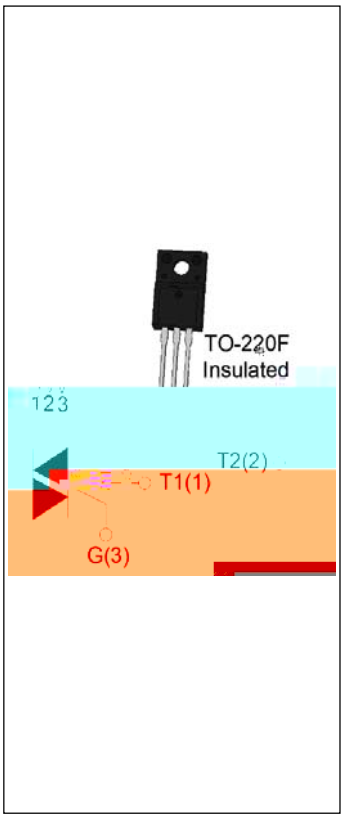
JST16F-1000CW 16A TRIAC

Rev.A.1.1

DESCRIPTION:

The JST16F-1000CW triac is suitable for general purpose AC switching. It can be used as an ON/OFF function in applications such as heating regulation, induction motor starting circuits, for phase control operation in light dimmers, motor speed controllers. JST16F-1000CW snubberless triac is especially recommended for use on inductive loads. By using an external plastic package, JST16F-1000CW provides a rated insulation voltage of 2000 VRMS, complying with UL standards (File ref: E252906). Package TO-220F is RoHS compliant.



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	16	A
V_{DRM}/V_{RRM}	1000	V
I_{GT} / /	35/35/35	mA

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40-150	
Operating junction temperature range	T_j	-40-125	
Repetitive peak off-state voltage (T_j=25)	V_{DRM}	1000	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	1000	V
RMS on-state current (T_C 073)	$I_{T(RMS)}$	16	A
Non repetitive surge peak on-state current (full cycle , t_p=20ms , T_j=25)	I_{TSM}	160	A
Non repetitive surge peak on-state current (full cycle , t_p=16.6ms , T_j=25)		176	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	128	A^2s
Critical rate of rise of on-state current (I_G=2 hI_{GT} , f=100Hz , T_j=125)	dI/dt	100	A/µs
Peak gate current (t_p=20µs , T_j=125)	I_{GM}	4	A
Average gate power dissipation (T_j=125)	$P_{G(AV)}$	0.5	W

Peak gate power	P_{GM}	10	W
Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.7)	V_{pp}	4	kV

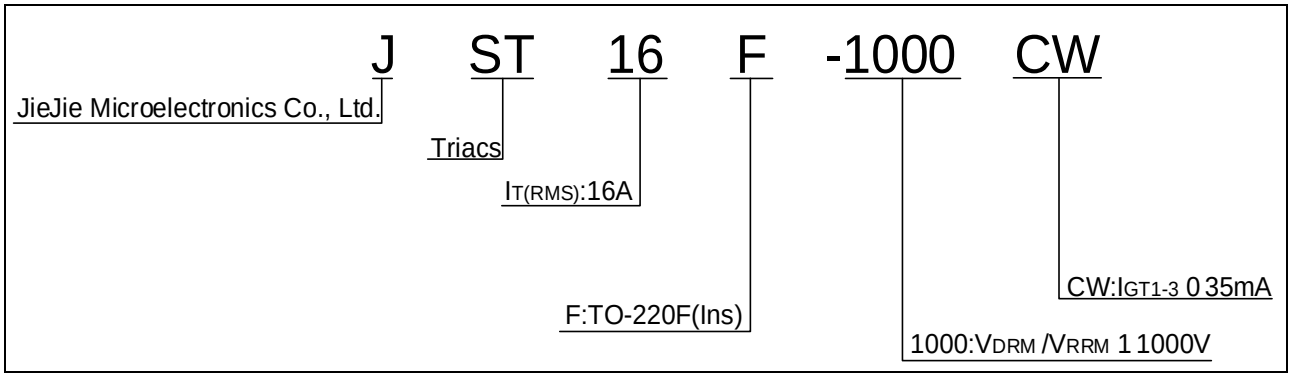
ELECTRICAL CHARACTERISTICS (T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	V_D =12V R_L =33Ω	- -	MAX.	35	mA
V_{GT}		- -	MAX.	1	V
V_{GD}	V_D =V_{DRM} T_j =125 R_L =3.3kΩ	- -	MIN.	0.2	V
I_L	I_G =1.2I_{GT}	-	MAX.	50	mA
				60	
I_H	I_T =500mA		MAX.	40	mA
dV/dt	V_D=670V Gate Open T_j =125		MIN.	800	V/μs
(dI/dt)c	(dV/dt)c=20V/μs T_j=125		MIN.	10	A/ms
t_{on}	I_G=40mA I_A=200mA I_R=20mA T_j=25		TYP.	7	μs
t_{off}				50	

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_{TM} =22.5A t_p=380μs	T_j=25	1 .5	V
V_{TO}	Threshold voltage	T_j=125	0 .77	V
R_D	Dynamic resistance	T_j=125	30	mΩ
I_{DRM}	V_D =V_{DRM} V_R =V_{RRM}	T_j=25	10	μA
I_{RRM}		TjG ! Ų ق I· Ã		

ORDERING INFORMATION



MARKING

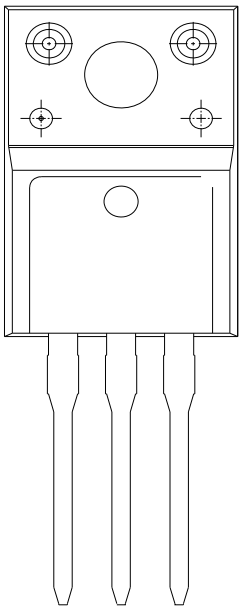


FIG.1: Maximum power dissipation versus RMS on-state current

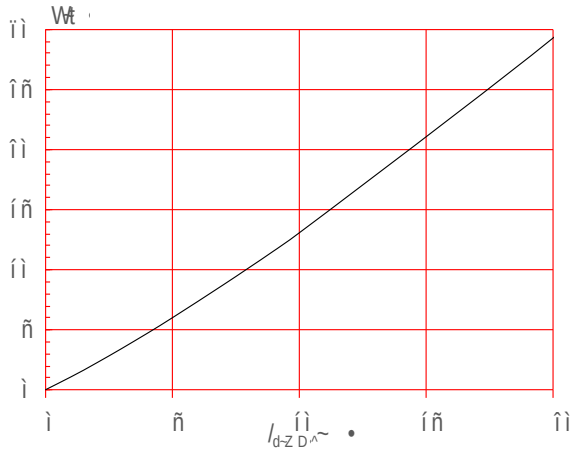


FIG.2: RMS on-state current versus case temperature

FIG.7 ÖTest circuit for inductive and resistive loads to IEC-61000-4-5 standards TTTTT

ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		- -			
JST16F-1000CW	1000	35	TO-220F(Ins)	50	Tube

Document Revision History

Date	Revision	Changes
May.18, 2023	A.1.0	Last updated
Oct.13, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA

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