

Features

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

Typical Applications

- Design for inverter supply application

品名： FH4890TN

$I_{T(AV)}$ **4890A**
 V_{DRM} **2000~3000V**
 V_{RRM} **1000~2500V**
 t_q **25~100 μ s**



SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_j(^{\circ}\text{C})$	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled	$T_c=55^{\circ}\text{C}$	125		4890	A
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} $t_p=10\text{ms}$ at V_{RRM} $t_p=10\text{ms}$		125		250	mA
I_{TSM}	Surge on-state current	10ms half sine wave		125		63	kA
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$		125		19845	$10^3\text{A}^2\text{s}$
V_{TO}	Threshold voltage			125		1.30	V
r_T	On-state slope resistance			125		0.13	$\text{m}\Omega$
V_{TM}	Peak on-state voltage	$I_{TM}=5000\text{A}$, $F=90\text{kN}$		25		2.50	V
						1.80	V
						1.60	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$		125		1000	$\text{V}/\mu\text{s}$
di/dt	Critical rate of rise of on-state current (Non-repetitive)	$V_{DM}=67\%V_{DRM}$, Gate pulse $t_r \leq 0.5\mu\text{s}$ $I_{GM}=1.5\text{A}$		125		1200	$\text{A}/\mu\text{s}$
Q_{rr}	Recovery charge	$I_{TM}=2000\text{A}$, $t_p=4000\mu\text{s}$, $di/dt=-20\text{A}/\mu\text{s}$, $V_R=100\text{V}$		125	2100		μC
t_q	Circuit commutated turn-off time	$I_{TM}=2000\text{A}$, $t_p=4000\mu\text{s}$, $V_R=100\text{V}$ $dv/dt=30\text{V}/\mu\text{s}$, $di/dt=-20\text{A}/\mu\text{s}$		125	25	100	μs
I_{GT}	Gate trigger current	$V_A=12\text{V}$, $I_A=1\text{A}$		25	40	250	mA
V_{GT}	Gate trigger voltage		0.9		2.5	V	
I_H	Holding current		20		1000	mA	
I_L	Latching current				1500	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 90kN				0.0050	$^{\circ}\text{C}/\text{W}$
$R_{th(c-h)}$	Thermal resistance case to heatsink					0.0015	
F_m	Mounting force				81	108	kN
T_{vj}	Junction temperature				-40	125	$^{\circ}\text{C}$
T_{stg}	Stored temperature				-40	140	$^{\circ}\text{C}$
W_t	Weight					2000	g
Outline	P21						

