

Features

- Center amplifying gate
- Metal case with ceramic insulator
- Low on-state and switching losses

Typical Applications

- AC controllers
- DC and AC motor control
- Controlled rectifiers

$I_{T(AV)}$ 5010 A
 V_{DRM}/V_{RRM} 4500-5500V
 I_{TSM} 72 kA
 I^2t 25920 10³A²S



SYMBOL	CHARACTERISTIC	TEST CONDITIONS		T _j (°C)	VALUE			UNIT
					Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled,	T _c =70°C	125			5010	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	4500		5500	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}		125			600	mA
I_{TSM}	Surge on-state current	10ms half sine wave		125			72	kA
I^2t	I ² t for fusing coordination	$V_R=0.6V_{RRM}$					25920	A ² s*10 ³
V_{TO}	Threshold voltage			125			1.02	V
r_T	On-state slope resistance						0.14	mΩ
V_{TM}	Peak on-state voltage	$I_{TM}=3000A, F=120kN$		125			1.50	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$		125			2000	V/μs
di/dt	Critical rate of rise of on-state current	$V_{DM}= 67\%V_{DRM}$ to 3000A, Gate pulse tr ≤0.5μs IGM=1.5A		125			250	A/μs
Q_{rr}	Recovery charge	$I_{TM}=2000A, tp=2000μs, di/dt=-5A/μs,$ $V_R =50V$		125		5500		μC
I_{GT}	Gate trigger current			25	30		300	mA
V_{GT}	Gate trigger voltage	$V_A=12V, I_A=1A$			0.8		3.0	V
I_H	Holding current				25		250	mA
V_{GD}	Non-trigger gate voltage	$V_{DM}=67\%V_{DRM}$		125	0.3			V
$R_{th(j-c)}$	Thermal resistance Junction to case	DC: double side cooled					0.004	°C /W
$R_{th(c-hs)}$	Thermal resistance case to heatsink	Clamping force 120.0kN					0.001	°C /W
F_m	Mounting force				110		140	kN
T_{stg}	Stored temperature				-40		140	°C
W_t	Weight					3420		g
Outline	P31							

