P/N: YZPST-BT139 Series 16A TRIAC

- **Description:**
  High current density due to mesa technology;Glass Passivation.
- **Applications**
  BT139 series triacs is suitable for general purpose AC switching.
  They can be used as an ON/OFF Function in applications such
  as static relays,heating regulation,induction motor stating circuits...
  or for phase contol operation light dimmers,motor speed controllers.
- **Features:**
  Blocking voltage to 600 & 800V
  On-state RMS current to 16A
  Non-repetitive peak on-state current to 140A
- **Absolute Maximum Ratings**

Symbol	Parameter	Conditions	Value		Unit
V_{DRM}	Repetitive peak off-state voltage	T_J=25℃	600 & 800		V
V_{RRM}	Repetitive peak Reverse voltage	T_J=25℃	600 & 800		V
$I_{T(RMS)}$	RMS on-state current (full sine wave)	T_c=99℃	16		A
I_{TSM}	Non-repetitive surge peak On-state current (full cycle,T_j=25℃)	tp=20ms	140		A
I^2t	I^2t Value for fusing	tp=10ms	98		A^2S
I_{GM}	Peak gate current	tp=20μs, T_J=125℃	2		A
$P_{G(AV)}$	Average gate power dissipation		0.5		W
P_{GM}	Peak gate power dissipation	tp=10ms, T_J=125℃	5		W
T_{STG}	Storage temperature		-40	150	℃
T_J	Junction temperature		-40	125	℃

- **Electrical Characteristics**

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Symbol	Conditions	Quadrant		Value				Unit
				D	E	F	G	
I_{GT}	V_D=12V,R_L=33Ω	I - II -III	MAX	5	10	25	50	mA
		IV		10	25	70	100	
V_{GT}		ALL	MAX	1.5				V
V_{GD}	V_D=V_{DRM},R_L=3.3KΩ,T_J=125℃	ALL	MIN	0.2				V
I_L	I_G=1.2I_{GT}	I -III-IV	MAX	15	30	40	60	mA
		II		20	40	60	90	
I_H	I_T=100mA		MAX	10	25	30	60	mA
dv/dt	V_{DM}=67%V_{DRM},gate open,T_J=125℃		MIN	5	10	50	200	V/μs

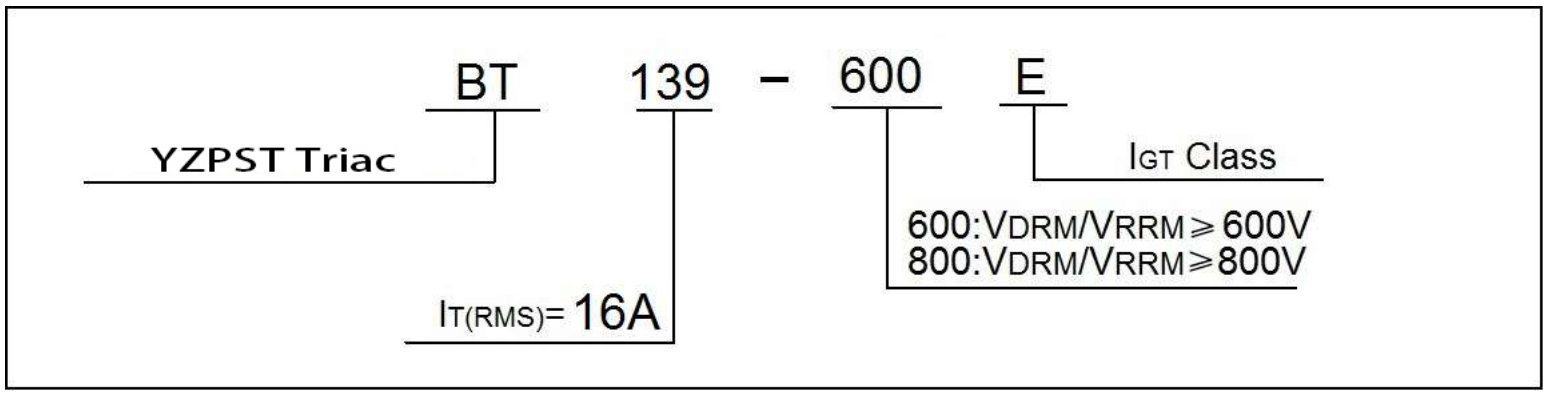
- **Electrical Characteristics**

Symbol	Parameter		Numerical	Unit
V_{TM}	I_T=15A,tp=380μs	T_J=25℃	1.65	V
I_{DRM} I_{RRM}	V_D=V_{DRM},V_R=V_{RRM}	T_J=25℃	5	μA
		T_J=125℃	1	mA

