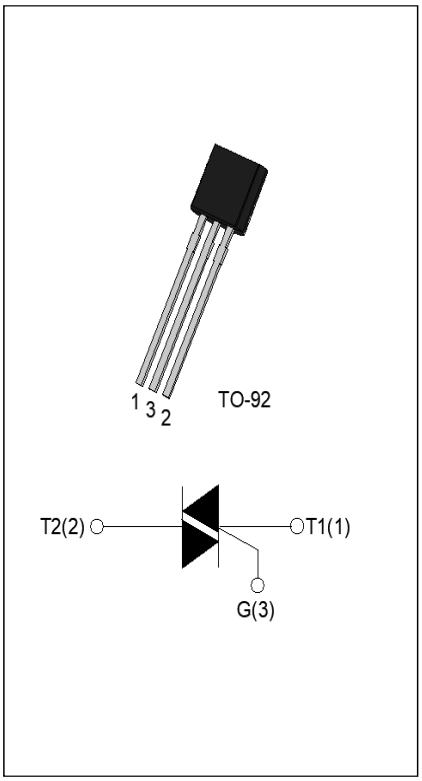
BT131-800E

MAIN FEATURES 4Q TRIAC

Symbol	Value	Unit
$I_{T(RMS)}$	1	A
V_{DRM} /V_{RRM}	800	V
$I_{GT1/2/3}$	10/10/10/25	mA



DESCRIPTION:

TheBT131-800E 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 TO-92 is RoHS compliant.

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℃)	V_{RRM}	800	V
RMS on-state current (T_C≤90℃)	$I_{T(RMS)}$	1	A
Non repetitive surge peak on-state current (full cycle , t_p=20ms , T_j=25℃)	I_{TSM}	12	A
I^2t value for fusing (t_p=10ms , T_j=25℃)	I^2t	0.72	A^2s
Critical rate of rise of on-state current (T_j=125℃)	dI/dt	50	A/μs
Peak gate current (t_p=20μs , T_j=125℃)	I_{GM}	1	A
Average gate power dissipation (T_j=125℃)	$P_{G(AV)}$	0.2	W

ELECTRICAL CHARACTERISTICS (T_j=25℃ unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	V_D =12V R_L =100Ω	Ⅰ-Ⅱ-Ⅲ	MAX.	10	mA
		Ⅳ		25	
V_{GT}		ALL	MAX.	1.3	V
V_{GD}	V_D =V_{DRM} T_j =125℃ R_L =100Ω	ALL	MIN.	0.2	V
I_L	I_G =1.2I_{GT}	Ⅰ-Ⅲ-Ⅳ	MAX.	10	mA
		Ⅱ		30	
I_H	I_T =500mA		MAX.	20	mA
dV/dt	V_D=2/3V_{DRM} T_j =125℃		MIN.	500	V/μs
dV/dt	T_j =125℃		MIN.	10	V/μs

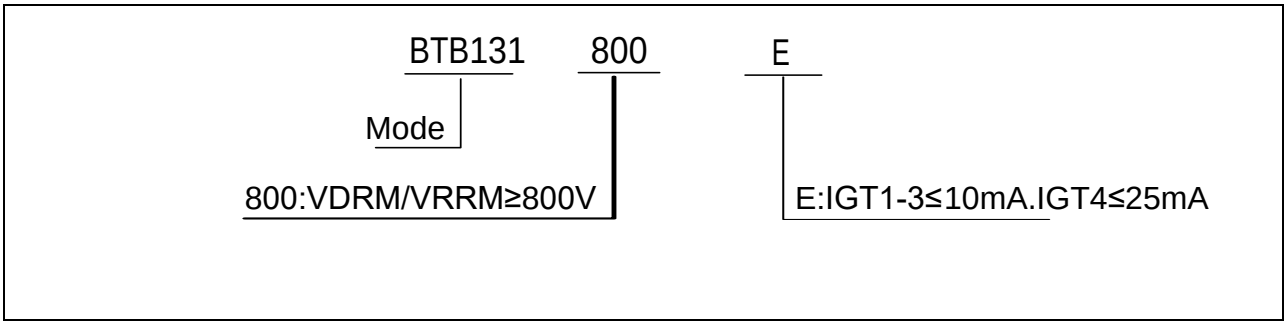
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_{TM} =32A	T_j=25℃	1.40	V
V_{TO}	Threshold voltage	T_j=125℃	0.94	V
R_D	Dynamic resistance	T_j=125℃	36.8	mΩ
I_{DRM}	V_D =V_{DRM} V_R =V_{RRM}	T_j=25℃	5	μA
I_{RRM}		T_j=125℃	1	mA