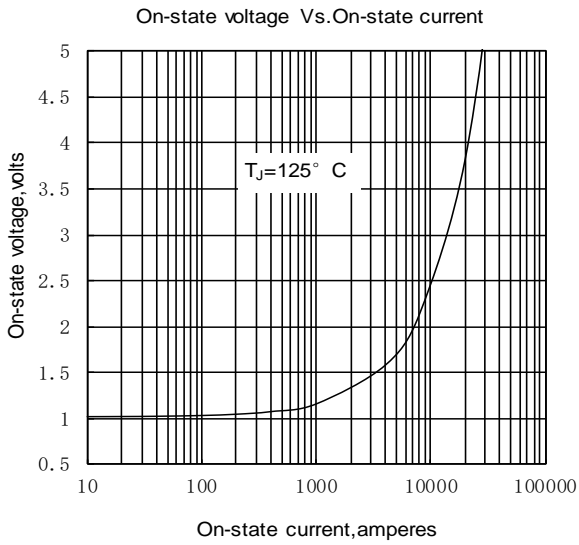


Fig.1

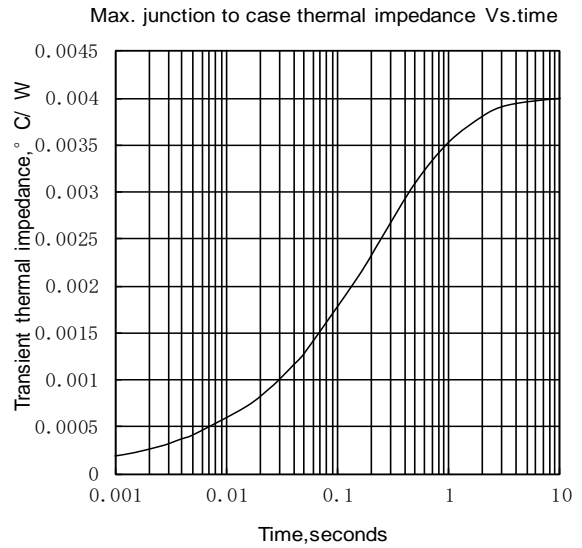


Fig.2

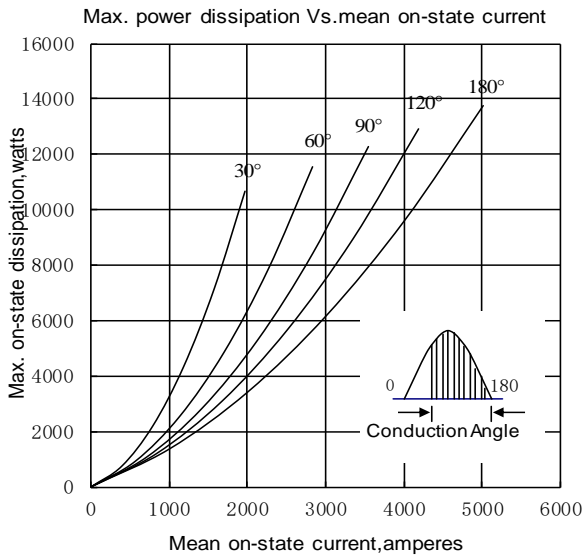


Fig.3

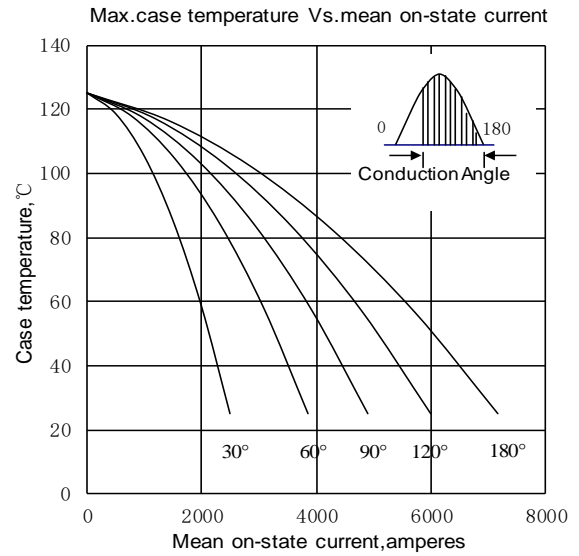


Fig.4

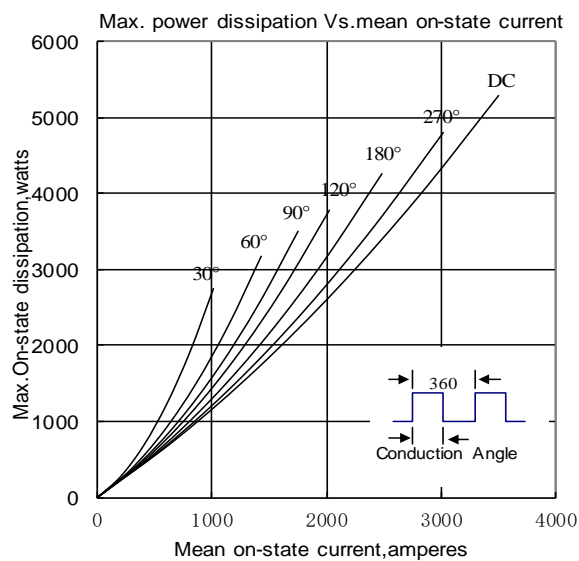


Fig.5

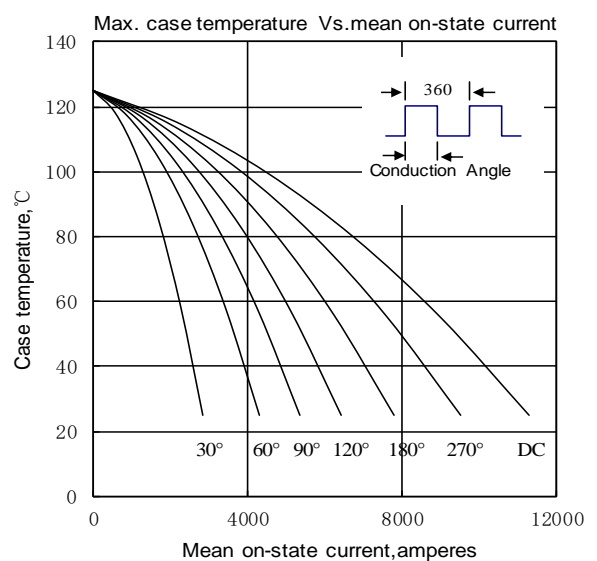


