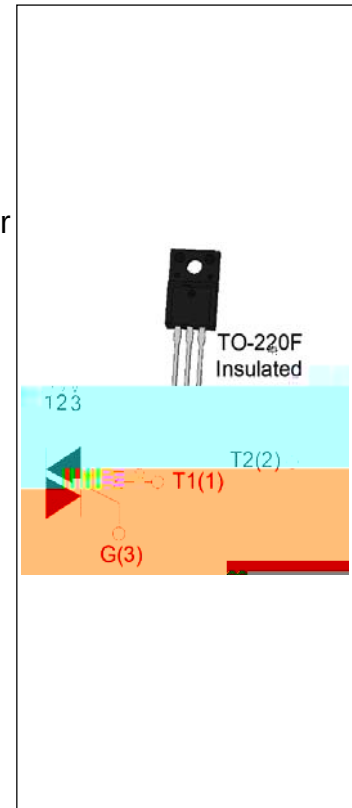


JST16F-1000CW 16A TRIAC

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 ($T_j=25^\circ\text{C}$)	V_{DRM}	1000	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	1000	V
RMS on-state current ($T_c 073^\circ\text{C}$)	$I_{T(RMS)}$	16	A
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$)	I_{TSM}	160	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$)		176	
I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I^2t	128	A^2s
Critical rate of rise of on-state current ($I_G=2\text{hI}_{GT}$, $f=100\text{Hz}$, $T_j=125^\circ\text{C}$)	dI/dt	100	$\text{A}/\mu\text{s}$
Peak gate current ($t_p=20\mu\text{s}$, $T_j=125^\circ\text{C}$)	I_{GM}	4	A
Average gate power dissipation ($T_j=125^\circ\text{C}$)	$P_{G(AV)}$	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}	$V_D=12V$ $R_L=33\Omega$	- -	MAX.	35	mA
V_{GT}		- -	MAX.	1	V
V_{GD}	$V_D=V_{DRM}$ $T_j=125$ $R_L=3.3k\Omega$	- -	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
$(dI/dt)_c$	$(dV/dt)_c=20V/\mu s$ $T_j=125$		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}	$I_{TM}=22.5A$ $t_p=380\mu s$	$T_j=25$	1 .5	V
V_{TO}	Threshold voltage	$T_j=125$	0 .77	V
R_D	Dynamic resistance	$T_j=125$	30	m Ω
I_{DRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25$	10	μA
I_{RRM}		T_jG !	$\dagger$ €	

ORDERING INFORMATION

J	ST	16	F	-1000	CW
JieJie Microelectronics Co., Ltd.	Triacs	IT(RMS):16A	F:TO-220F(Ins)	1000:VDRM /VRRM 1 1000V	CW:IGT1-3 0.35mA

MARKING

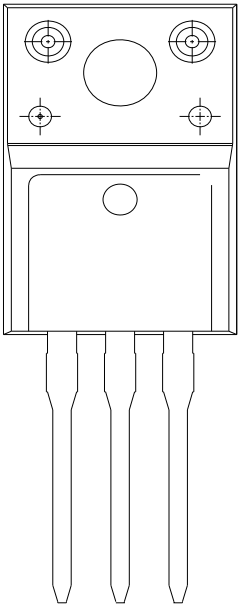


FIG.1: Maximum power dissipation versus RMS on-state current

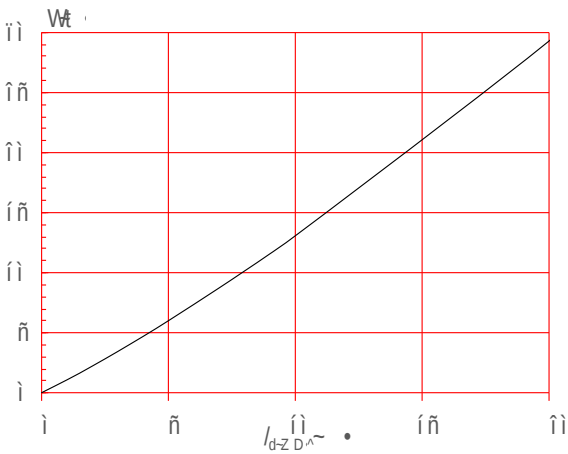
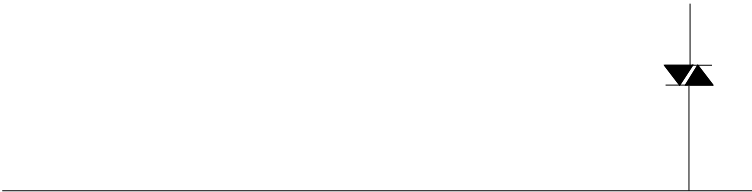


FIG.2: RMS on-state current versus case temperature

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



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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