



JST08FH Series 8A TRIACs

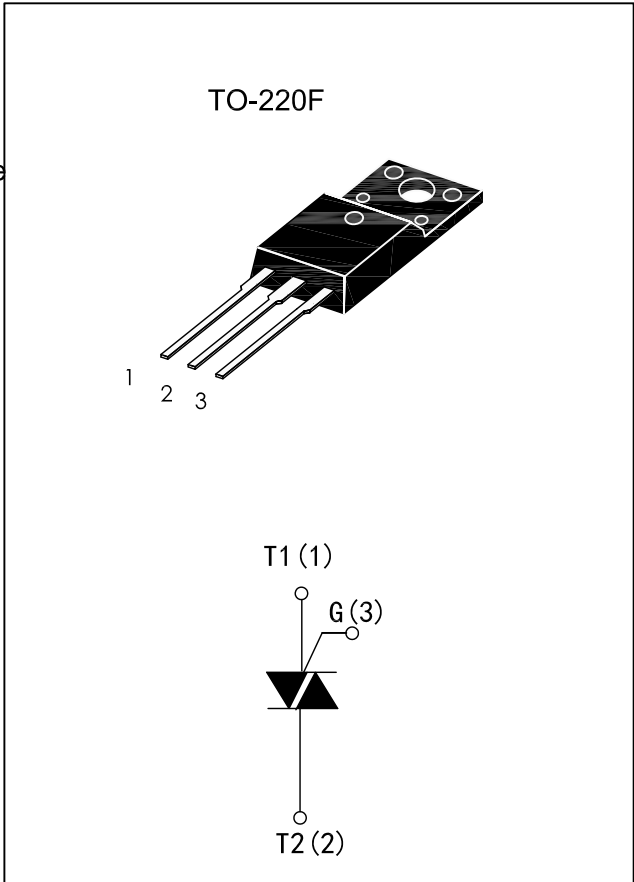
DESCRIPTION:

High current density due to single mesa technology ; Glass Passivation ; guaranteed maximum junction temperature 150°C.

JST08FH series triacs is suitable for general purpose AC switching.They can be used as an ON/OFF Function in applications such as static relays,washing machine,flush toilet,heating regulation, induction motor starting circuits... or for phase control operation light dimmers,motorspeed controllers.

JST08FH are 3 Quadrants triacs,They are specially recommended for use on inductive loads.

JST08FH are full pack plastic package,they provides a 2500V RMS isolation voltage from all three terminals to external heatsink.



MAIN FEATURES

Symbol	Value	Unit
IT(RMS)	8	A
VDRM/VRRM	600 and 800	V
IGT(Q1)	5 to 30	mA

ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		Tstg	-40 to +150	°C
Operating junction temperature range		Tj	-40 to +150	°C
Repetitive Peak Off-state Voltage	Tj=25°C	VDRM	600and800	V
Repetitive Peak Reverse Voltage	Tj=25°C	VRRM	600and800	
Non repetitive Surge Peak Off-state Voltage	tp=10ms, Tj=25°C	VDSM	700and900	V
Non repetitive Peak Reverse Voltage		VRSM	700and900	
RMS on-state current (full sine wave)	TO-220F Tc=113°C	IT(RMS)	8	A
Non repetitive surge peak on-state current (full cycle, Tj=25°C)	f = 60 Hz t=16.7ms	ITSM	84	A
	f = 50 Hz t=20ms		80	
I²t Value for fusing	tp=10ms	I²t	32	A²s
Critical rate of rise of on-state current IG=2×IGT, tr≤100 ns, f=120Hz, Tj=150°C		dI /dt	50	A/µs
Peak gate current	tp=20µs, Tj=150°C	IGM	2	A
Average gate power dissipation	Tj=150°C	PG(AV)	1	W

ELECTRICAL CHARACTERISTICS(T_j=25°C unless otherwise specified)

Symbol	Test Condition	Quadrant		Limits	Unit
I _{GT}	V _D =12V R _L =33Ω	I-II-III	MAX.	35	mA
V _{GT}		I-II-III	MAX.	1.5	V
V _{GD}	V _D =V _{DRM} R _L =3.3KΩ T _j =125°C	I-II-III	MIN.	0.2	V
V _{GD}	V _D =V _{DRM} R _L =3.3KΩ T _j =150°C	I-II-III	MIN.	0.1	V
I _L	I _G =1.2I _{GT}	I-III	MAX.	50	mA
		II	MAX.	110	mA
I _H	I _T =100mA		MAX.	50	mA
dV/dt	V _D =67%V _{DRM} gate open T _j =150°C		MIN.	1000	V/μs
(dV/dt) _c	(dI/dt) _c =4A/ms T _j =125°C		MIN.	10	V/μs
	(dI/dt) _c =4A/ms T _j =150°C			1	

