

Features :

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

Typical Applications

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

V_{DSM}, V_{RSM}	V_{DRM}, V_{RRM}	Type
900V	800V	MD135TH80S
1100V	1000V	MD135TH100S
1300V	1200V	MD135TH120S
1500V	1400V	MD135TH140S
1700V	1600V	MD135TH160S
1900V	1800V	MD135TH180S

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, $T_c=85^\circ\text{C}$	125			135	A
$I_{T(RMS)}$	RMS on-state current		125			212	A
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			35	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125			3.5	kA
I^2t	I^2t for fusing coordination	$V_R=60\%V_{RRM}$				61.3	$\text{A}^2\text{s}\cdot 10^3$
V_{TO}	Threshold voltage		125			0.95	V
r_T	On-state slope resistance					1.50	$\text{m}\Omega$
V_{TM}	Peak on-state voltage	$I_{TM}=410\text{A}$	25			1.60	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=67\%V_{DRM}$	125			1000	$\text{V}/\mu\text{s}$
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	$\text{A}/\mu\text{s}$
I_{GT}	Gate trigger current	$V_A=12\text{V}, I_A=1\text{A}$	25	30		200	mA
V_{GT}	Gate trigger voltage			0.6		2.5	V
I_H	Holding current			10		250	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				0.18	$^\circ\text{C}/\text{W}$
$R_{th(c-h)}$	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, $t=1\text{min}, I_{iso}:1\text{mA(MAX)}$		3000			V
F_m	Terminal connection torque(M6)				6.0		N·m
	Mounting torque(M6)				6.0		N·m
T_{stg}	Stored temperature			-40		125	$^\circ\text{C}$
W_t	Weight				150		g
Outline	M17						

