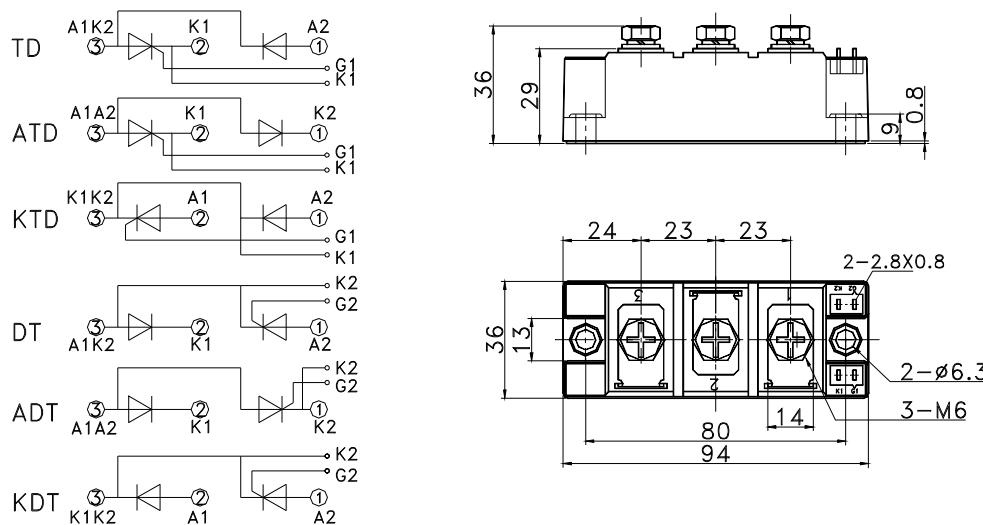


TD160 ATD160 KTD160 DT160 ADT160 KDT160

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_J(^\circ\text{C})$	VALUE			UNIT
				Min	Type	Max	
$I_{T(\text{AV})}$ $I_{F(\text{AV})}$	Mean on-state current	180° half sine wave 50Hz Single side cooled, $T_C=85^\circ\text{C}$	125			160	A
$I_{T(\text{RMS})}$	RMS on-state current	Single side cooled, $T_C=85^\circ\text{C}$	125			251	A
$V_{\text{DRM}}$ $V_{\text{RRM}}$	Repetitive peak off-state voltage Repetitive peak reverse voltage	$V_{\text{DRM}} \& V_{\text{RRM}} \text{ tp}=10\text{ms}$ $V_{\text{DSM}} \& V_{\text{RSM}} = V_{\text{DRM}} \& V_{\text{RRM}} + 200\text{V}$ respectively	125	600		1600	V
$I_{\text{DRM}}$ $I_{\text{RRM}}$	Repetitive peak current	at $V_{\text{DRM}}$ at $V_{\text{RRM}}$	125			20	mA
$I_{\text{TSM}}$	Surge on-state current	10ms half sine wave	125			5.40	KA
$I^2t$	$I^2T$ for fusing coordination	$V_R=60\%V_{\text{RRM}}$				149	$\text{A}^2\text{s} \times 10^3$
$V_{\text{TO}}$	Threshold voltage		125			0.8	V
$r_T$	On-state slop resistance					1.69	$\text{m}\Omega$
$V_{\text{TM}}$	Peak on-state voltage	$I_{\text{TM}}=480\text{A}$	125			1.70	V
$dv/dt$	Critical rate of rise of off-state voltage	$V_{\text{DM}}=67\%V_{\text{DRM}}$	125			800	$\text{V}/\mu\text{s}$
$di/dt$	Critical rate of rise of on-state current	From 67% $V_{\text{DRM}}$ to 480A, Gate source 1.5A $t_r \leq 0.5\mu\text{s}$ Repetitive	125			100	$\text{A}/\mu\text{s}$
$I_{\text{GT}}$	Gate trigger current		25	30		150	mA
$V_{\text{GT}}$	Gate trigger voltage	$V_A=12\text{V}, I_A=1\text{A}$		1.0		2.0	V
$I_H$	Holding current			20		100	mA
$V_{\text{GD}}$	Non-trigger gate voltage	At 67% $V_{\text{DRM}}$	125			0.2	V
$R_{\text{th(j-c)}}$	Thermal resistance Junction to heatsink	At 180° sine Single side cooled				0.170	$^\circ\text{C}/\text{W}$
$V_{\text{iso}}$	Isolation voltage	50Hz, R.M.S, $t=1\text{min}, I_{\text{iso}}:1\text{mA}(\text{MAX})$		2500			V
$F_m$	Thermal connection torque(M6)				0.3		N·m
	Mounting torque(M6)				0.3		N·m
$T_{\text{stg}}$	Stored temperature			-40		140	$^\circ\text{C}$
$W_t$	Weight				320		g
Outline		214F3					

