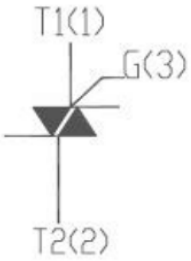
BT137

8 A standard and Snubberless™ triacs

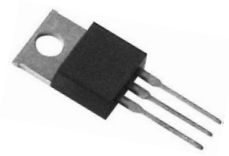
Features

- High current triac
- Low thermal resistance with clip bonding
- High commutation (4 quadrant) or very high commutation (3 quadrant) capability



VOLTAGE RANGE 600/800 Volts

CURRENT 8 Ampere



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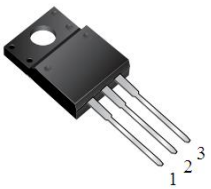

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MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

ELECTRICAL CHARACTERISTICS (Tj = 25°C, unless otherwise specified)

Symbol	Parameter	Conditions	Ratings	Unit
VDRM VRRM	Repetitive Peak Off-State Voltage	BT137-600	600	V
		BT137-800	800	V
IT(RMS)	R.M.S On-State Current	Tc=110°C	8	A
ITSM	Surge On-State Current	tp=16.7ms/tp=10ms	80/84	A
I²t	I²t for fusing	Tp=10ms	30	A²s
PG(AV)	Average Gate Power Dissipation	Tj=125°C	1	W
IGM	Peak Gate Current	Tj=125°C	4	A
Tj	Operating Junction Temperature		~40~125	°C
TSTG	Storage Temperature		~40~150	°C

BT137

Electrical Characteristics (Tj=25°C unless otherwise specifed)

Symbol	Parameter		Test Conditions	Value				Unit
				D	E	F	G	
IDRM	Repetitive Peak Off-State Current		Tj=25°C	≤5				uA
			Tj=125°C	≤1				mA
IRRM	Repetitive Peak Reverse Current		Tj=25°C	≤5				uA
			Tj=125°C	≤1				mA
VTM	Forward "on" voltage		IT=12A tp=380us	≤1.55				V
VGT	Gate trigger voltage		VD=12V ,RL=30Ω	≤1.3				V
di/dt	Critical-rate of rise of commutation current.	I,II,III	VD=12V IGT==0.1A	≥50				A /us
		IV		≥10				A /us
IGT	Gate trigger current	I,II,III	VD=12V RL=30Ω	≤5	≤10	≤25	≤50	mA
		IV		≤10	≤25	≤70	≤100	mA
IH	Holding current		IT=0.2A	≤10	≤25	≤30	≤60	mA
VGD	Gate non-trigger voltage	ALL	VD=VDRM TJ=125°C,RL=3.3KΩ	≥0.2				V
dv/dt	Critical-rate of rise of commutation voltage		TJ=125°C VD=2/3VDRM Gate	≥5	≥10	≥50	≥200	V/us

RATING AND CHARACTERISTIC CURVES (BT137)

