

**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	
	800V	MFC160-08-229H3
1000V	MFC160-10-229H3	MFC160-10-229H3B
1200V	MFC160-12-229H3	MFC160-12-229H3B
1400V	MFC160-14-229H3	MFC160-14-229H3B
1600V	MFC160-16-229H3	MFC160-16-229H3B
1800V	MFC160-18-229H3	MFC160-18-229H3B

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_j(^{\circ}C)$	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled, $T_c=85^{\circ}C$	125			160	A
$I_{T(RMS)}$	RMS on-state current		125			251	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			3.8	kA
I^2t	I^2t for fusing coordination					72.2	$A^2s \cdot 10^3$
V_{TO}	Threshold voltage		125			0.85	V
r_T	On-state slope resistance					1.50	m Ω
V_{TM}	Peak on-state voltage	$I_{TM}=480A$	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 $t_r \leq 0.5\mu s$ Repetitive	125			200	A/ μs
I_{GT}	Gate trigger current	$V_A=12V, I_A=1A$	25	30		200	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				0.17	$^{\circ}C/W$
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled per chip				0.08	$^{\circ}C/W$
V_{iso}	Isolation voltage	50Hz, R.M.S, $t=1min, I_{iso}: 1mA(MAX)$		3000			V
F_m	Terminal connection torque(M6)			2.5		4.0	N·m
	Mounting torque(M6)			4.5		6.0	N·m
T_{vj}	Junction temperature			-40		125	$^{\circ}C$
T_{stg}	Stored temperature			-40		125	$^{\circ}C$
W_t	Weight				165		g
Outline	229H3/229H3B						