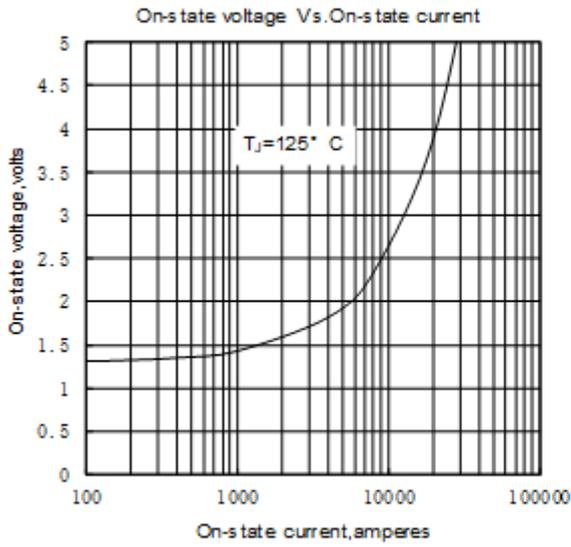


Fig.1

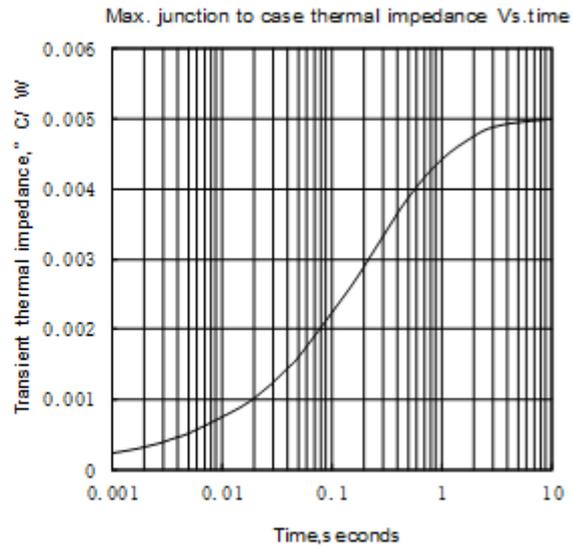


Fig.2

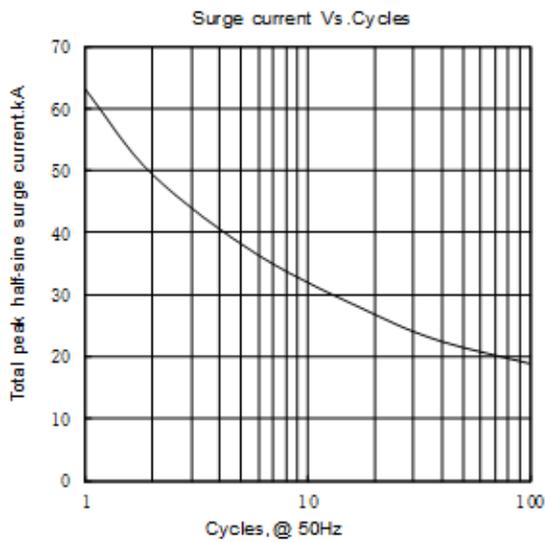


Fig.3

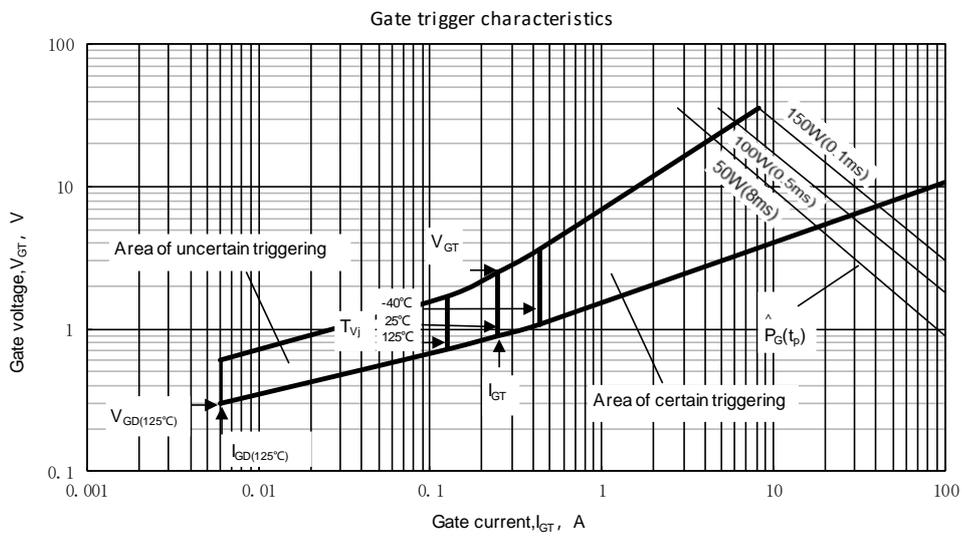
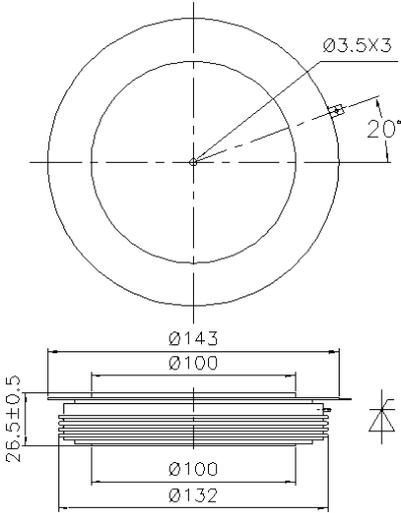


Fig.4



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