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

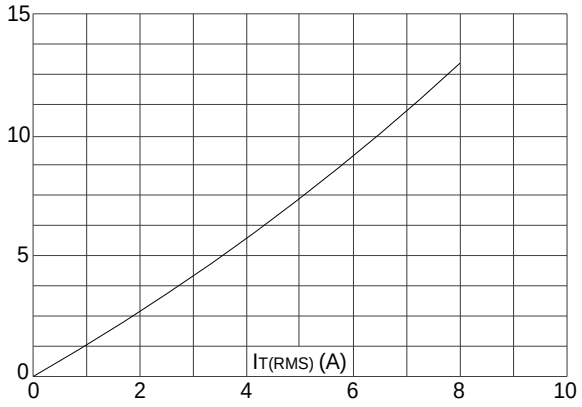


FIG.2: RMS on-state current versus case temperature

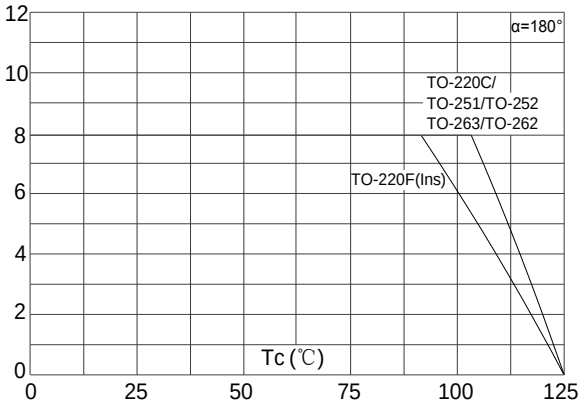


FIG.3: Surge peak on-state current versus number of cycles

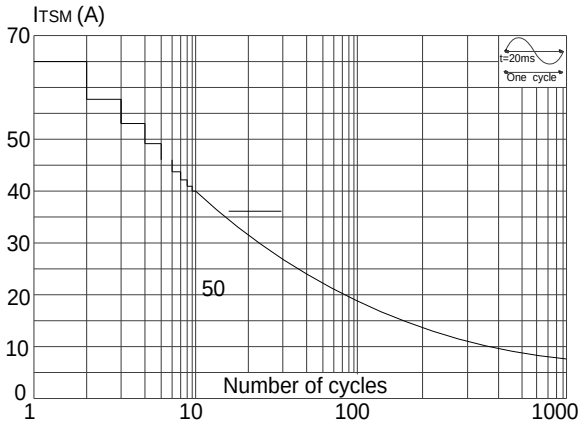


FIG.4: On-state characteristics (maximum values)

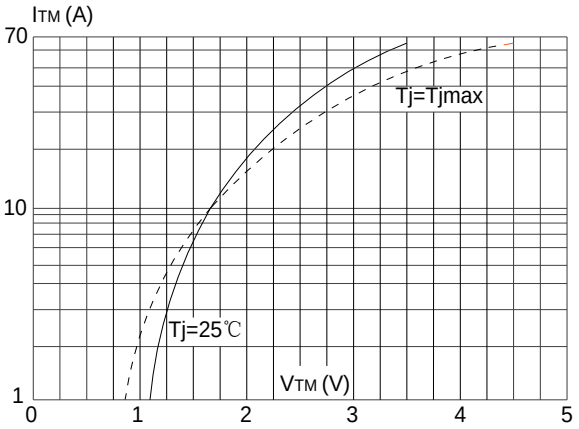


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp<20ms, and corresponging value of I^2t (dI/dt < 100A/μs)

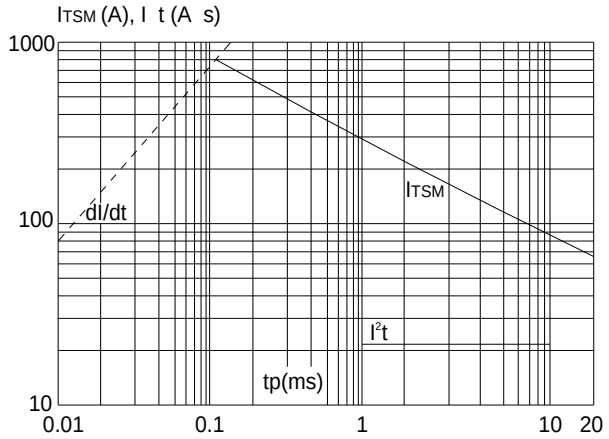
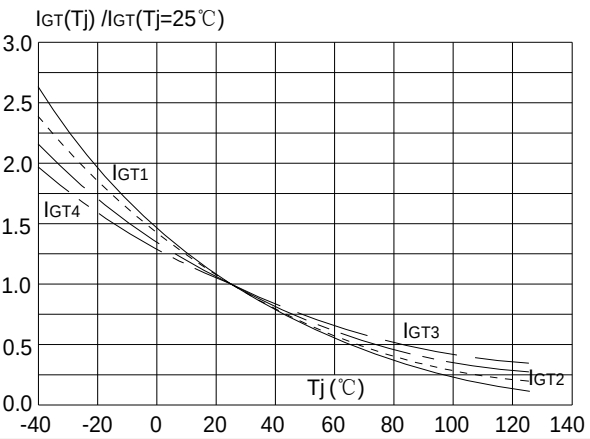