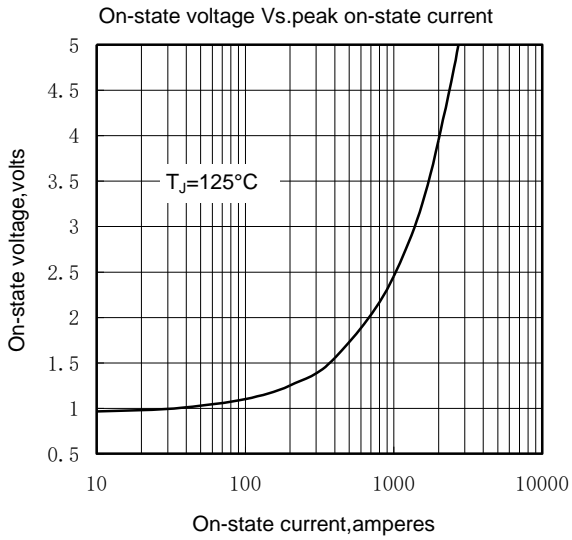


Fig1

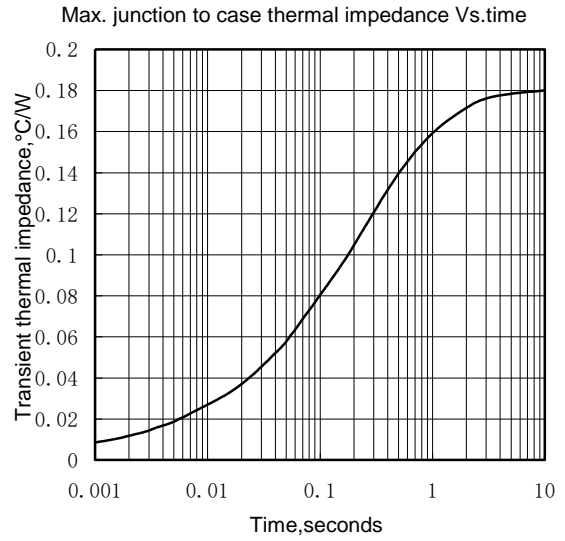


Fig2

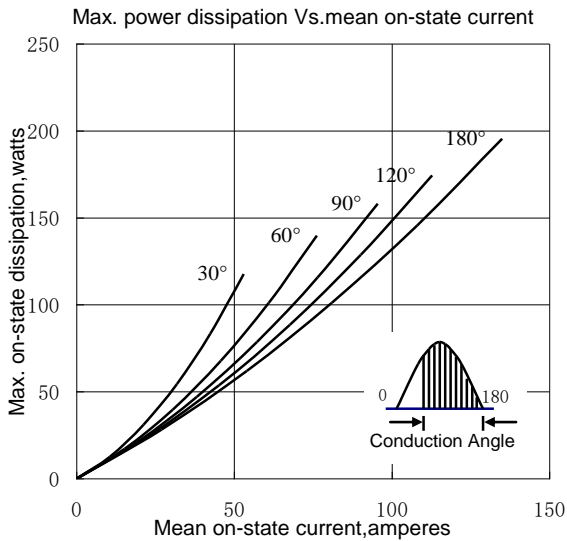


Fig3

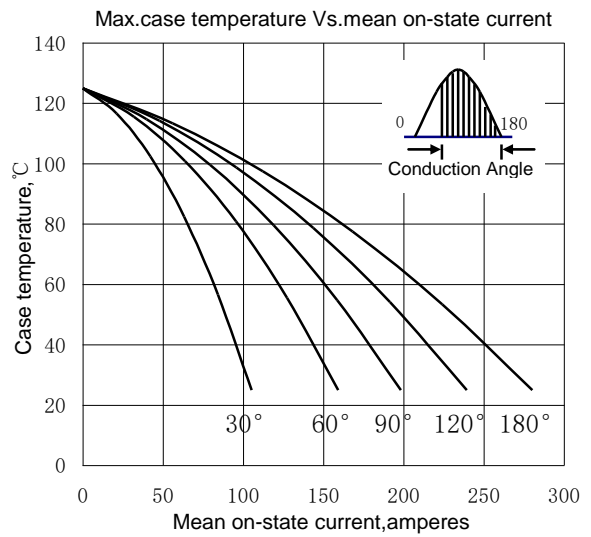


Fig4

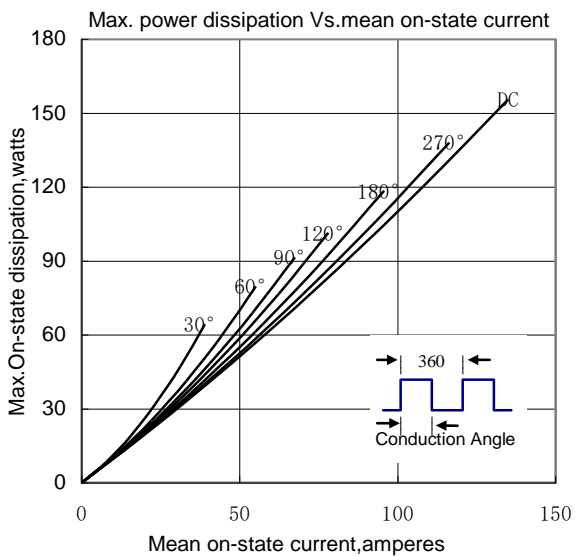


Fig5

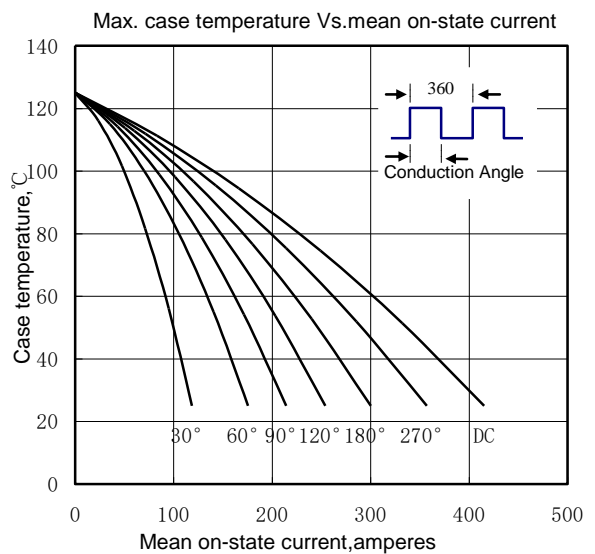


Fig6