## OUTLINE DRAWING & CIRCUIT DIAGRAM



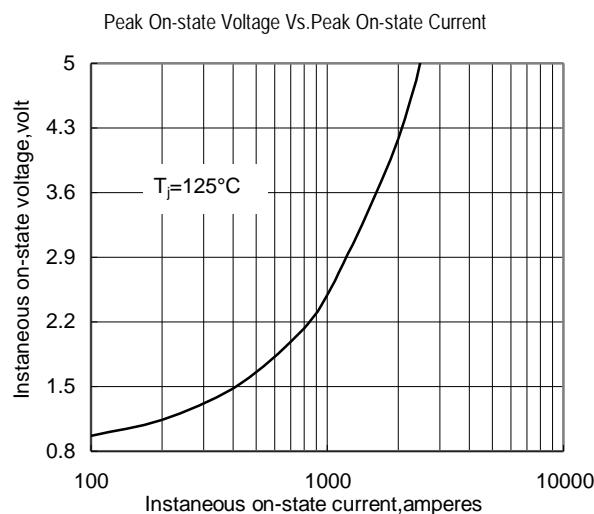


Fig.1

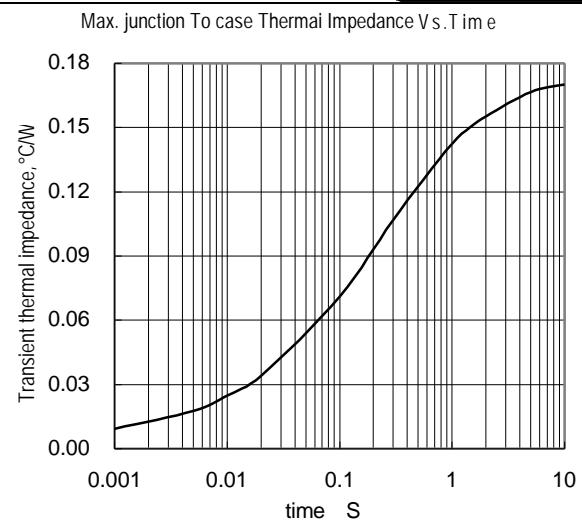


Fig.2

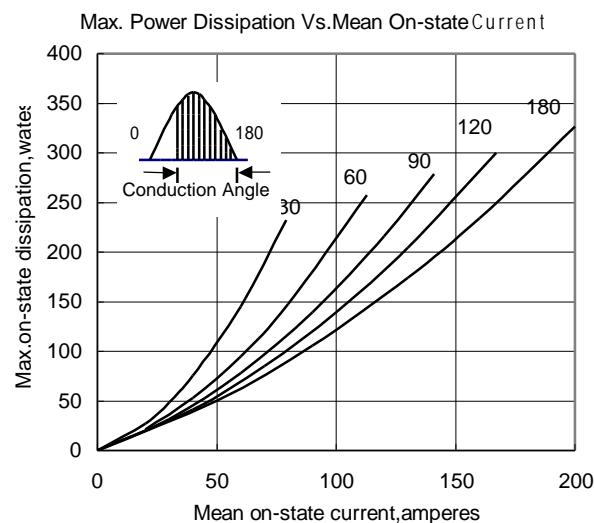