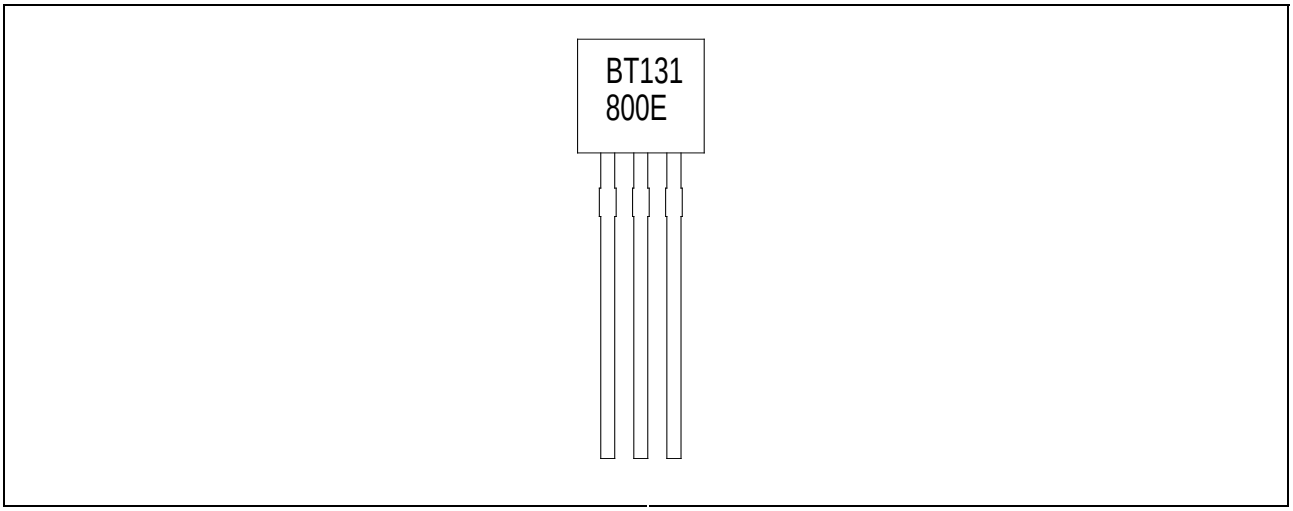
THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	11.3	℃/W

ORDERING INFORMATION



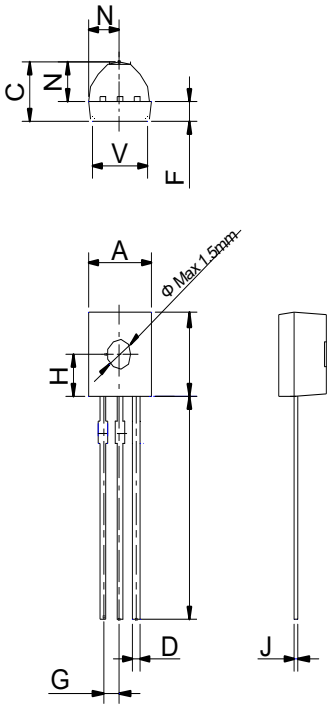
MARKING



ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)		Package	Base qty. (pcs)	Delivery mode
		Ⅰ-Ⅱ-Ⅲ	Ⅳ			
BT131-800E	800	10	25	TO-92	/	/

PACKAGE MECHANICAL DATA



TO-92

Ref.	Dimensions		
	Millimeters		
	Min.	Typ.	Max.
A	4.43	4.58	4.83
B	4.38	4.58	4.78
C	/	/	3.86
D	0.45	0.46	0.47
F	8.97	9.17	9.37
G	9.96	10.16	10.36
H	6.48	6.68	6.88
J	2.44	2.54	2.64
K	28.65	28.95	29.25
N	1.10	1.30	1.50
P	3.15	3.30	3.45
V	3.15	3.30	3.45

