

1.0A 4Quadrants TRIACs

Product Summary

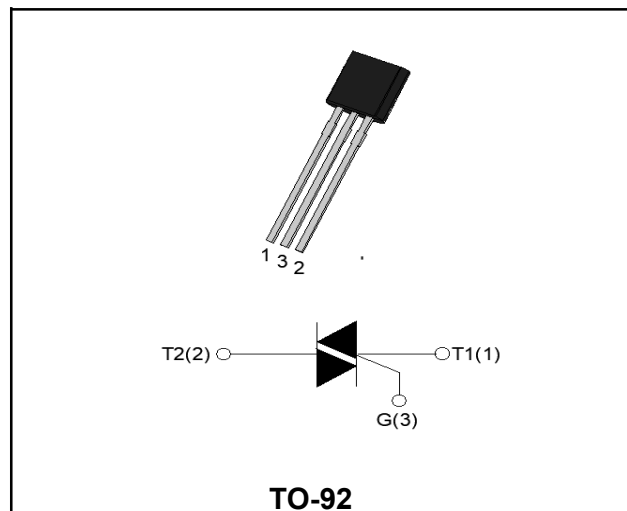
Symbol	Value	Unit
$I_{T(RMS)}$	1	A
$V_{DRM} V_{RRM}$	600/800	V
V_{TM}	1.6	V

Features

With high ability to withstand the shock loading of large current, With high commutation performances, 4 quadrants products especially recommended for use on inductive load

Application

Washing machine, vacuums, massager, solid state relay, AC Motor speed regulation and so on



Absolute maximum ratings (Ta=25°C unless otherwise noted)

Parameter		Symbol	Value	Unit
Repetitive peak off-state voltage		V_{DRM}	600/800	V
Repetitive peak reverse voltage		V_{RRM}	600/800	V
RMS on-state current		$I_{T(RMS)}$	1	A
Non repetitive surge peak on-state current	F=50Hz t=20ms	I_{TSM}	16	A
	F=60Hz t=16.7ms		16.7	A
I^2t value for fusing (tp=10ms)		I^2t	1.28	A ² s
Critical rate of rise of on-state current ($I_G = 2 \times I_{GT}$)		di/dt	I - II - III 10	A/ μ s
Peak gate current		I_{GM}	2	A
Average gate power dissipation		$P_G (AV)$	0.5	W
Junction Temperature		T_J	-40~+125	°C
Storage Temperature		T_{STG}	-40 ~+150	°C

Electrical characteristics (TA=25°C, unless otherwise noted)

Parameter	Symbol	Test Condition	Value		Unit
			T	D	
Gate trigger current	I_{GT}	$V_D=12V, R_L=30\Omega$	I - II - III	5	mA
			IV	10	mA
Gate trigger voltage	V_{GT}		1.3		V
Non-triggering gate voltage	V_{GD}	$V_D=V_{DRM}, R_L=3.3k\Omega, T_J=125^\circ C$	0.2		V
Holding current	I_H	$I_T=50mA$	I - III	5	mA
Latching current	I_L	$I_G=1.2I_{GT}$	I - III - IV	5	mA
			II	20	
Critical-rate of rise of commutation voltage	dV/dt	$V_D=67\%V_{DRM}, \text{gate open}$ $T_J=125^\circ C$	10	20	V/μs

