

3TT8F

MAIN CHARACTERISTICS

$I_{T(RMS)}$	8A
V_{DRM}	800V
I_{GT}	30mA

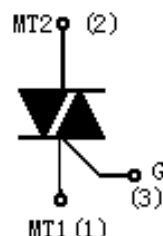
APPLICATIONS

AC switching
Phase control

FEATURES

Glass-passivated mesa chip for reliability and uniform
Uniform gate trigger currents in three quadrants
RoHS products

Package



Pin	Description
1	Main terminal 1 MT1
2	Main terminal 2 MT2
3	Gate G

TO-220HF



ORDER MESSAGES

Order codes				Order codes	Order codes
Halogen-Bag	Halogen-Free-Bag	Halogen-Tube	Halogen-Free- Tube	3TT8F	TO-220HF
3TT8F-F1-C	3TT8F-F1-CR	3TT8F-F1-B	3TT8F-F1-BR		

GENERAL DESCRIPTION

3TT8F is Glass passivated three quadrant triacs, designed for high performance full-wave ac control applications where high static and dynamic dV/dt and high dI/dt can occur. They are specially recommended for use on inductive loads such as motor control circuits. Available packages is TO-220HF.

**ABSOLUTE RATINGS (T_c=25℃)**

Parameter	Symbol	Condition	Value	Unit
Repetitive peak off-state voltage	V _{DRM}	R _{GT} =∞ Ω	± 800	V
On-state RMS current	I _{T(RMS)}	Commercial frequency, sine full wave 360 conduction, T _c = 114℃	8	A
Non- repetitive surge peak on-state current	I _{TSM}	50 Hz sinewave 1 full cycle, peak value,non-repetitive	90	A
		60Hz sinewave 1 full cycle, peak value,non-repetitive	95	A
I _{2t} for fusion	I ² t	Value corresponding to 1 cycle of half wave 50 Hz, surge on-state current	40.5	A ² s
Repetitive rate of rise of on-state current after triggering	di/dt	I _{TM} =12A, I _G =0.2A, di _G /dt=0.2A/ μ s	100	A/ μ s
Peak gate current	I _{GM}		2	A
Peak gate voltage	V _{GM}		10	V
Peak gate power	P _{GM}		5	W
Average gate power	P _{G(AV)}	over any 20ms period	0.5	W
Storage temperature	T _{stg}		-40~150	℃
Operation junction temperature	T _{VJ}		-40~150	℃

**ELECTRICAL CHARACTERISTIC (T_c=25℃)**

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Peak Repetitive Blocking Current	I _{DRM}	V _{DM} =V _{DRM} , T _j =150℃, gate open	-	-	2	mA
Peak on-state voltage	V _{TM}	T _c = 25℃, I _{TM} = 12A, instantaneous measurement	-	1.3	1.6	V
Gate trigger current	I _{GT}	V _{DM} =12V, MT1(-),MT2(+),G(+)	2	-	30	mA
		R _L =100 Ω MT1(-),MT2(+),G(-)	2	-	30	mA
		Ω MT1(+),MT2(-),G(-)	2	-	30	mA
Gate trigger voltage	V _{GT}	V _{DM} =6V, MT1(-),MT2(+),G(+)	-	0.7	1.5	V
		R _L =6 Ω MT1(-),MT2(+),G(-)	-	0.7	1.5	V
		R _G =330 Ω MT1(+),MT2(-),G(-)	-	0.7	1.5	V
Holding current	I _H	V _{DM} =12V, I _{GT} =0.1A	-	-	50	mA
Latching current	I _L	V _{DM} =12V, MT1(-),MT2(+),G(+)	-	-	50	mA
		I _{GT} =0.1A MT1(-),MT2(+),G(-)	-	-	75	mA
		MT1(+),MT2(-),G(-)	-	-	50	mA
Rise of off- state voltage	dV/dt	V _{DM} =67% V _{DRM(MAX)} , T _j =125℃, gate open	1000	-	-	V/ μ s
Gate controlled turn-on time	t _{gt}	I _{TM} =12A, V _{DM} =V _{DRM(MAX)} , I _G =0.1A, dI _G /dt=5A/ μ S	-	2	-	μ s

THERMAL CHARACTERISTIC

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Thermal resistance junction to case	R _{th(j-c)}	full cycle(/TO-220HF)			4.1	℃/W