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



RATING AND CHARACTERISTIC CURVES (BT137)

FIG.7: Relative variations of holding current versus junction temperature

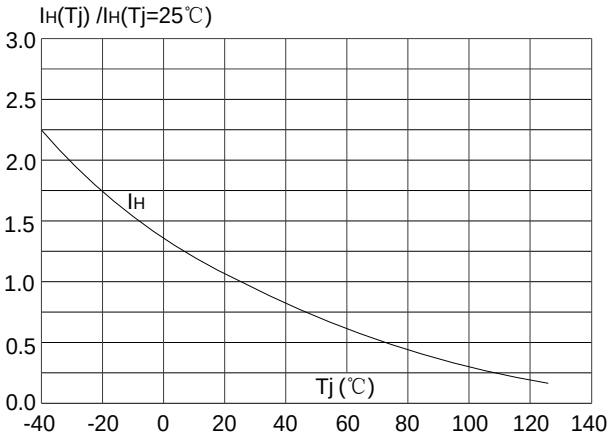
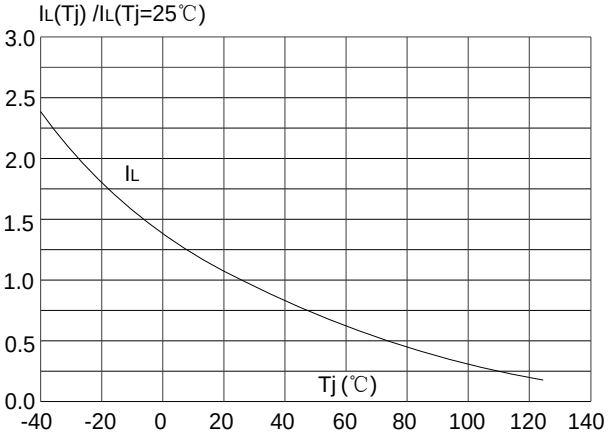


FIG.8: Relative variations of latching current versus junction temperature



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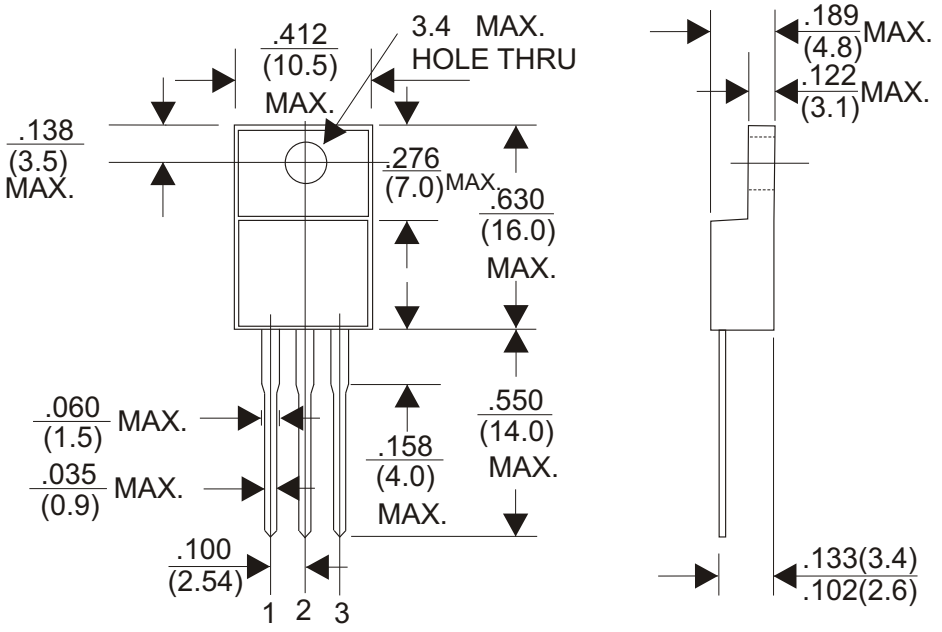

