



## JST136V-800E 1A TRIAC

Rev.A.1.1

### DESCRIPTION:

The JST136V-800E 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 SOT-223 is RoHS compliant.

### MAIN FEATURES

### 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 ( $T_j=25$ )	$V_{DRM}$	800	V
Repetitive peak reverse voltage ( $T_j=25$ )			

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.	10	mA
				25	
V <sub>GT</sub>		ALL	MAX.	1.3	V
V <sub>GD</sub>	V <sub>D</sub> =V <sub>DRM</sub> T <sub>j</sub> =125 R <sub>L</sub> =3.3k	ALL	MIN.	0.2	V
I <sub>L</sub>	I <sub>G</sub> =1.2I <sub>GT</sub>	-	MAX.	20	mA
		-		30	
I <sub>H</sub>	I <sub>T</sub> =100mA		MAX.	15	mA
dV/dt	V <sub>D</sub> =540V Gate Open T <sub>j</sub> =110		MIN.	250	V/μs
(dV/dt) <sub>c</sub>	(dI/dt) <sub>c</sub> =1.8A/ms, T <sub>j</sub> =110		MIN.	6	V/μs
t <sub>on</sub>	I <sub>G</sub> =40mA I <sub>A</sub> =200mA I <sub>R</sub> =20mA T <sub>j</sub> =25		TYP.	1.5	μs
t <sub>off</sub>				15	

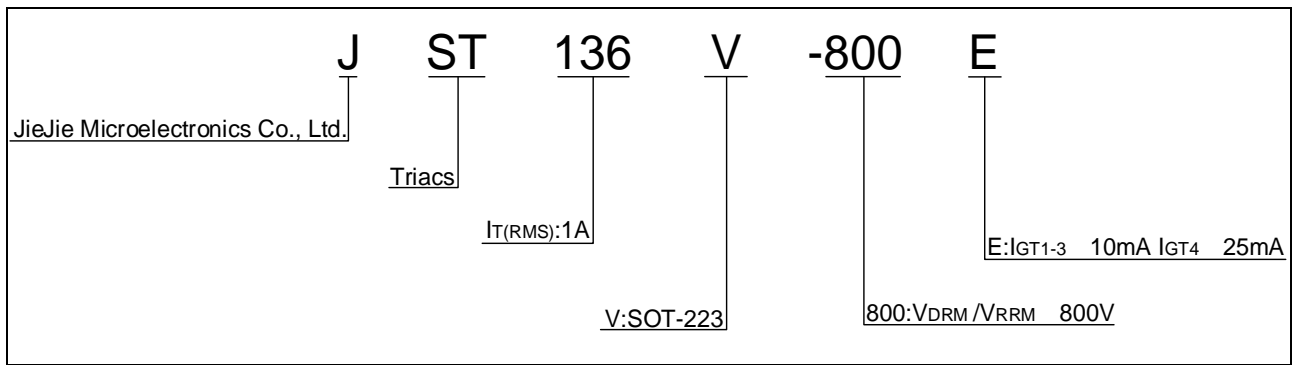
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V <sub>TM</sub>	I <sub>TM</sub> =5A t <sub>p</sub> =380μs	T <sub>j</sub> =25	1.7	V
V <sub>TO</sub>	Threshold voltage	T <sub>j</sub> =125	0.94	V
R <sub>D</sub>	Dynamic resistance	T <sub>j</sub> =125	124	m
I <sub>DRM</sub>	V <sub>D</sub> =V <sub>DRM</sub> V <sub>R</sub> =V <sub>RDM</sub>	T <sub>j</sub> =25	5	μA
I <sub>RDM</sub>		T <sub>j</sub> =125	0.4	mA