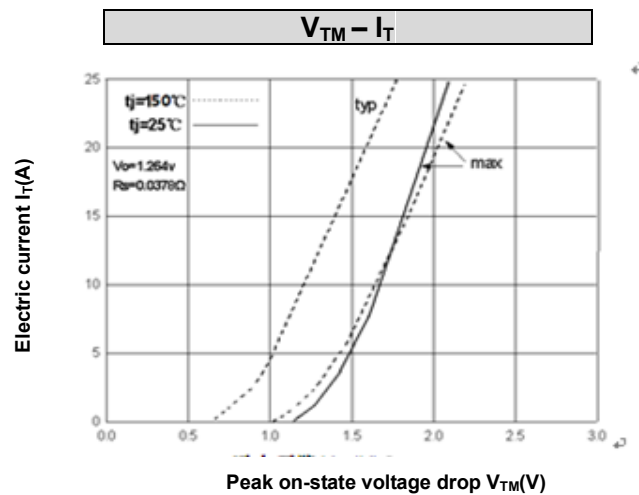
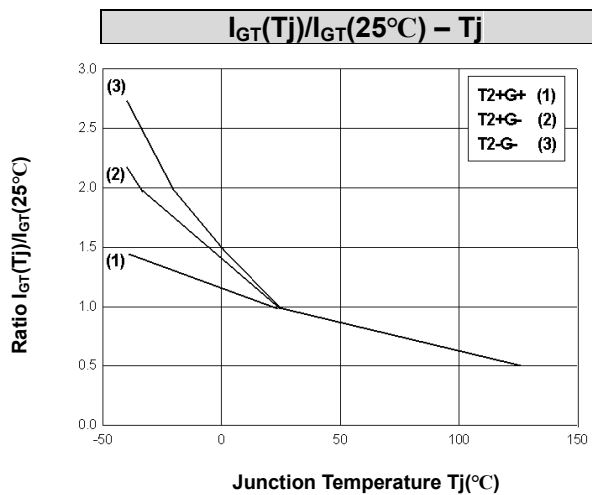
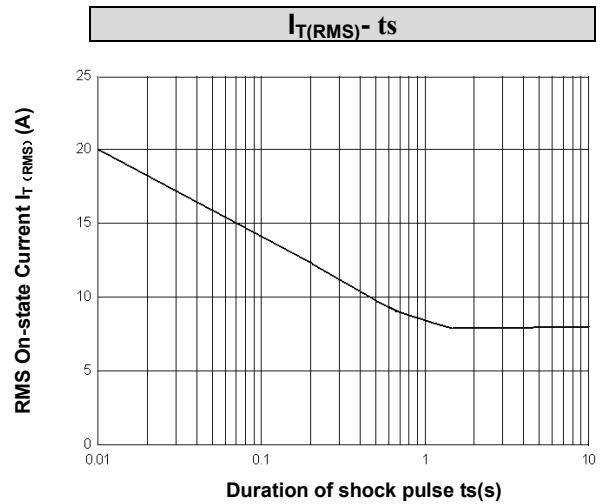
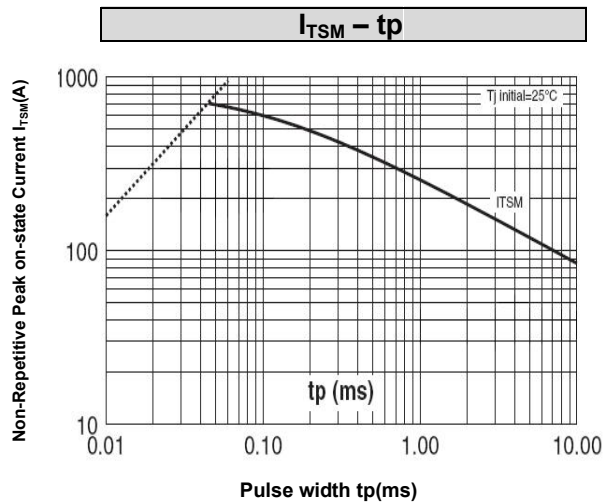
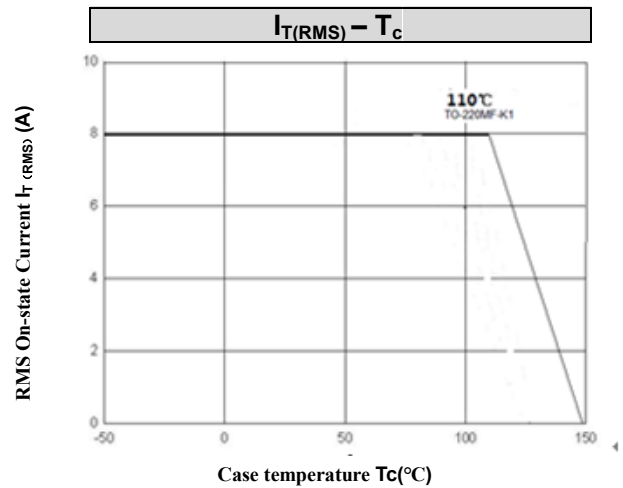
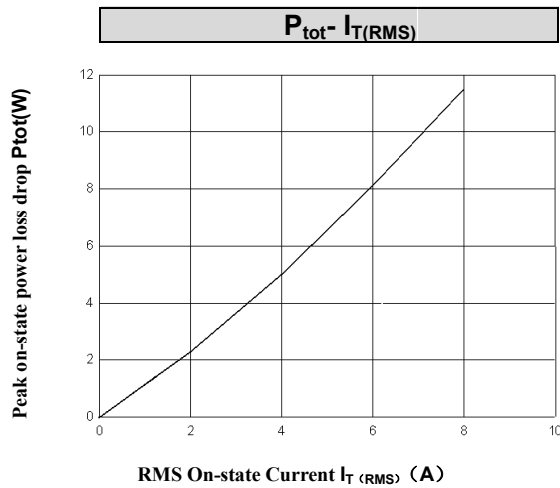
ELECTRICAL ISOLATION

