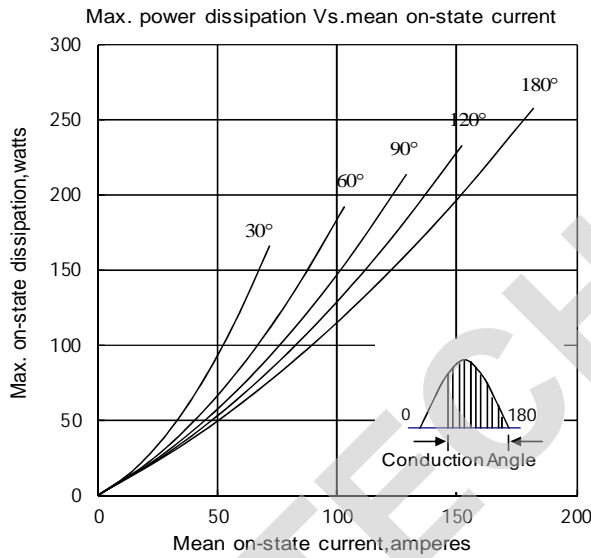


Fig3

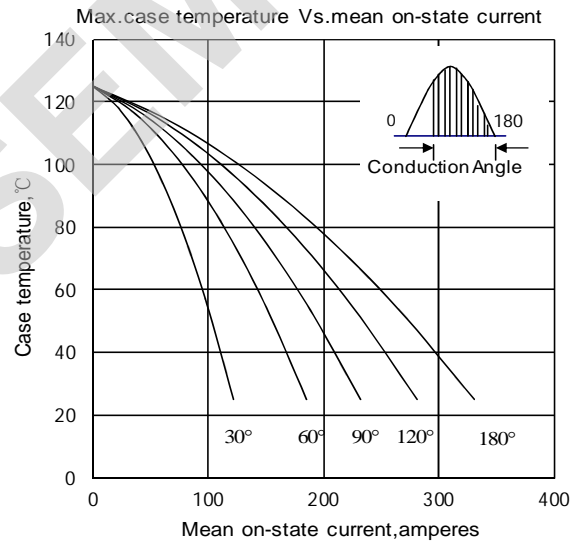


Fig4

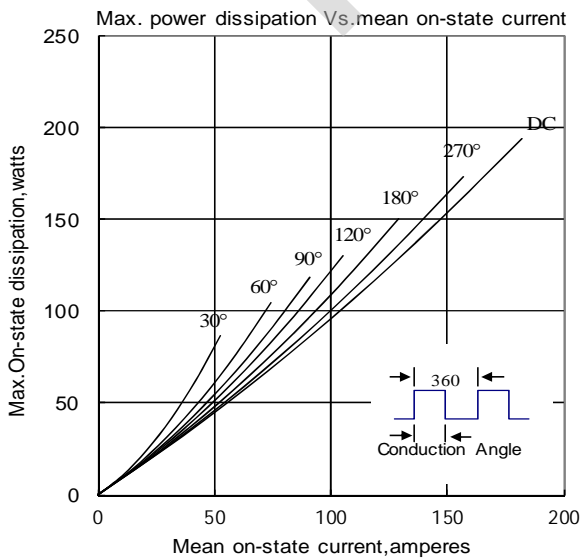


Fig5

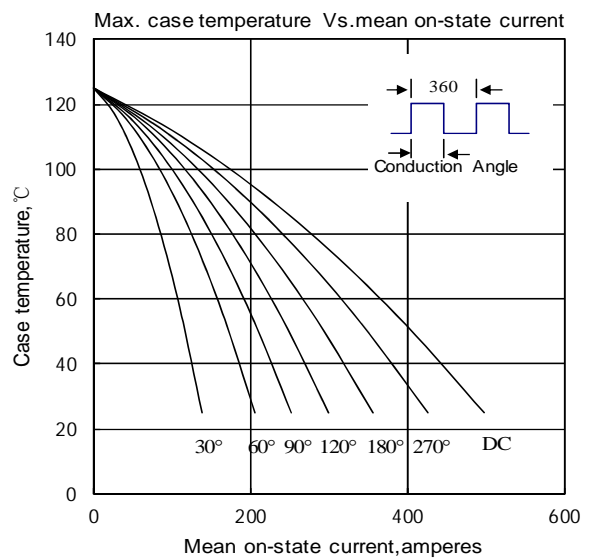


Fig6

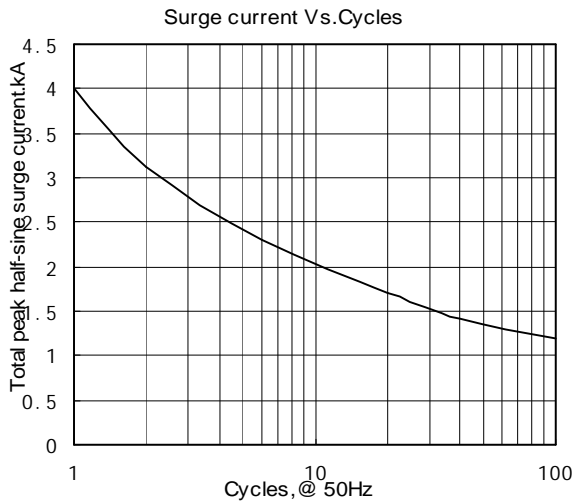


Fig 7

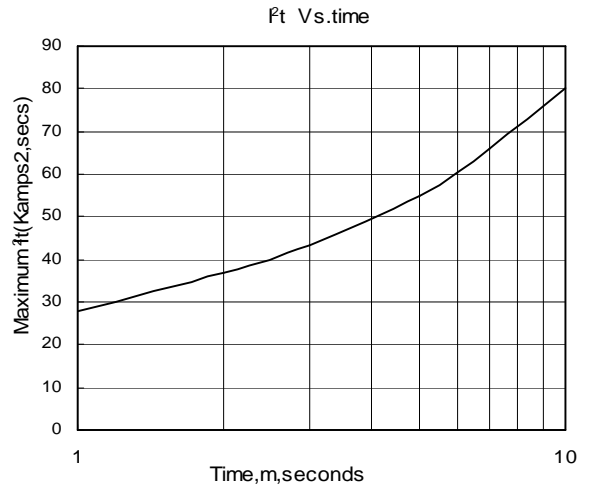


Fig 8