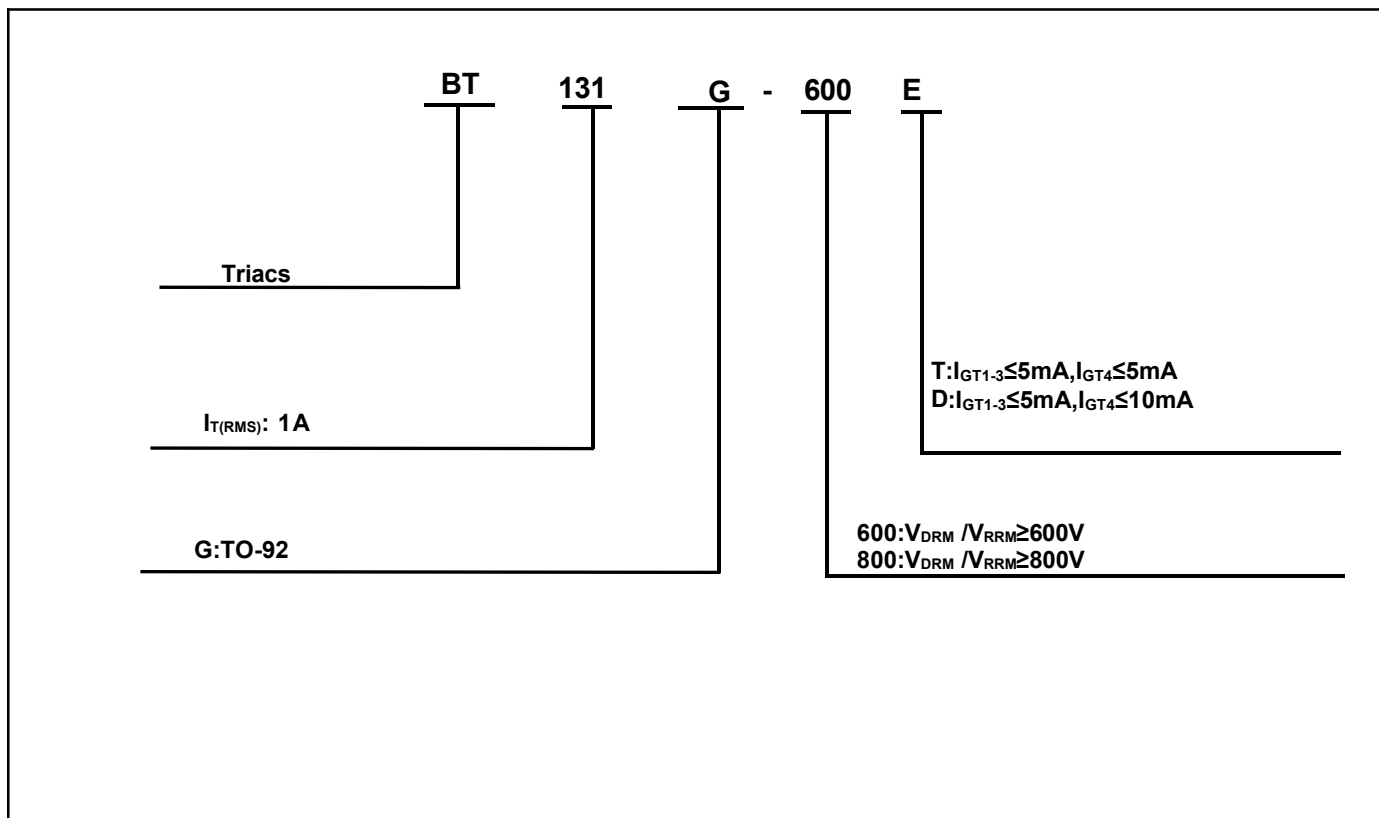
STATIC CHARACTERISTICS

On-state Voltage	V_{TM}	$I_T=1A, t_p=380\mu s$	1.6		V
Repetitive Peak Off-State Current	I_{DRM}	$V_D=V_{DRM}=V_{RRM}$	$T_J=25^\circ C$	10	μA
Repetitive Peak Reverse Current	I_{RRM}		$T_J=125^\circ C$	1	mA

THERMAL RESISTANCES

lhermal resistance	$R_{th(j-c)}$	Junction to case	TYP.	50	$^\circ C/W$
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Ordering Information



Typical Characteristics

FIG.1: Maximum power dissipation versus RMS on-state current (full cycle)

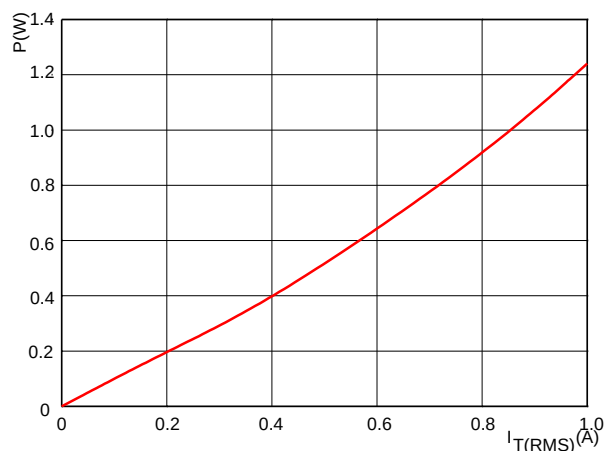


FIG.2: RMS on-state current versus case temperature (full cycle)