DELIVERY MODE

PACKAGE	OUTLINE	TUBE (PCS)
BT131	/	/

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

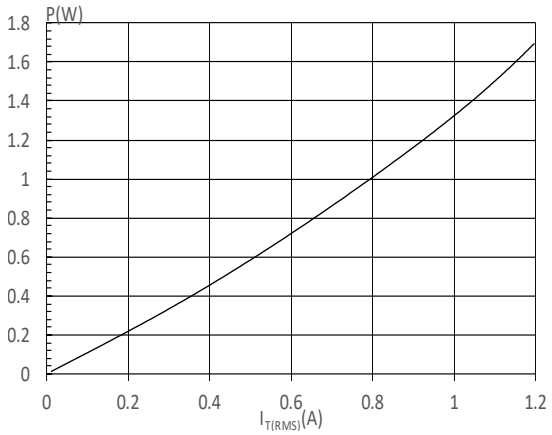


FIG.2: RMS on-state current versus case temperature

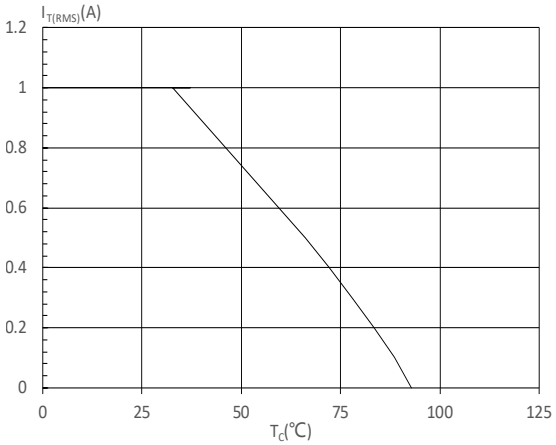


FIG.3: Surge peak on-state current versus number of cycles

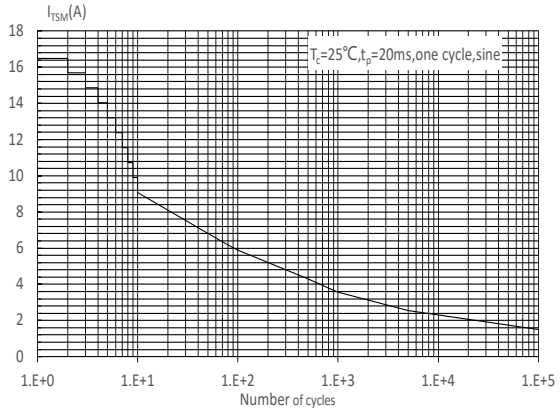


FIG.4: On-state characteristics

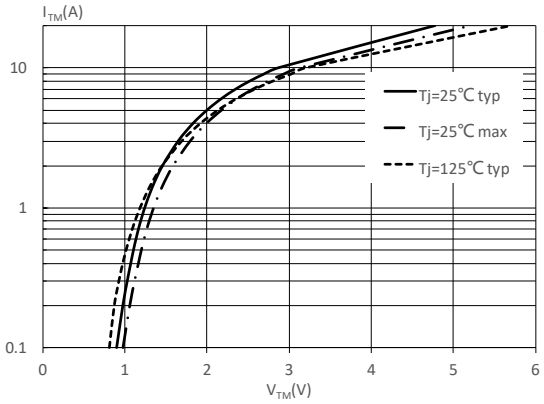


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width t_p ding value of I^2t

(Ⅰ-Ⅱ-Ⅲ: dI/dt<50A/μs;Ⅳ: dI/dt<30A/μs)

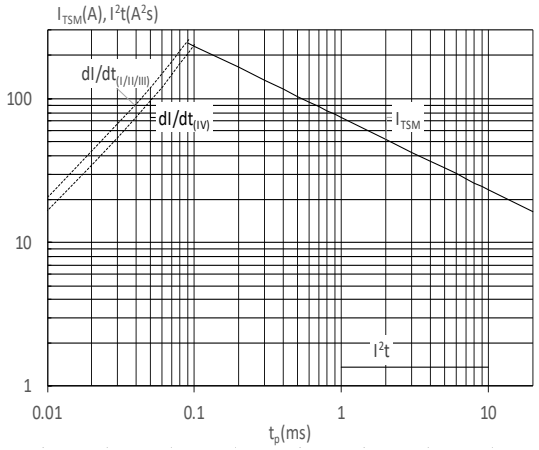
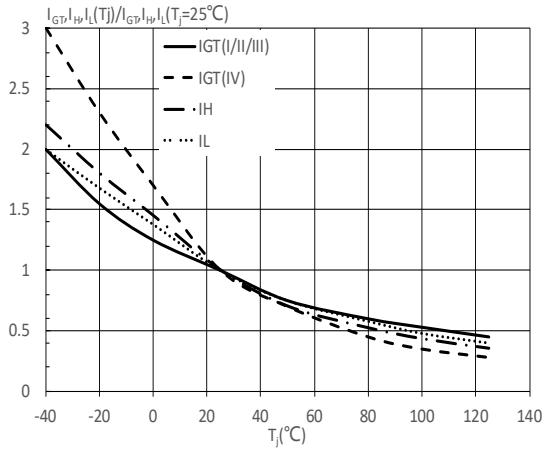


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



单击下面可查看定价，库存，交付和生命周期等信息

>>ZG(中鑫半导体)