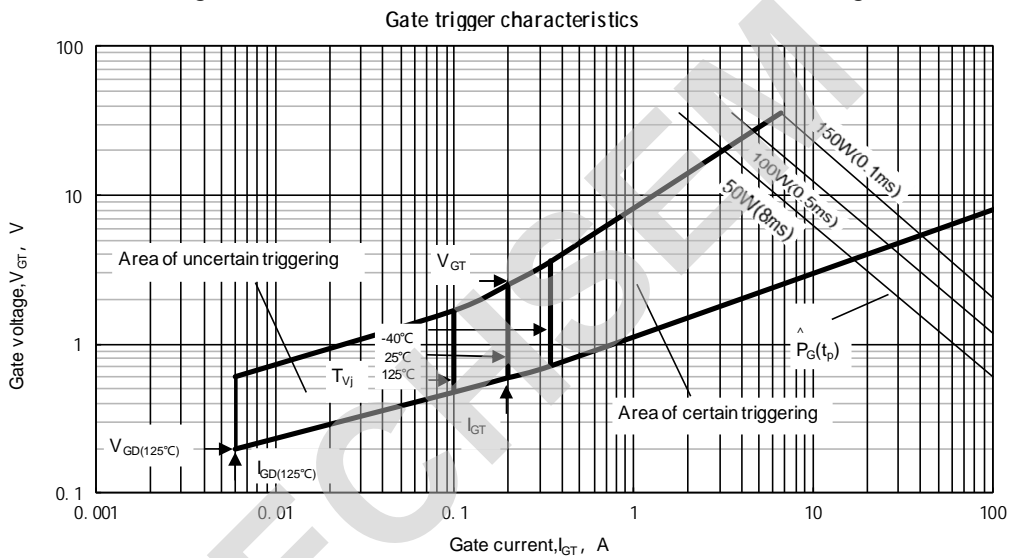
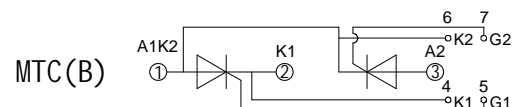
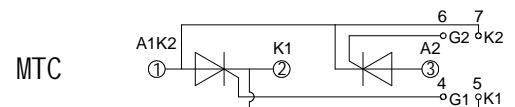
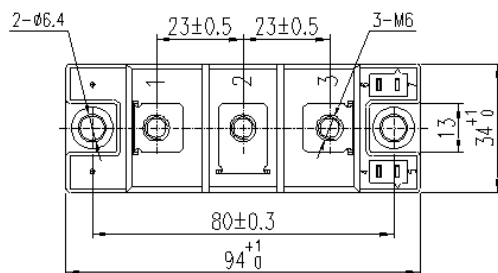
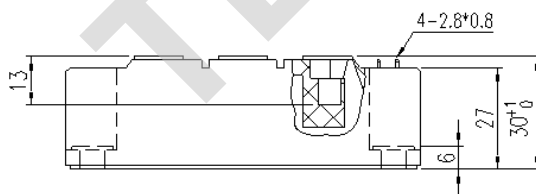


Fig.9

Outline:



Unmarked dimensional tolerance: ±0.5mm

TECHSEM reserves the right to change specifications without notice.