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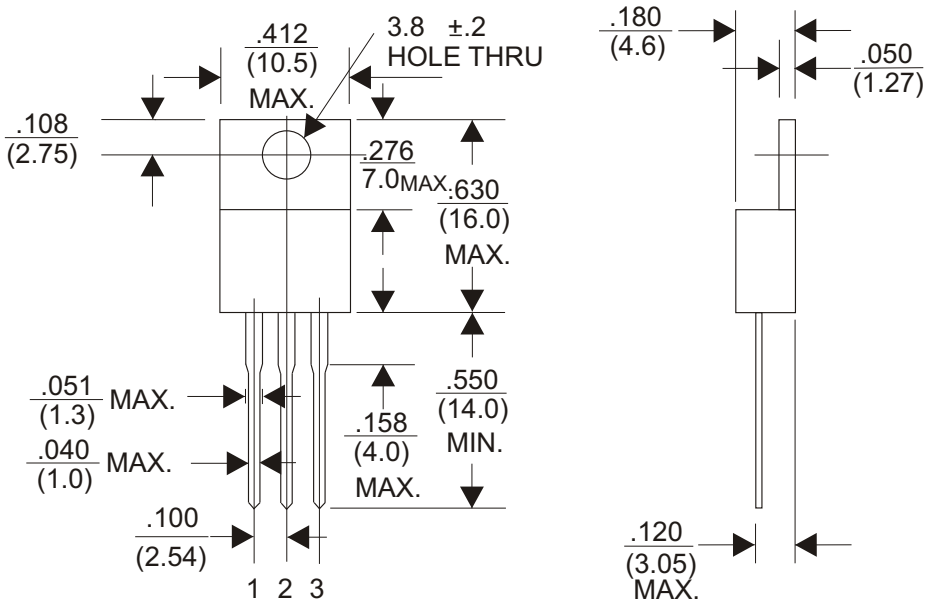

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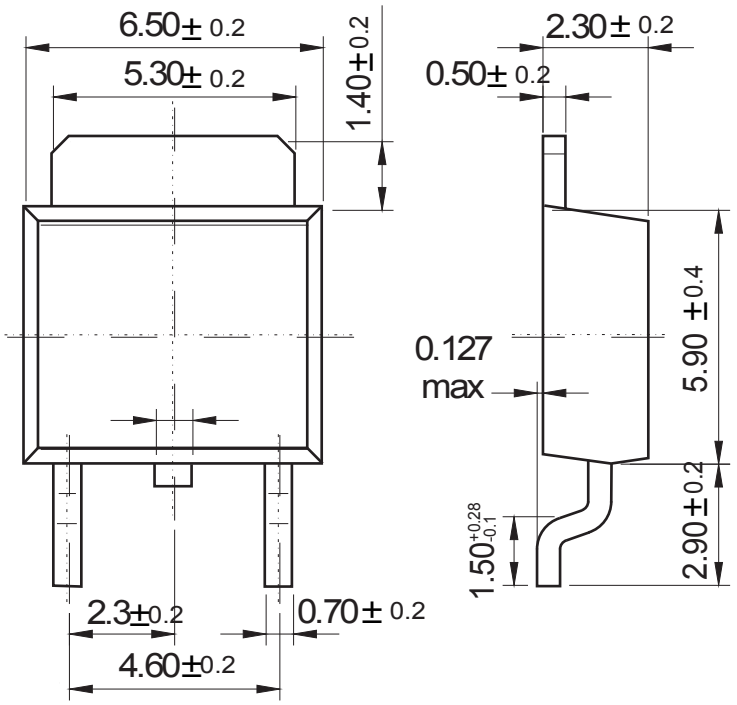
Unit: mm



Dimensions in inches and (millimeters)