Fig.3

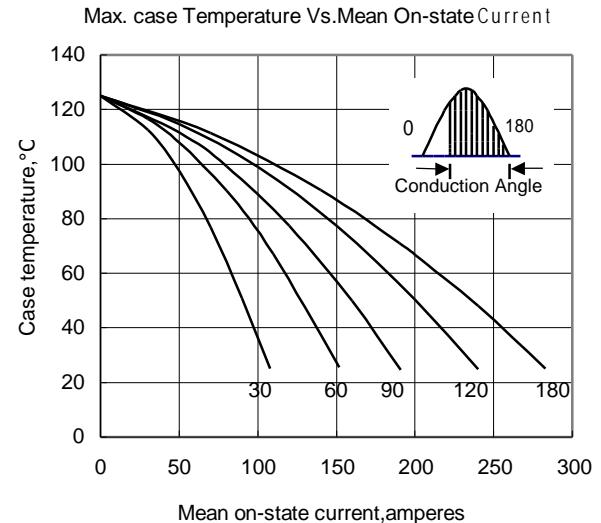


Fig.4

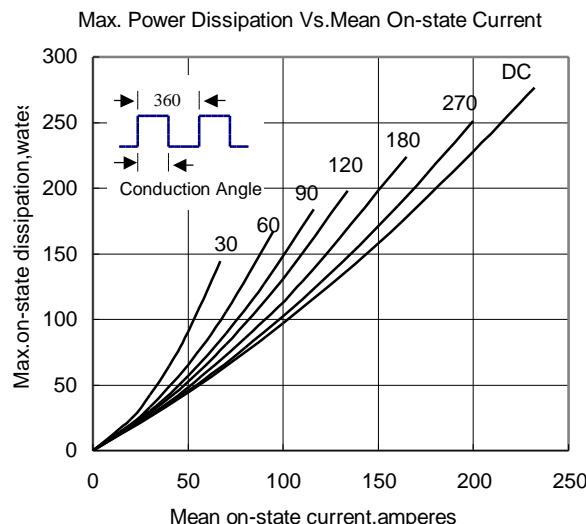


Fig.5

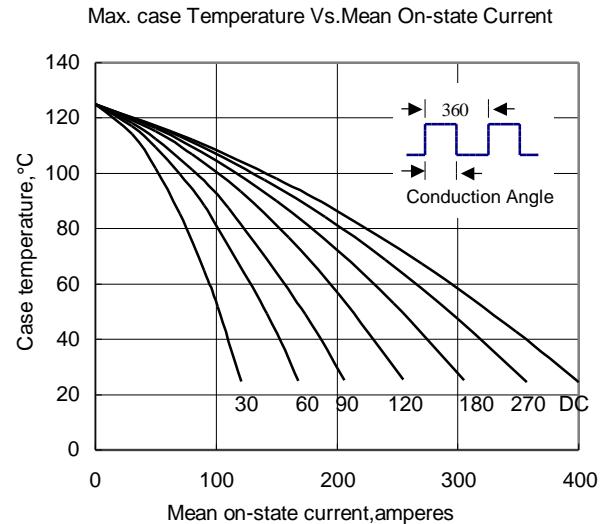


Fig.6

