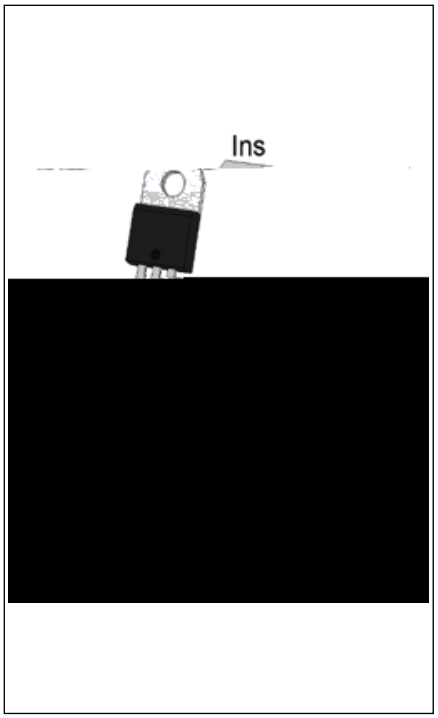
JST139A-800D 16A TRIAC

Rev.A.1.0

The JST139A-800D 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. By using an internal ceramic pad, JST139A-800D provides a rated insulation voltage of 2500 VRMS, complying with UL standards (File ref: E252906). Package TO-220A is RoHS compliant.



Symbol	Value	Unit
$I_{T(RMS)}$	16	A
V_{DRM} /V_{RRM}	800	V
I_{GT} / / /	5/5/5/10	mA

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}	800	V
Repetitive peak reverse voltage (T_j=25)		V_{RRM}	800	V
RMS on-state current ($T_C \leq$ 72)		$I_{T(RMS)}$	16	A
Non repetitive surge peak on-state current (full cycle , t_p=20ms , T_j=25)		I_{TSM}	140	A
Non repetitive surge peak on-state current (full cycle , t_p=16.6ms , T_j=25)			154	
I^2t value for fusing (t_p=10ms , T_j=25)		I^2t	98	A^2s
Critical rate of rise of on-state current (I_G=2×I_{GT} , f=100Hz , T_j=125)	-	dI/dt	50	A s
	-		20	
Peak gate current (t_p=20 s , 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

J	ST	139	A	-800	D
JieJie Microelectronics Co., Ltd.	Triacs	$I_{T(RMS)}$:16A	A:TO-220A(Ins)	800:V_{DRM} /V_{RRM} ≥ 800V	D:I_{GT1-3} ≤ 5mA I_{GT4} ≤ 10mA