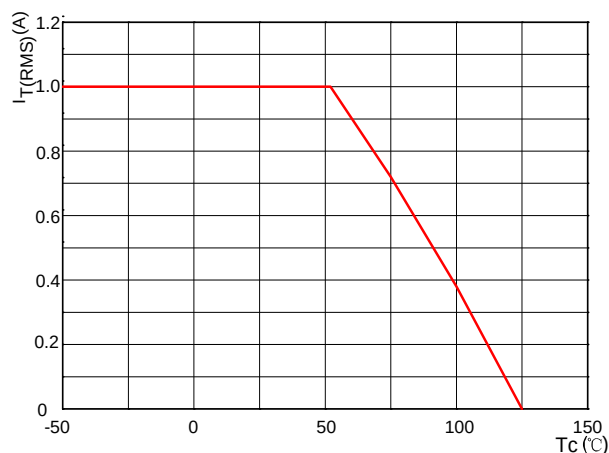


FIG.3: Surge peak on-state current versus number of cycles

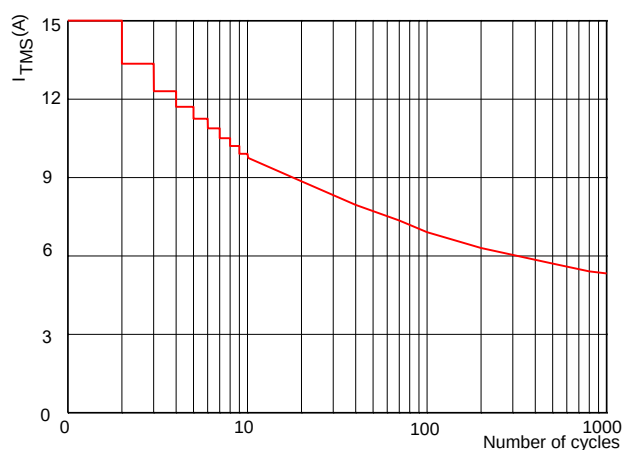


FIG.4: On-state characteristics (maximum values)

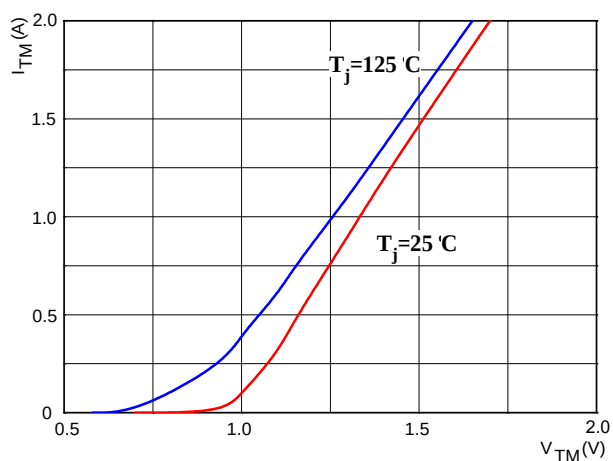


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10ms$

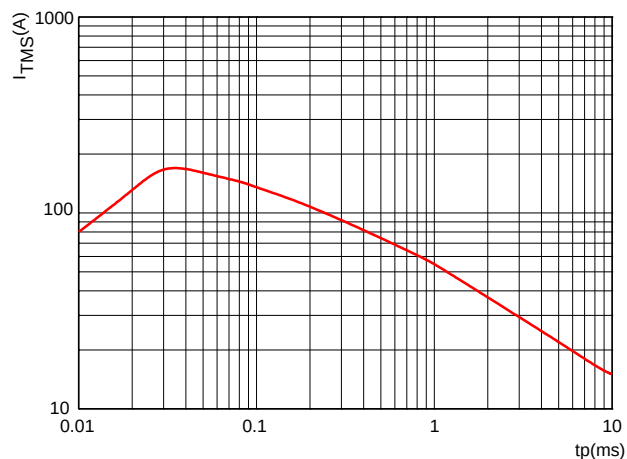
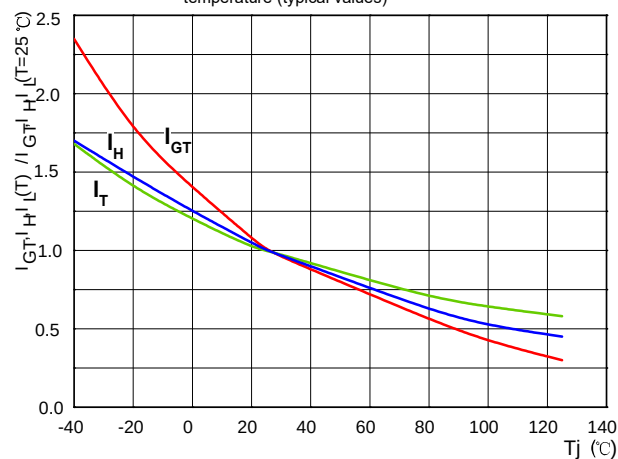


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature (typical values)



Ordering information

Package	Packing Description	Base Quantity
TO-92	Bulk	1000pcs/Bag
	Tape	2000pcs/Box

Package Dimensions

TO-92

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.70	0.130	0.146
A1	2.30	2.70	0.091	0.106
b	0.40	0.50	0.016	0.020
b1	0.50	0.70	0.020	0.028
c	0.35	0.45	0.014	0.018
D	4.45	4.70	0.175	0.185
E	4.40	4.65	0.173	0.183
e	1.17	1.37	0.046	0.054
e1	2.34	2.64	0.092	0.104
L	13.50	14.50	0.531	0.571
L1	1.80	2.20	0.071	0.087

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