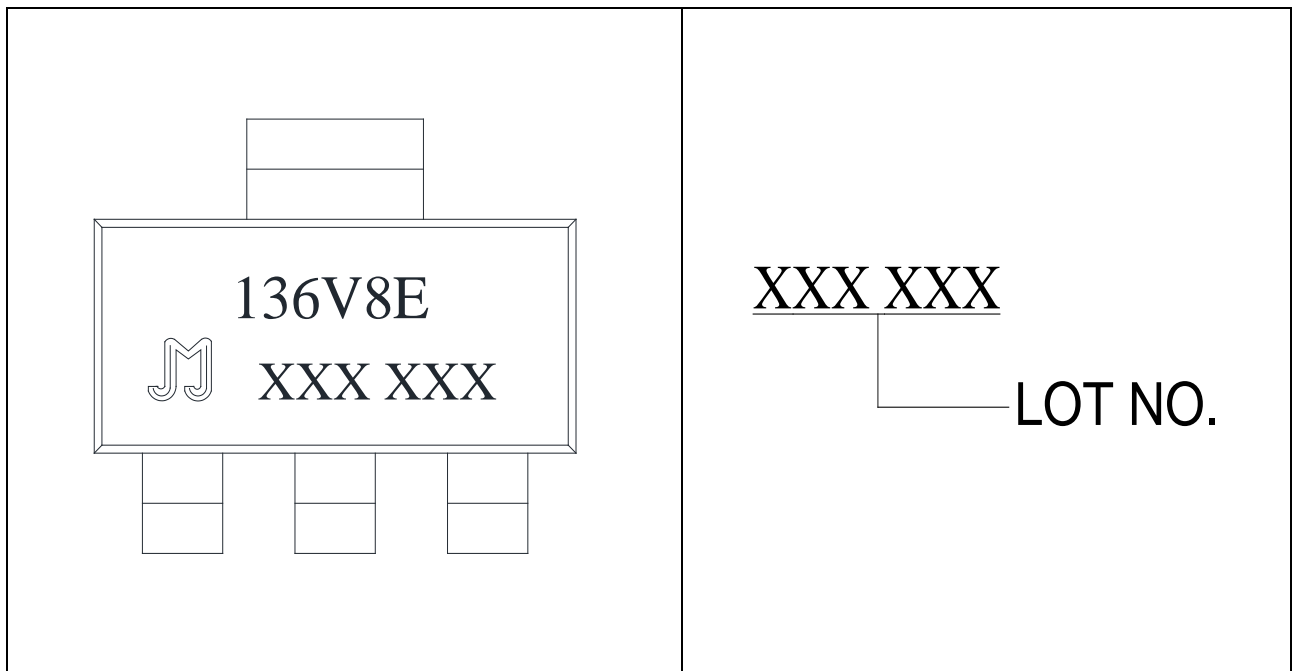
THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R <sub>th(j-c)</sub>	junction to case (AC)	15	/W
R <sub>th(j-a)</sub>	junction to ambient (AC)	150	/W

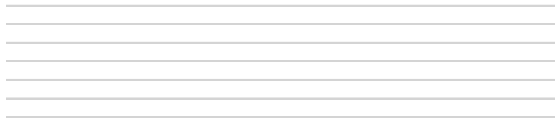
ORDERING INFORMATION



MARKING



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



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

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

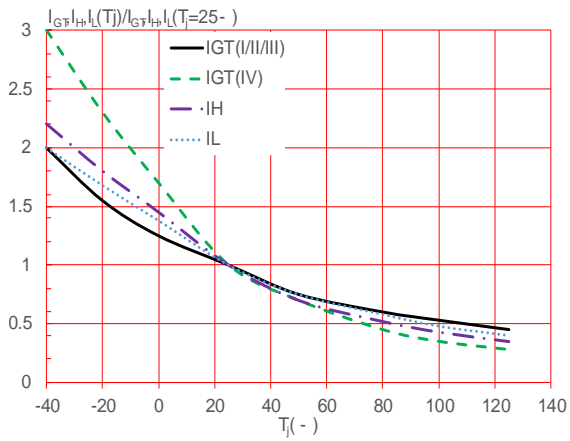


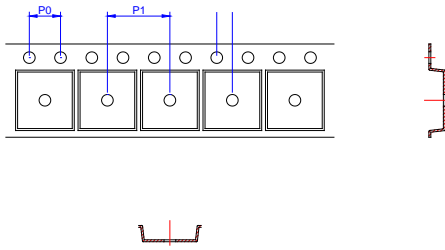
FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards







DELIVERY MODE



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
W	-		12.30	-		0.482
E	1.65	1.75	1.85	0.065	0.069	0.073
F	5.45	5.50	5.55	0.215	0.217	0.219
D0		1.55	1.60		0.061	0.063
D1		-	-			
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	7.90	8.00	8.10	0.311	0.315	0.319
P2	1.95	2.00	2.05	0.077	0.079	0.081
10P0	39.80	40.00	40.20	1.567	1.575	1.583
A0	6.85	6.95	7.05	0.269	0.273	0.276
B0	7.15	7.25	7.35	0.280	0.284	0.288
K0	1.95	2.05	2.15	0.076	0.080	0.084
T	0.20	0.25	0.30	0.008	0.010	0.012

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