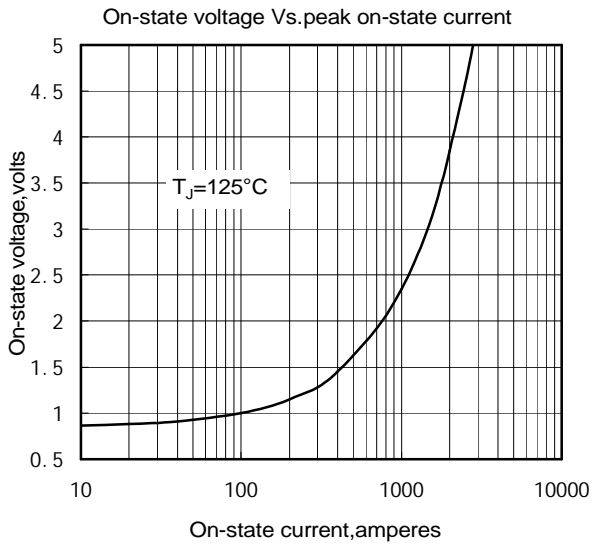


Fig1

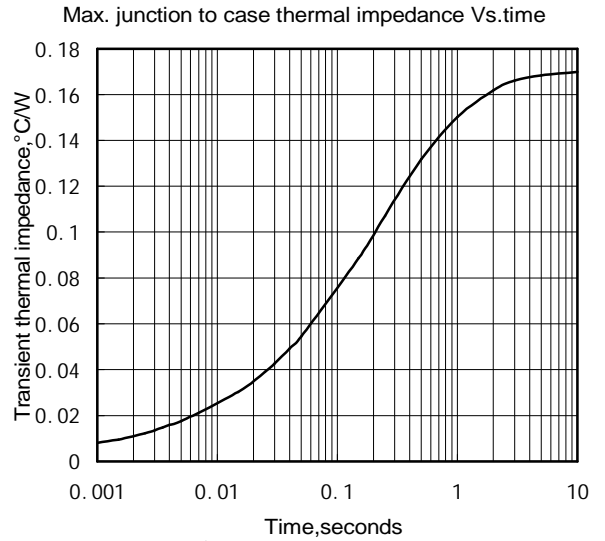


Fig2

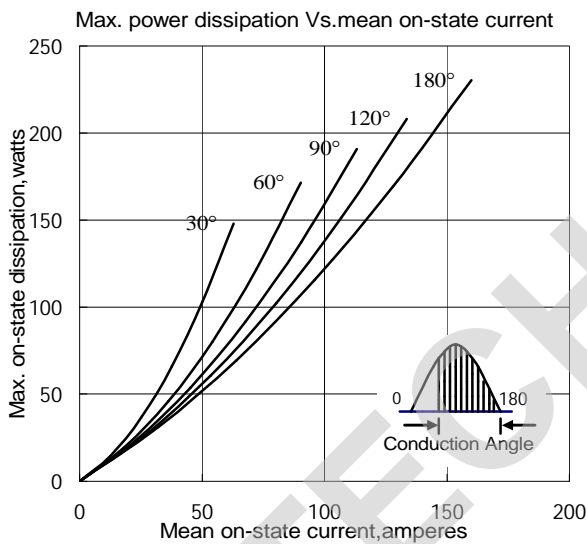


Fig3

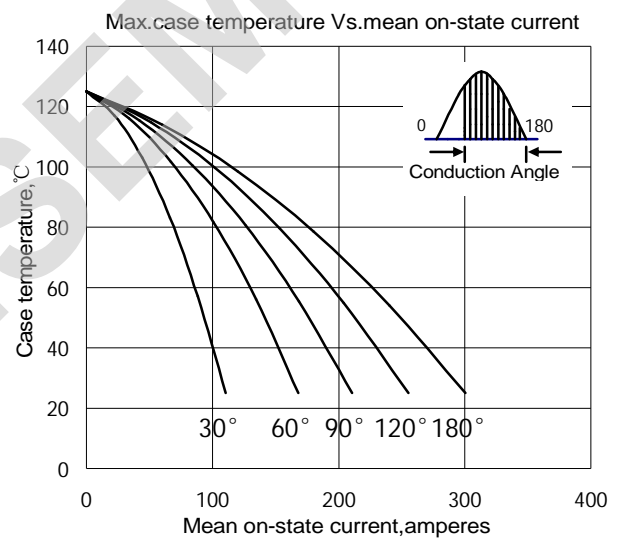


Fig4

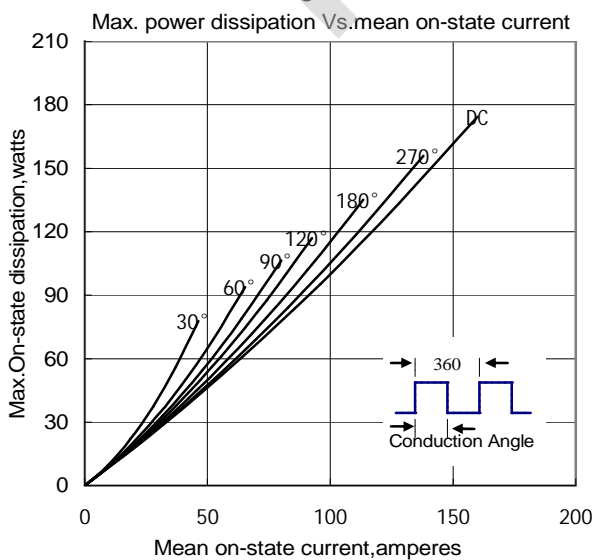


Fig5

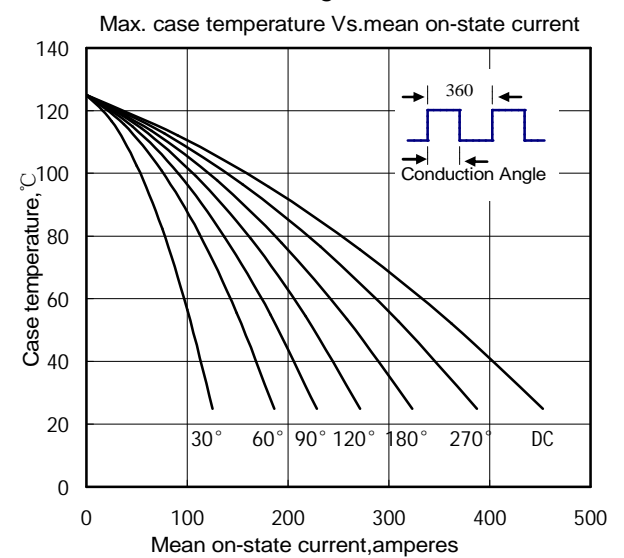


Fig6

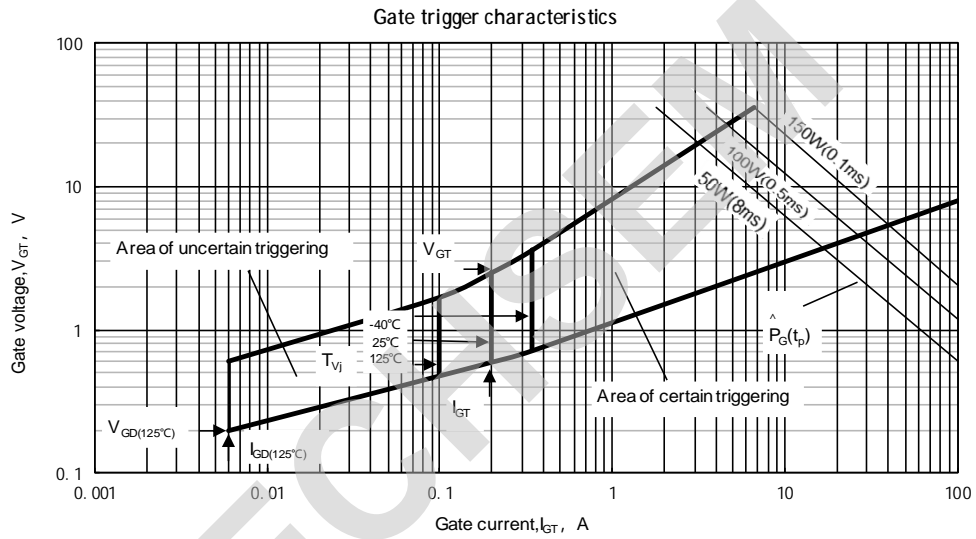