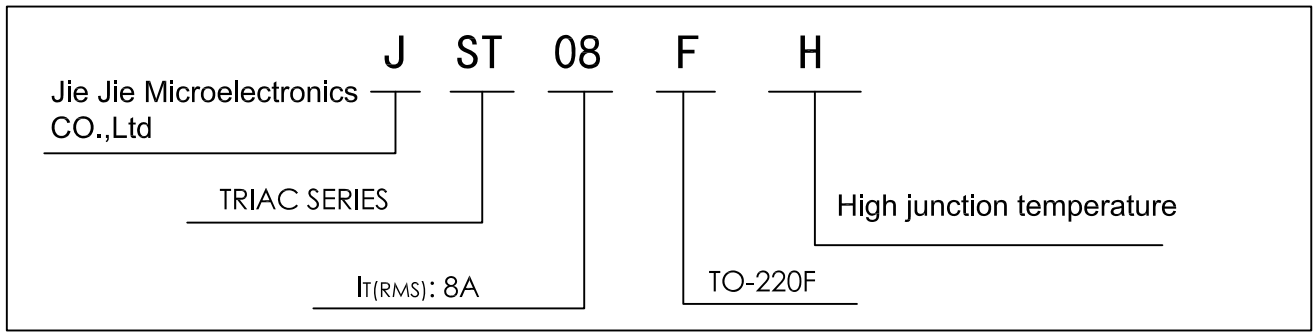
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V _{TM}	I _{TM} =12A, t _p =380μs	T _j =25°C	1.5	V
I _{DRM} I _{RRM}	V _D =V _{DRM} V _R =V _{RRM}	T _j =25°C	5	μA
		T _j =150°C	2	mA

THERMAL RESISTANCES

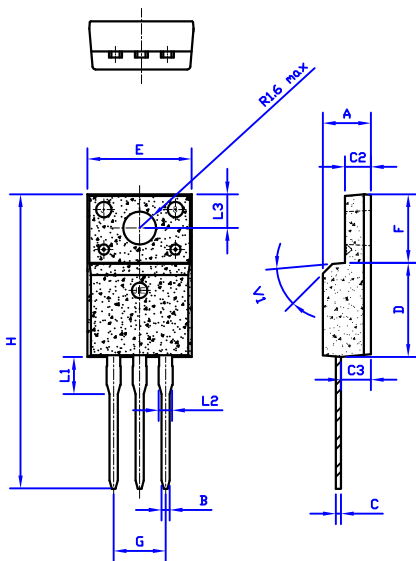
Symbol	Parameter		Value	Unit
R _{th} (J -C)	Junction to Case(AC)	TO-220F	3.7	°C/W

ORDERING INFORMATION



PACKAGE MECHANICAL DATA

TO-220F



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.4		4.8	0.173		0.189
B	0.74	0.8	0.83	0.029	0.031	0.033
C	0.5		0.75	0.020		0.030
C2	2.4		2.7	0.094		0.106
C3	2.6		3.0	0.102		0.118
D	8.8		9.3	0.346		0.367
E	9.7		10.3	0.382		0.406
F	6.4		6.8	0.252		0.268
G	5.0		5.2	0.197		0.205
H	28.0		29.8	11.0		11.7
L1		3.63			0.143	
L2	1.14		1.7	0.044		0.067
L3		3.3			0.130	
V1		40°			40°	

FIG.1:Maximum power dissipation versus RMS on-state current(full cycle)

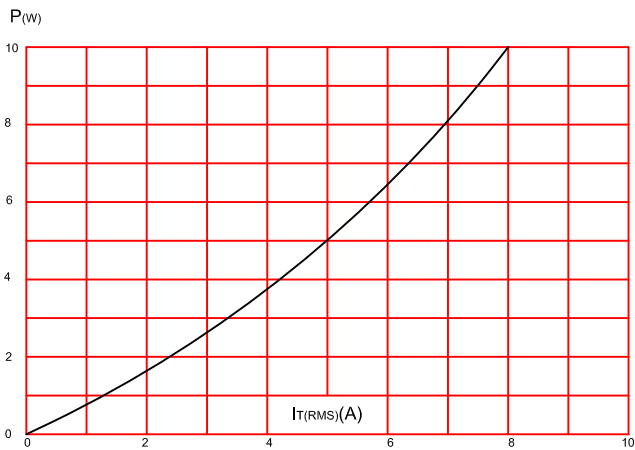


FIG.2:RMS on-state current versus case temperature(full cycle)