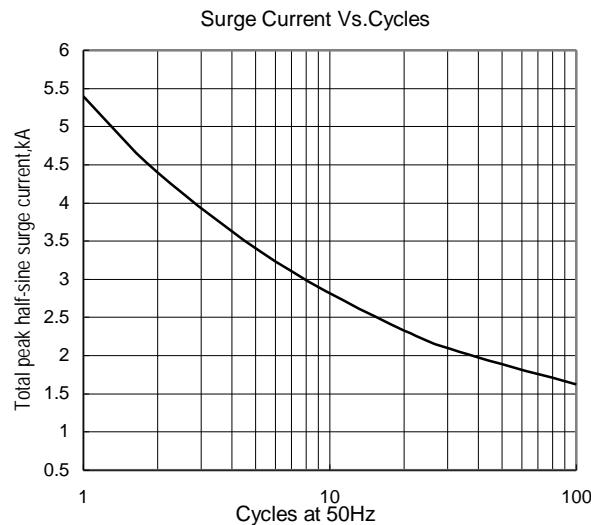


Fig.7

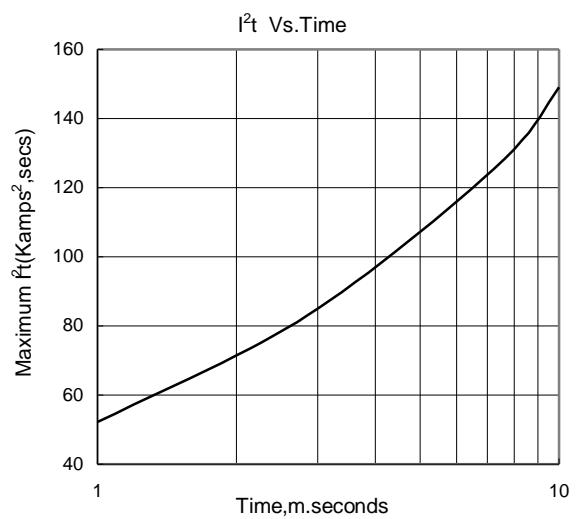


Fig.8

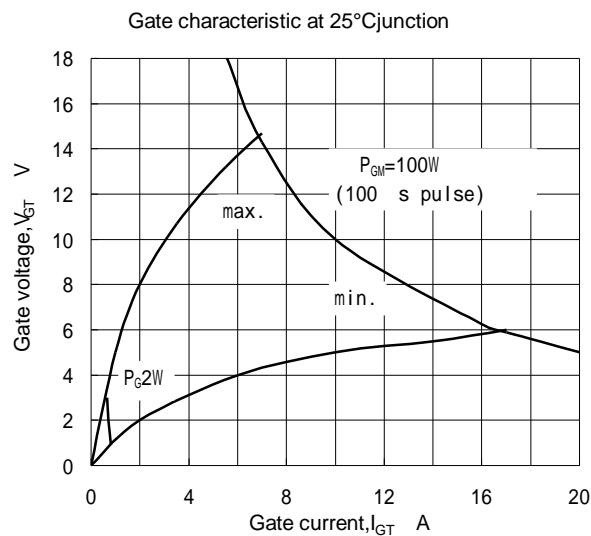


Fig.9

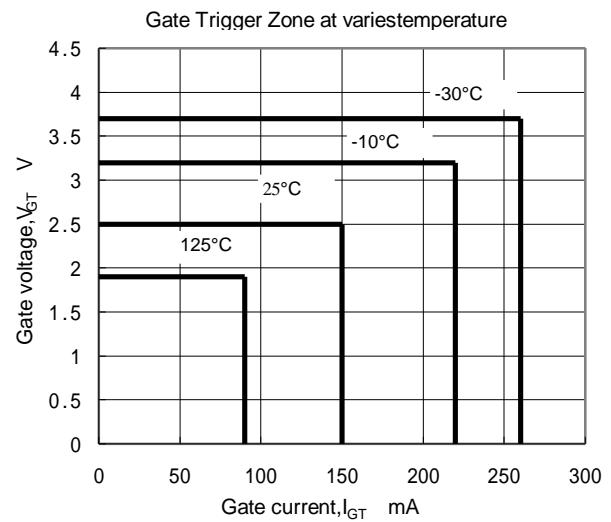


Fig.10