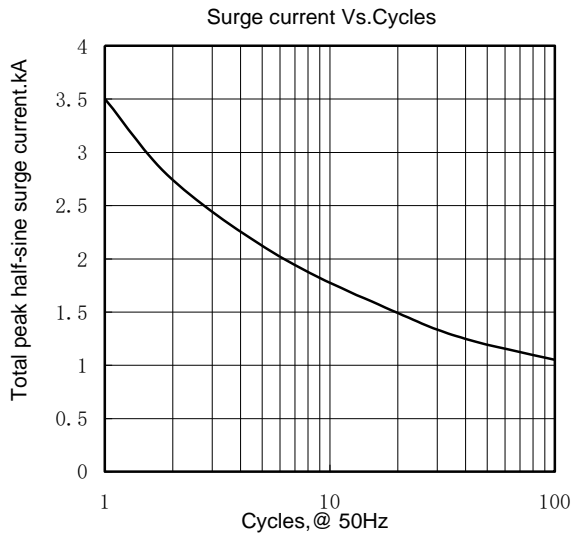


Fig7

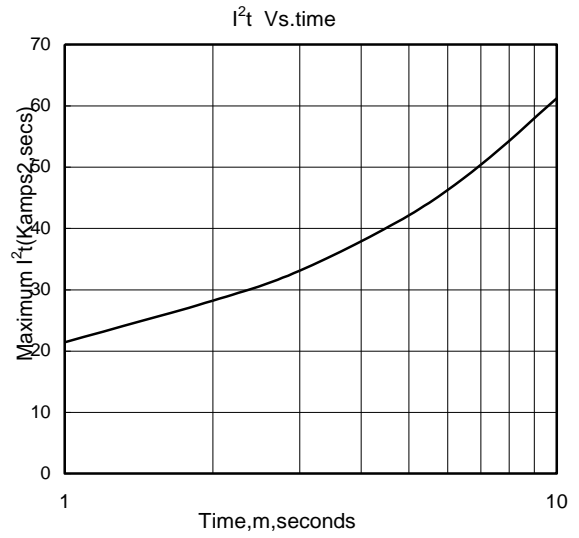


Fig8

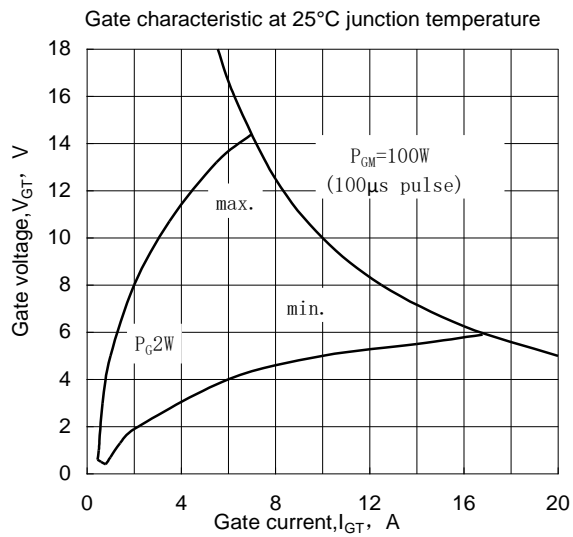


Fig9

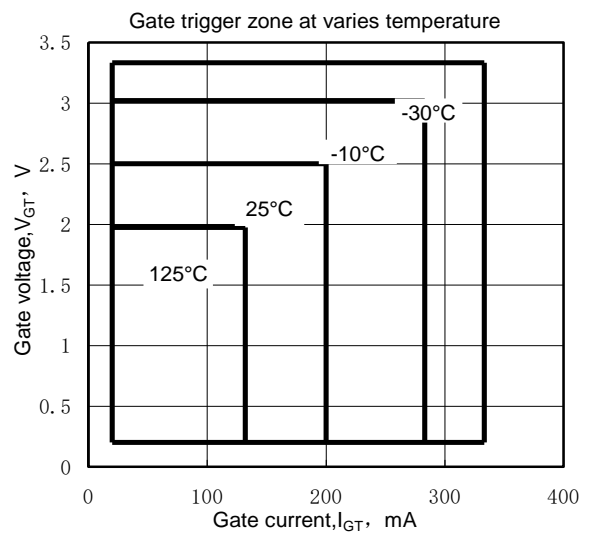
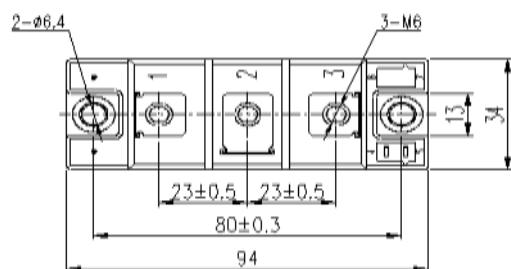
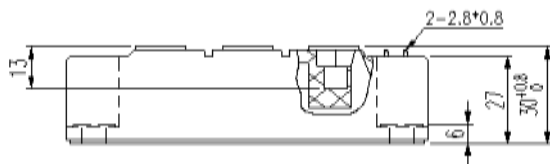


Fig10

Outline:



MD135TH*S

