

Features

- Excellent dynamic characteristics
- Fast turn-on and high di/dt
- Low switching losses

Typical Applications

- Design for inverter supply application

品名： FH1494TN

$I_{T(AV)}$	1494A
V_{DRM}	1200V~2000V
V_{RRM}	1000V~1800V
t_q	15~55μs



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 Double side cooled,	125			1494	A
		$T_c=55^{\circ}C$ $T_c=70^{\circ}C$				1243	
V_{DRM}	Repetitive peak off-state voltage	$t_p=10ms$	125	1200		2000	V
V_{RRM}	Repetitive peak reverse voltage			1000		1800	
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			80	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125			17	kA
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$				1445	$A^2s \times 10^3$
V_{TO}	Threshold voltage		125			1.57	V
r_T	On-state slop resistance					0.21	m Ω
V_{TM}	Peak on-state voltage	$I_{TM}=3000A, F=24kHz$	25			2.50	V
				$15\mu s \leq t_q \leq 28\mu s$ $29\mu s \leq t_q \leq 55\mu s$			2.10
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$	125			1000	V/ μ s
di/dt	Critical rate of rise of on-state current	$V_{DM}=67\%V_{DRM}$ to 1600A, Gate pulse $t_r \leq 0.5\mu s$ $I_{GM}=1.5A$	125			1500	A/ μ s
Q_{rr}	Recovery charge	$I_{TM}=1000A, t_p=4000\mu s, di/dt=-20A/\mu s,$ $V_R=100V$	125		750		μC
t_q	Circuit commutated turn-off time	$I_{TM}=1000A, t_p=4000\mu s, V_R=100V$ $dv/dt=30V/\mu s, di/dt=-20A/\mu s$	125	15		55	μs
I_{GT}	Gate trigger current	$V_A=12V, I_A=1A$	25	40		300	mA
V_{GT}	Gate trigger voltage			0.9		3.0	V
I_H	Holding current			20		500	mA
I_L	Latching current					1000	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 Clamping force 24kN				0.020	$^{\circ}C/W$
$R_{th(c-h)}$	Thermal resistance case to heat sink					0.005	
F_m	Mounting force			19		26	kN
T_{vj}	Junction temperature			-40		125	$^{\circ}C$
T_{stg}	Stored temperature			-40		140	$^{\circ}C$
W_t	Weight					440	g
Outline	P11						