Parameter	Symbol	Condition	Value	Unit
Isolation voltage	V _{ISOL}	1 minute, leads to mounting tab TO-220HF	2000	V





ELECTRICAL CHARACTERISTICS (curves)



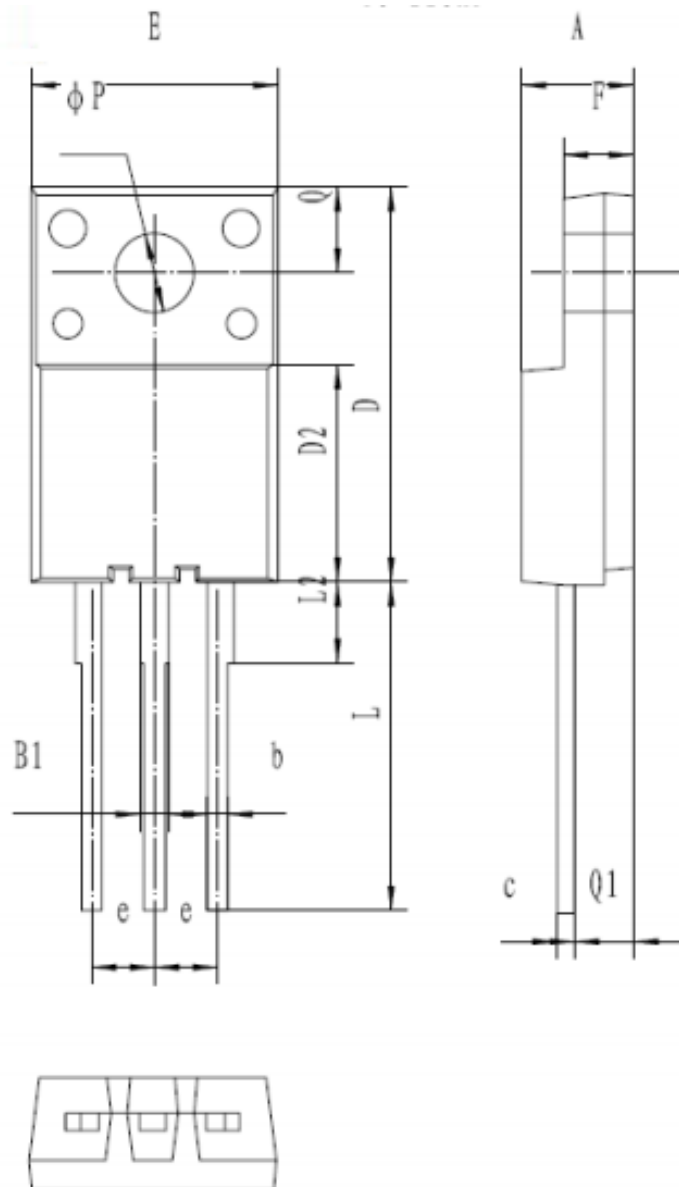


3TT8F

PACKAGE MECHANICAL DATA

TO-220HF

Unit : mm



符号 symbol	MIN	MAX
A	4.0	5.0
B1	0.87	1.27
b	0.72	0.92
c	0.5	0.7
D	15.0	16.5
D2	7.8	9.4
E	9.62	10.62
e	2.54 TYP	
F	2.3	3.3
L	13.0	14.0
L2	3.1	3.5
φP	3.0	3.4
Q	3.15	3.55
Q1	2.2	2.5



NOTE

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2. We strongly recommend customers check carefully on the trademark when buying our product, if there is any question, please don't be hesitate to contact us.
3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
4. Jilin Sino-microelectronics co., Ltd reserves the right to make changes in this. specification sheet and is subject to change without prior notice.

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