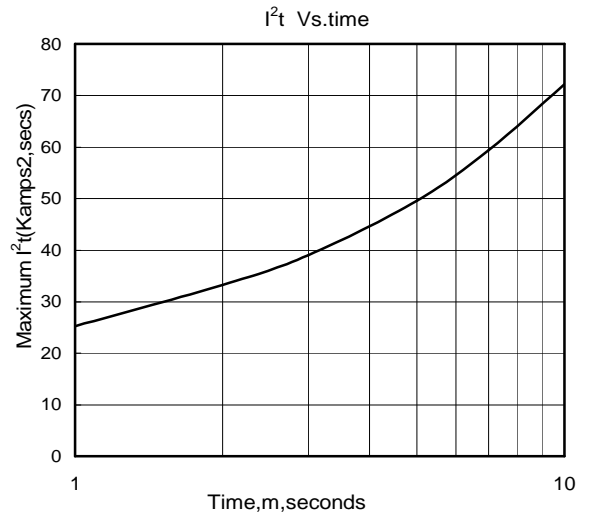
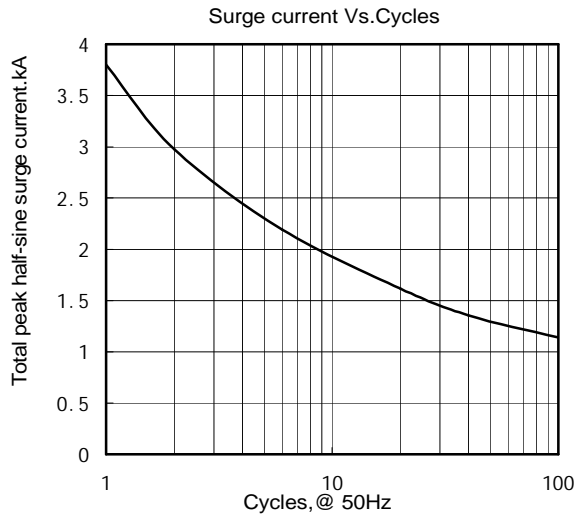
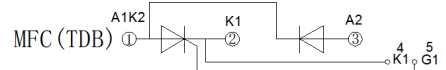
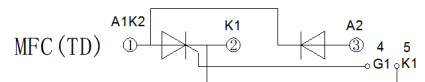
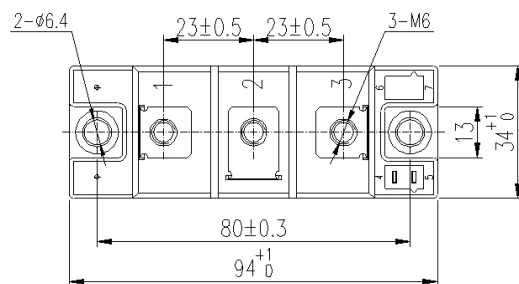
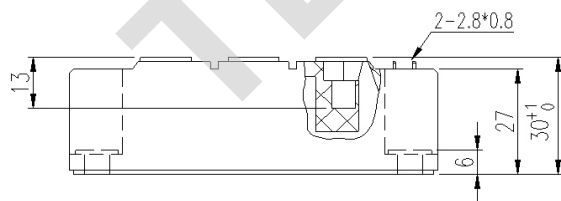


Fig.9

Outline:



Unmarked dimensional tolerance: ±0.5mm

TECHSEM reserves the right to change specifications without notice.