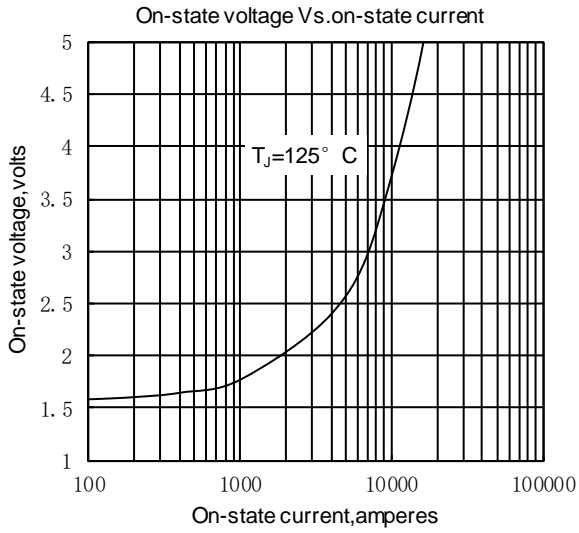


Fig.1

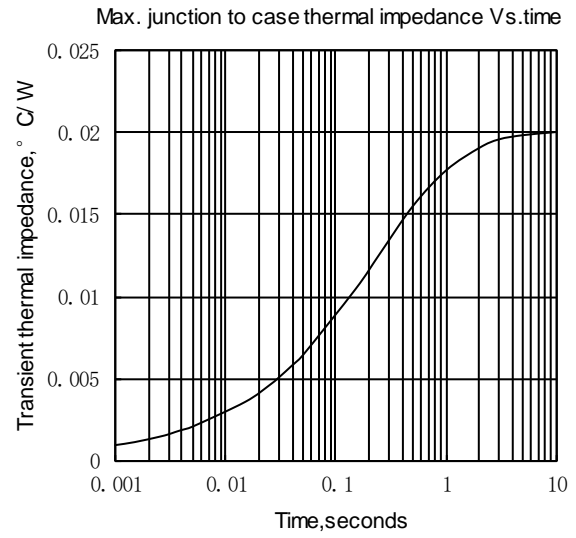


Fig.2

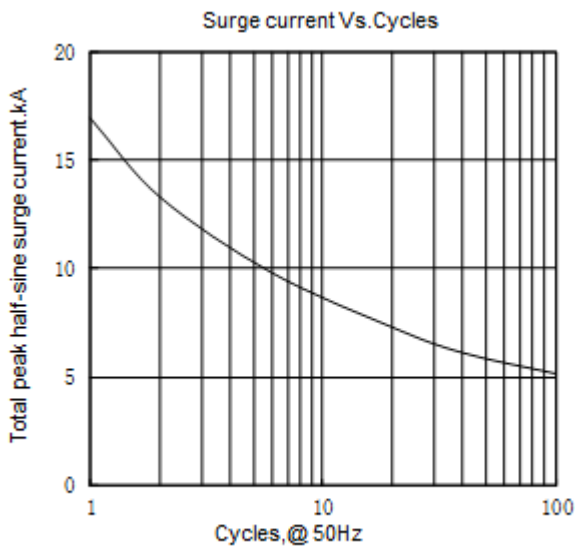


Fig.3

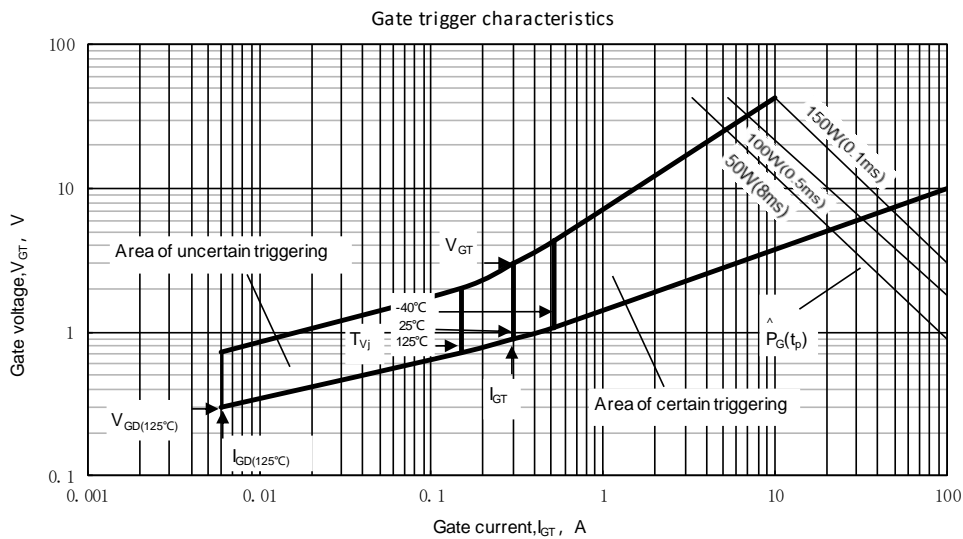
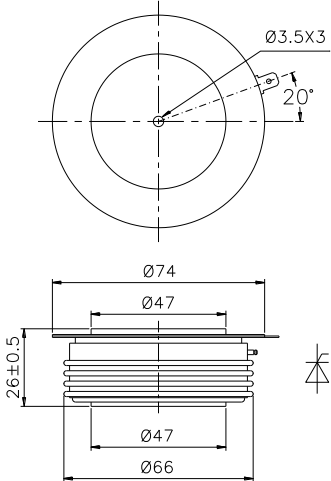


Fig.4



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