- **Thermal Characteristics**

Symbol	Parameter	Numerical(MAX)	Unit
$R_{th(j-c)}$	Junction to case(AC)	3.0	℃/W

- **Ordering Information**



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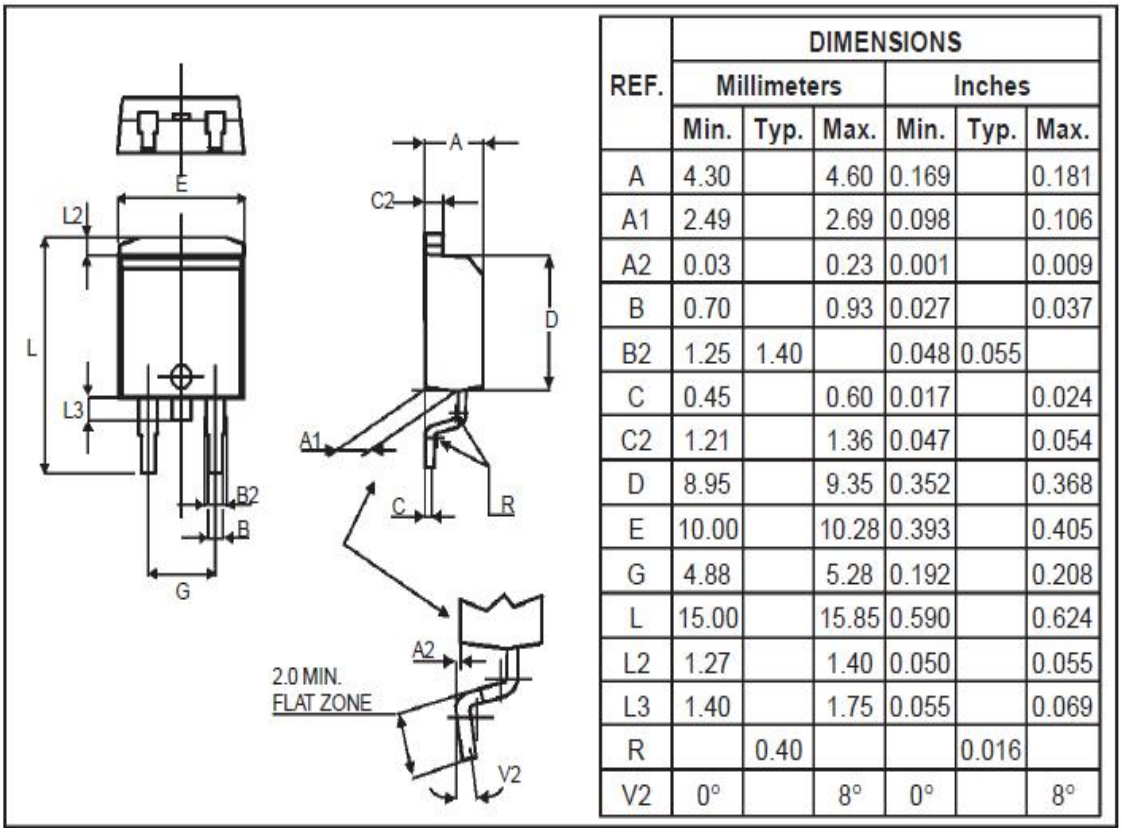
- **Package Outline Dimensions**

TO-263：



REF.	DIMENSIONS					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.30		4.60	0.169		0.181
A1	2.49		2.69	0.098		0.106
A2	0.03		0.23	0.001		0.009
B	0.70		0.93	0.027		0.037
B2	1.25	1.40		0.048	0.055	
C	0.45		0.60	0.017		0.024
C2	1.21		1.36	0.047		0.054
D	8.95		9.35	0.352		0.368
E	10.00		10.28	0.393		0.405
G	4.88		5.28	0.192		0.208
L	15.00		15.85	0.590		0.624
L2	1.27		1.40	0.050		0.055
L3	1.40		1.75	0.055		0.069
R		0.40			0.016	
V2	0°		8°	0°		8°

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