

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_{R RM}	1000~2500V
t_q	25~100μs

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 =55°C	125			4890	A	
I _{DRM} I _{R RM}	Repetitive peak current	at V _{DRM} t _p =10ms at V _{R RM} t _p =10ms		125			250	mA	
I _{TSM}	Surge on-state current	10ms half sine wave		125			63	kA	
I ² t	I ² t for fusing coordination	V _R =0.6V _{R RM}					19845	10 ³ A ² s	
V _{TO}	Threshold voltage			125			1.30	V	
r _T	On-state slope resistance						0.13	mΩ	
V _{TM}	Peak on-state voltage	I _{TM} =5000A, F=90kN	25μs ≤ t _q ≤ 45μs	25			2.50	V	
			46μs ≤ t _q ≤ 75μs				1.80	V	
			76μs ≤ t _q ≤ 100μs				1.60	V	
dv/dt	Critical rate of rise of off-state voltage	V _{DM} =0.67V _{DRM}		125			1000	V/μs	
di/dt	Critical rate of rise of on-state current (Non-repetitive)	V _{DM} = 67%V _{DRM} , Gate pulse t _r ≤ 0.5μs I _{GM} =1.5A		125			1200	A/μs	
Q _{rr}	Recovery charge	I _{TM} =2000A, t _p =4000μs, di/dt=-20A/μs, V _R =100V		125		2100		μC	
t _q	Circuit commutated turn-off time	I _{TM} =2000A, t _p =4000μs, V _R =100V dv/dt=30V/μs, di/dt=-20A/μs		125	25		100	μs	
I _{GT}	Gate trigger current	V _A =12V, I _A =1A		25			40	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	D.C. double side cooled Clamping force 90kN					0.0050	°C/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	°C	
T _{stg}	Stored temperature				-40		140	°C	
W _t	Weight					2000		g	
Outline	P21								

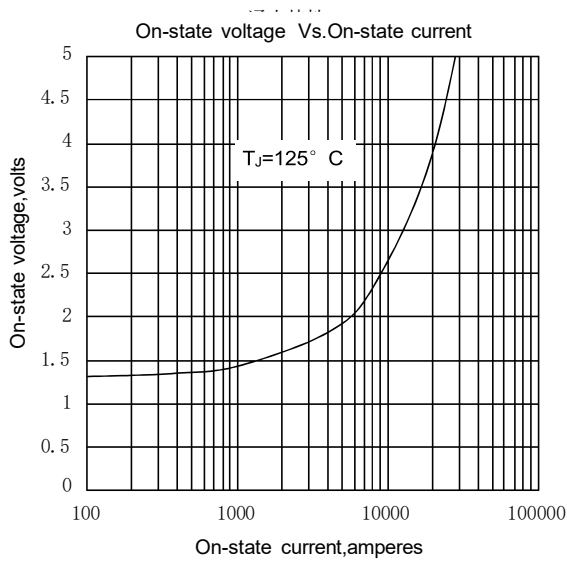


Fig.1

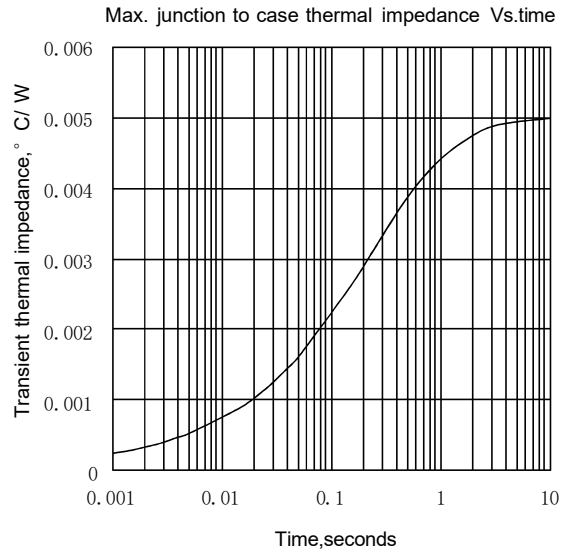


Fig.2

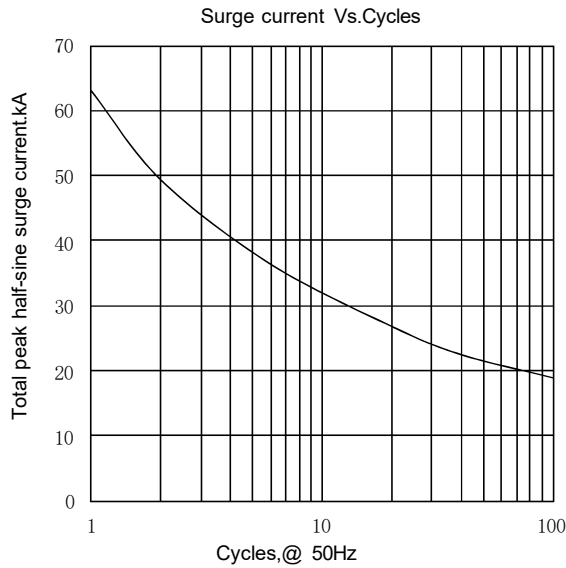


Fig.3

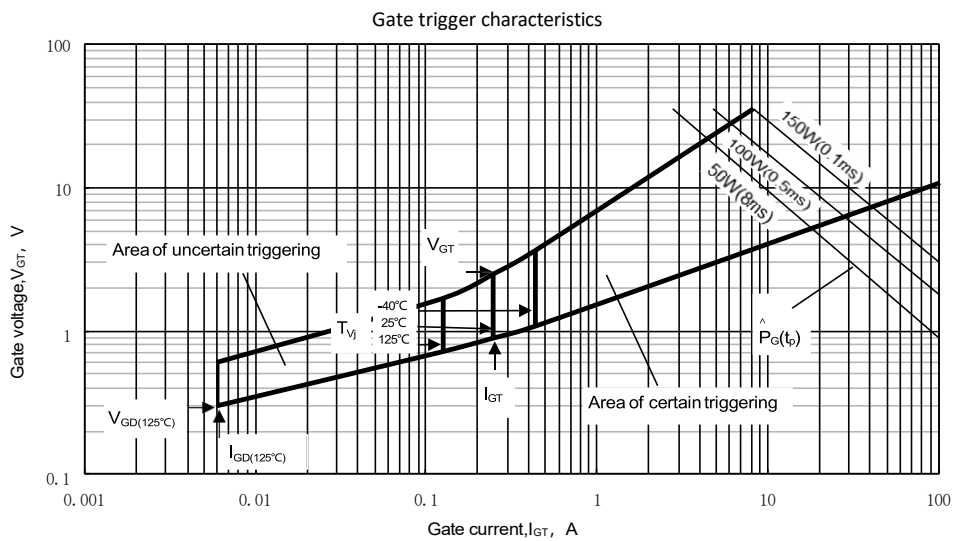
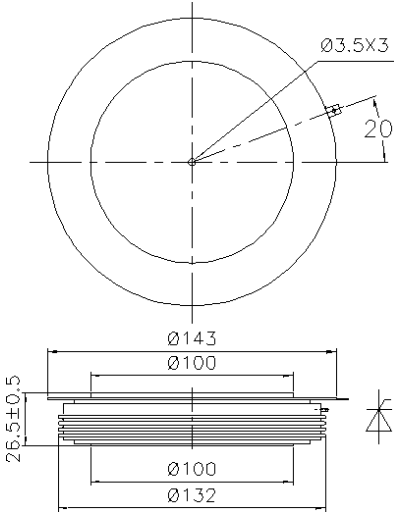


Fig.4

Outline:



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