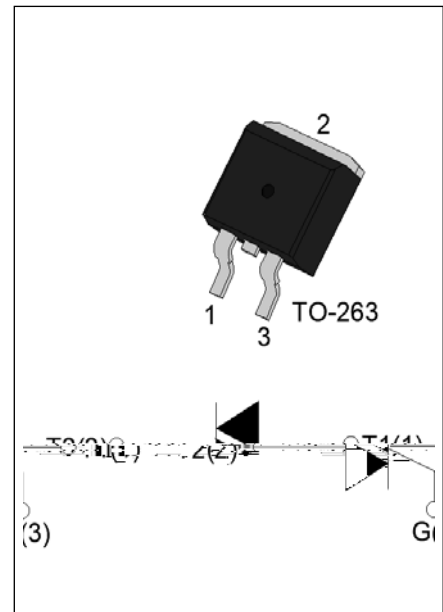


### DESCRIPTION:

The JST139E-600F 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. Package TO-263 is RoHS compliant.

### MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	16	A
$V_{DRM}/V_{RRM}$	600	V
$I_{GT} / / /$	25/25/25/70	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 ( $T_j=25^\circ\text{C}$ )		$V_{DRM}$	600	V
Repetitive peak reverse voltage ( $T_j=25^\circ\text{C}$ )		$V_{RRM}$	600	V
RMS on-state current ( $T_c = 95^\circ\text{C}$ )		$I_{T(RMS)}$	16	A
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$ , $T_j=25^\circ\text{C}$ )		$I_{TSM}$	140	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$ , $T_j=25^\circ\text{C}$ )			154	
$I^2t$ value for fusing ( $t_p=10\text{ms}$ , $T_j=25^\circ\text{C}$ )		$I^2t$	98	$\text{A}^2\text{s}$
Critical rate of rise of on-state current ( $I_G=2 \times I_{GT}$ , $f=100\text{Hz}$ , $T_j=125^\circ\text{C}$ )	-	$di/dt$	100	$\text{A/s}$
	-		70	
Peak gate current ( $t_p=20\text{ }\mu\text{s}$ , $T_j=125^\circ\text{C}$ )		$I_{GM}$	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 ( $T_j=25^\circ\text{C}$ ; non-repetitive, off-state; FIG.8)		$V_{pp}$	1	kV

ELECTRICAL CHARACTERISTICS (unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I <sub>GT</sub>	V <sub>D</sub> =12V R <sub>L</sub> =33	- -	MAX.	25	mA
				70	

ORDERING INFORMATION

<b>J</b>	<b>ST</b>	<b>139</b>	<b>E</b>	<b>-600</b>	<b>F</b>	<b>-/</b>
JieJie Microelectronics Co., Ltd.	Triacs	$I_{T(RMS)}: 16A$	E: TO-263	600: $V_{DRM} / V_{RRM}$ 600V	F: $I_{GT1-3} 25mA$ $I_{GT4} 70mA$	Blank: Tube -TR: Tape & Reel

MARKING

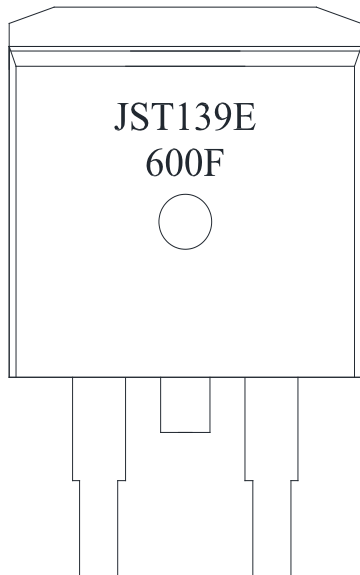




FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature

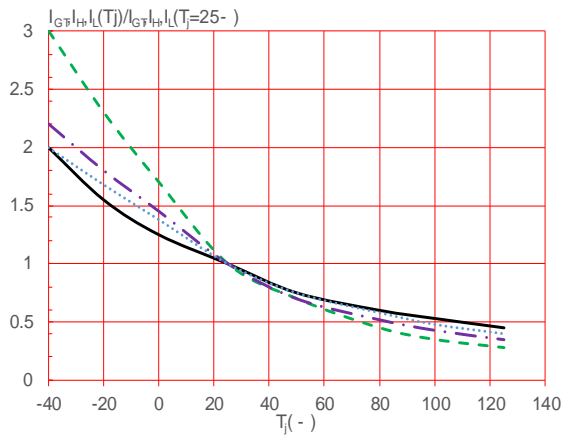
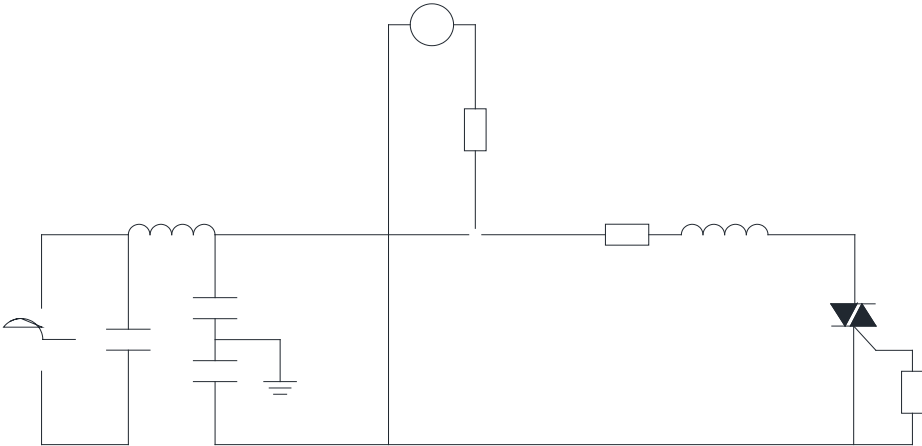


FIG.8: Test circuit for inductive and resistive loads to IEC-61000-4-5 standards





JST139E-600F



