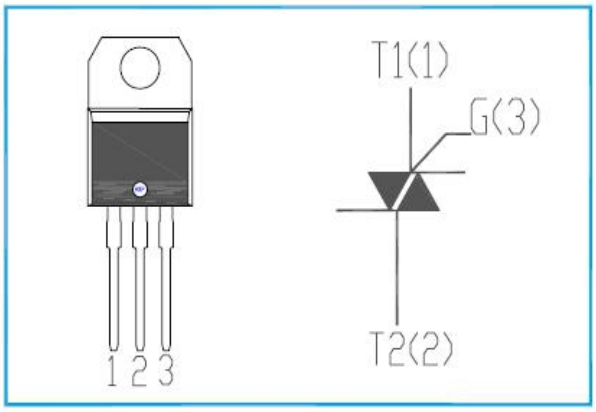
BT138-600E
TRIAC

RoHS COMPLIANT

● Features and Applications:

* NPNPN Bi-direction Triac
* Back multilayer metal electrode
* High temperature reliability
* Glass Passivated junction chips



Applications

The LGE BT138-600E is suitable for inductive load switching operations,also can be used in ON/OFF function applications such as induction motor starting circuits, vacuum cleaners,power tools,heating regulation,static relay e t c .

● MAXIMUM RATING

Rating at 25℃ ambient temperature unless otherwise specified.

Symbol	Test Conditions		Value	Units
$I_{T(RMS)}$	R.M.S. On-State Current	Tc=90℃	12	A
I_{TSM}	Non-Repetitive Surge Peak On-State	F=50HZ tp=20ms	120	A
I^2t	Current(full cycle) I^2t Value for Fusing	tp=10ms	72	A^2S
di/dt	Critical Rate of Rise of On-State Current	Tj=150℃	50	A/us
V_{DRM}/V_{RRM}	Repetitive peak Off-State voltage Repetitive Peak	Tj=25℃	600	V
I_{GM}	Reverse voltage Peak Gate Current	tp=20us Tj=150℃	4	A
$PG_{(AV)}$	Average Gate Power Dissipation	Tj=150℃	10	W
T_{stg} T_j	Storage temperature range Operating junction temperature		−40~+150 −40~+125	℃

• ELECTRICAL CHARACTERISTICS(4QUADRANTS)

Symbol	Test Conditions	Quadrant		Value		Units
I_{GT}	VD=12V RL=100Ω	Ⅰ Ⅱ Ⅲ Ⅳ	MAX	Ⅰ Ⅱ Ⅲ	Ⅳ	mA
				10	25	
V_{GT}			MAX	1.5		V
V_{GD}	Tj=150℃		MIN	0.2		V
I_H	IT=0.5A		MAX	60		mA
I_L	IG=1.2IGT		MAX	60		mA
				100		
dv/dt	VD=2/3VDRM Tj=150℃		MIN	1000		V/us
(dv/dt)c	Tj=150℃		MIN	8		V/us

• STATIC CHARACTERISTICS

Symbol	Test Conditions			Value	Units
V_{TM}	Peak On-State Voltage ITM= 12A	Tj=25℃	MAX	1.40	V
V_{T0}	Threshold Voltage	Tj=150℃	MAX	0.86	V
R_d	Dynamic Resistance	Tj=150℃	MAX	36.6	mΩ
IDRM IRRM	Peak Off-State Current Repetitive Peak Off-State Current	Tj=25℃ Tj=150℃	MAX	5	uA
				1	mA
Rth(j-c)	Typical Thermal Resistance (Junction to Case AC)			1.25	℃/W

- **TO-220 Mechanical Data**

Unit：mm（±0.1）