Fig.6

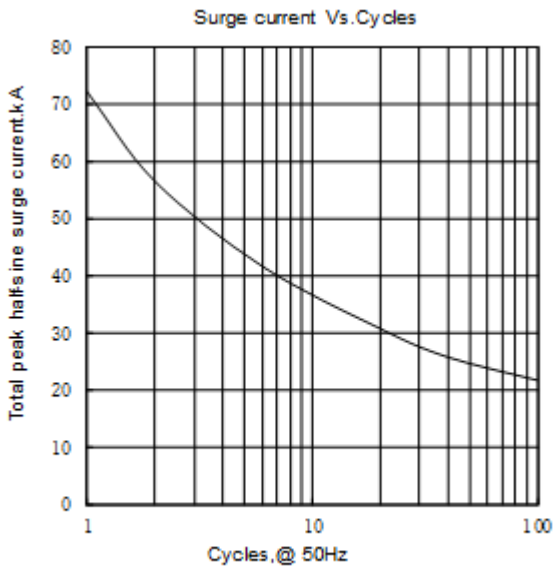


Fig.7

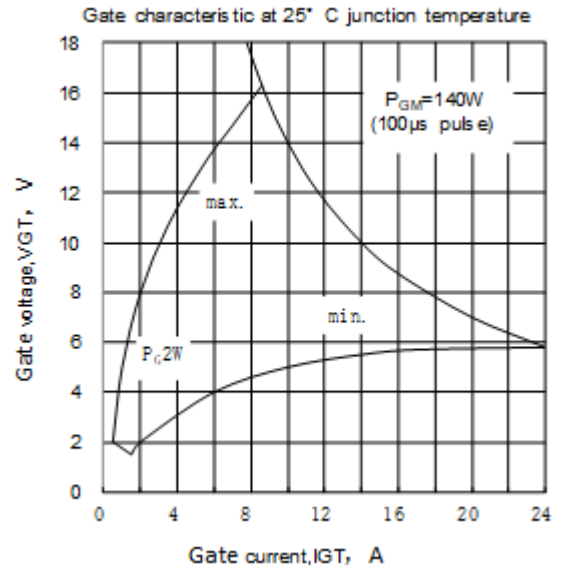


Fig.8

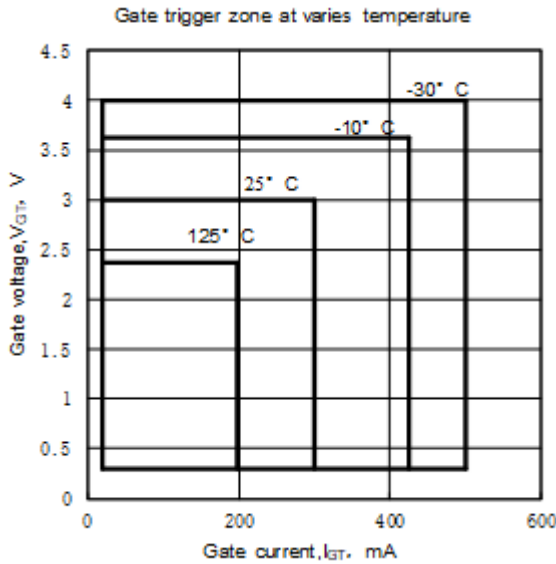
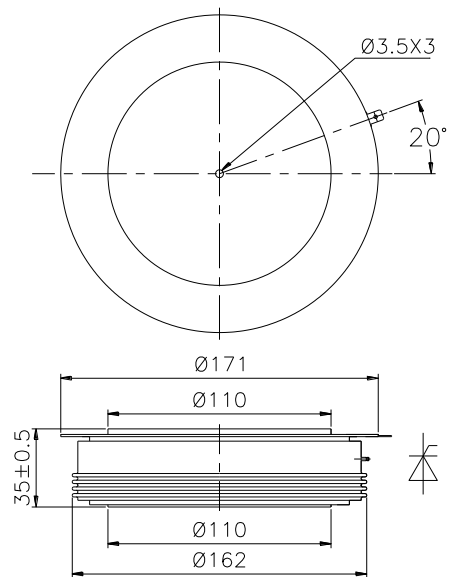


Fig.9



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