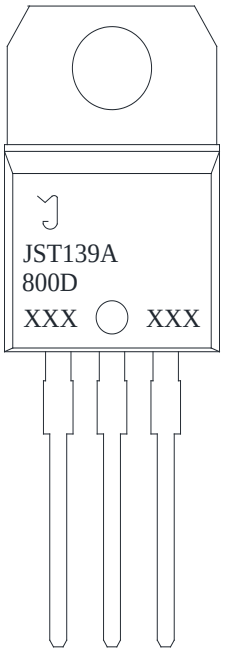


FIG.1 Maximum power dissipation versus RMS on-state current

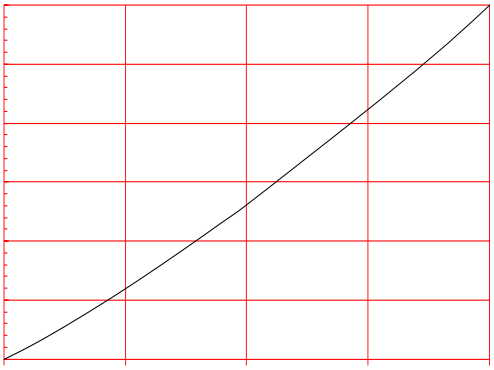


FIG.2: RMS on-state current versus case temperature

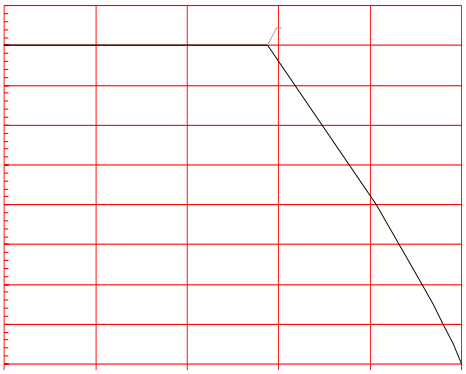


FIG.3: Surge peak on-state current versus number of cycles

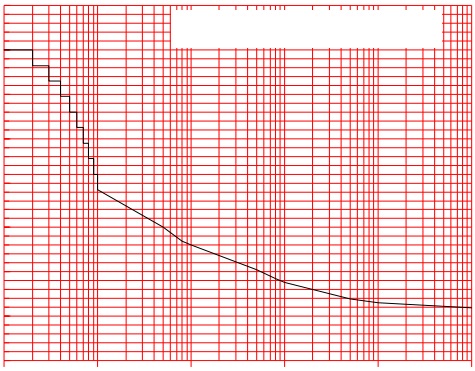


FIG.4: On-state characteristics

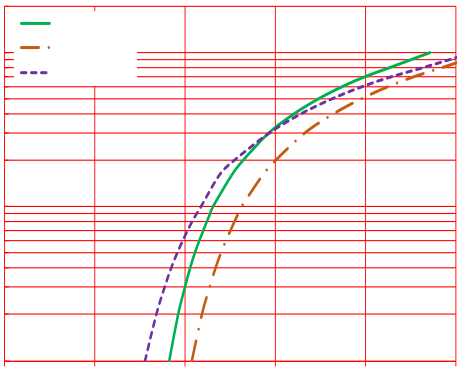


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width t_p <20ms, and corresponding value of I^2t

(- : dI/dt<50 t - : dI/dt<20)

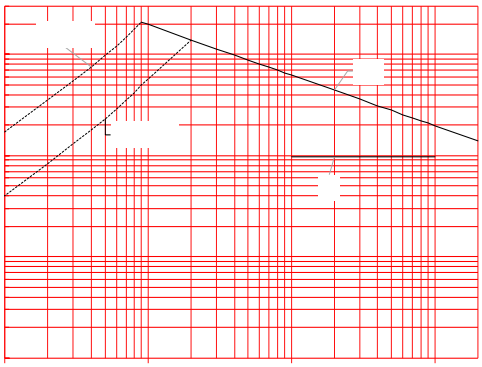


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

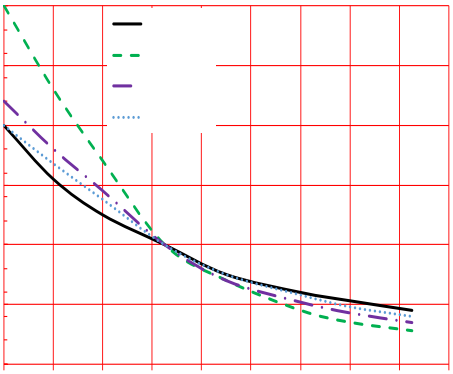
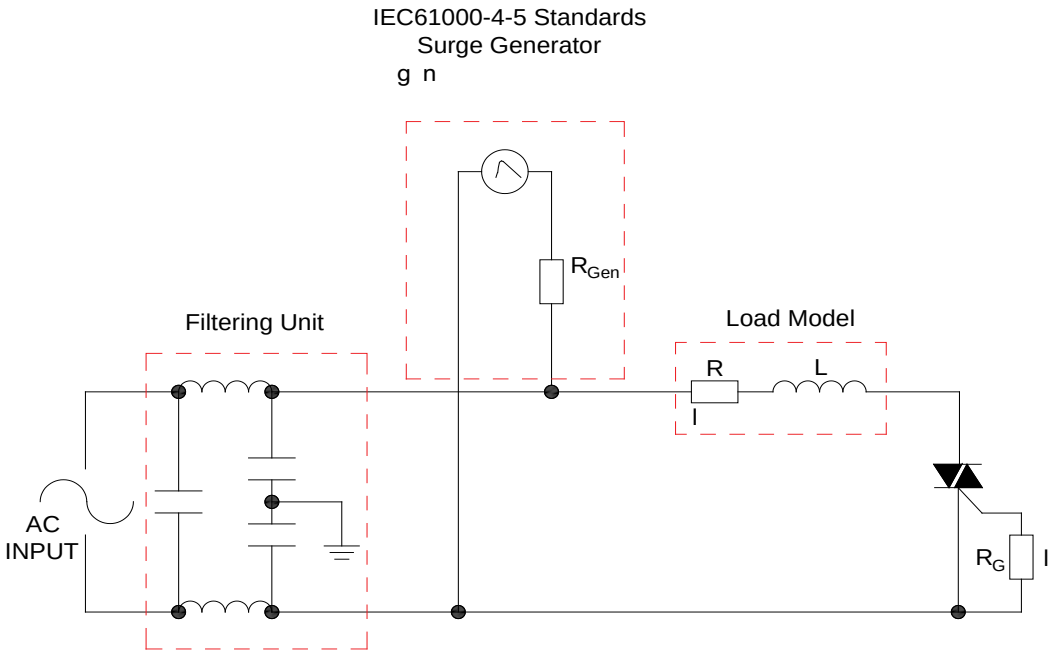


FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



Refer to Instructions for installation of plastic-sealed in-line power devices released by JieJie.

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)		Package	Base qty. (pcs)	Delivery mode
		- -				
JST139A-800D	800	5	10	TO-220A(Ins)	50	Tube

Document Revision History

Date	Revision	Changes
Apr.14, 2023	A.1.0	Last updated