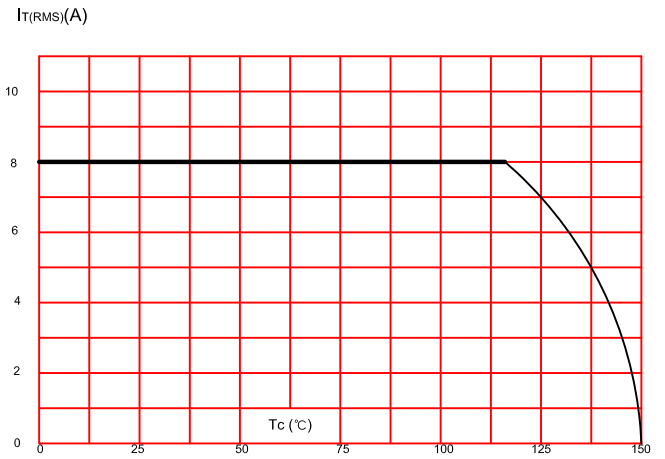


FIG.3:On-state characteristics (maximum values).

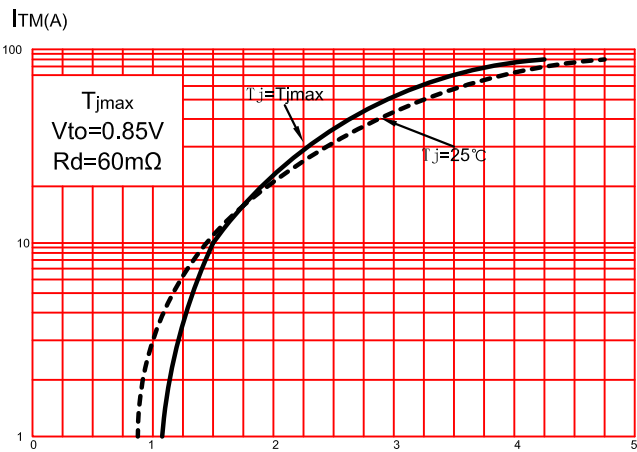


FIG.4:Surge peak on-state current versus number of cycles.

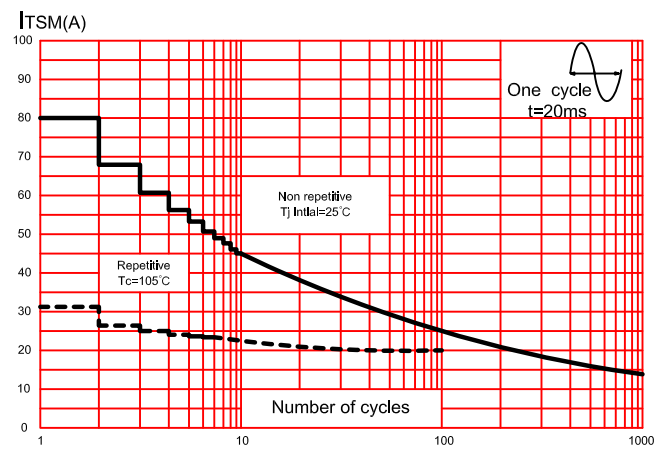


FIG.5:Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10ms$, and corresponding pulse value of I^2t .

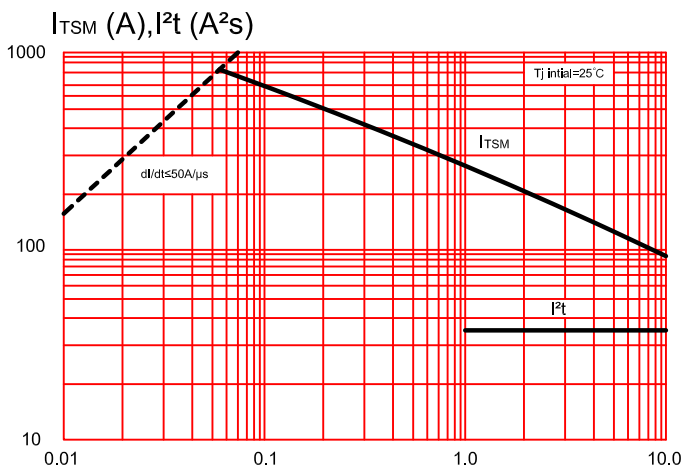


FIG.6:Relative variations of gate trigger current, holding current and latching current versus junction temperature(typical values)

