

IT(RMS)		4A
VDRM/VRRM	BT134-600	600V
VTM		1.7V

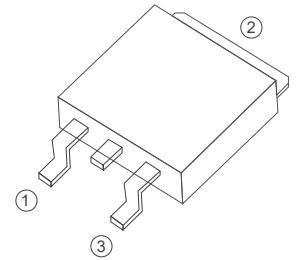
FEATURES

IT(RMS): 4A

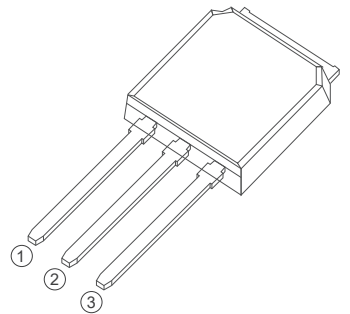
VGT: 1.5V

VDRM VRRM: 600V

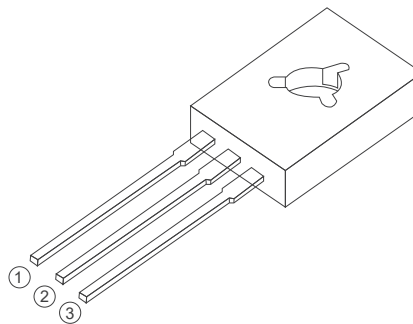
High blocking voltage capability
Less sensitive gate for improved
noise immunity



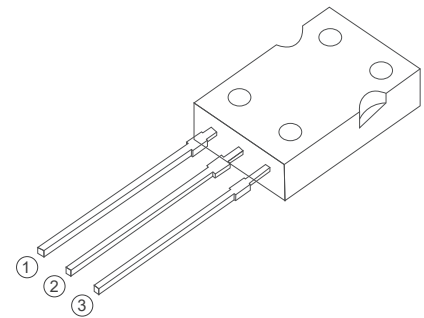
TO-252



TO-251



TO-126



SOT-82(TO-126P)

APPLICATIONS

Heater Control

Motor Speed Controller

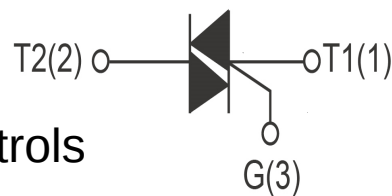
Washing machine

Vacuums

Solid state relay

General purpose motor controls

General purpose switching



Absolute Maximum Ratings (T_j=25°C unless otherwise specified)

Symbol	Parameter	Conditions	Ratings	Unit
V _{DRM} V _{RRM}	Repetitive Peak Off-State Voltage	BT134-600	600	V
I _{T(RMS)}	R.M.S On-State Current	T _c =110°C	4	A
I _{ISM}	Surge On-State Current	t _p =16.7ms/t _p =10ms	25/27	A
I ² t	I ² t for fusing	T _p =10ms	3.1	A ² s
P _{G(AV)}	Average Gate Power Dissipation	T _j =125°C	0.5	W
I _{GM}	Peak Gate Current	t _p =20us T _j =125°C	2	A
T _j	Operating Junction Temperature		~40~125	°C
T _{STG}	Storage Temperature		~40~150	°C

Electrical Characteristics (T_j=25°C unless otherwise specified)

Symbol	Parameter		Test Conditions	Value		Unit
				D	E	
IDRM	Repetitive Peak Off-State Current		T _j =25°C	≤10		uA
			T _j =125°C	≤0.5		mA
IRRM	Repetitive Peak Reverse Current		T _j =25°C	≤10		uA
			T _j =125°C	≤0.5		mA
VTM	Forward "on" voltage		I _T =5A t _p =380us	≤1.7		V
VGD	gate non-trigger voltage		V _D =12V, T _j =125°C	≥0.2		V
I _H	Holding current		V _D =12V ,I _{GT} =0.1A	≤10	≤15	mA
VGT	Gate trigger voltage		V _D =12V	≤1.5		V
IGT	Gate trigger current	I,II,III	V _D =12V,I _{GT} =0.1A	≤5	≤10	mA
		IV		≤10	≤25	mA
di/dt	Critical-rate of rise of commutation current.	I,II,III	I _T =6A ,I _{GT} =0.2A, dI _g /dt=0.2A/us	≥50		A/us
		IV		≥10		A/us
dv/dt	Critical-rate of rise of commutation voltage		T _J =125°C V _D =2/3V _{DRM} Gate open circuit	≥5	≥50	V/us

FIG1

Maximum power dissipation versus RMS on-state current

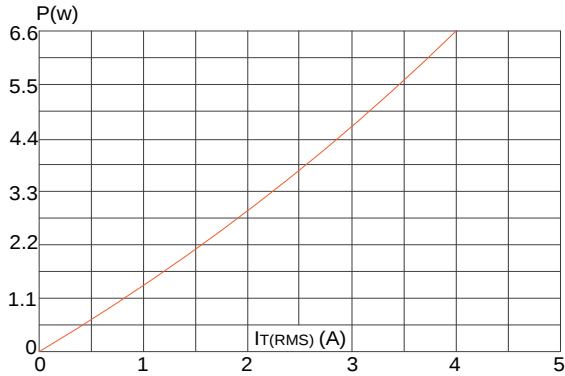


FIG2

RMS on-state current versus case temperature

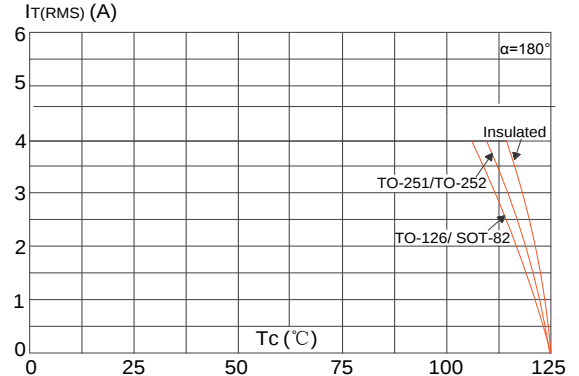


FIG3

Surge peak on-state current versus number of cycles

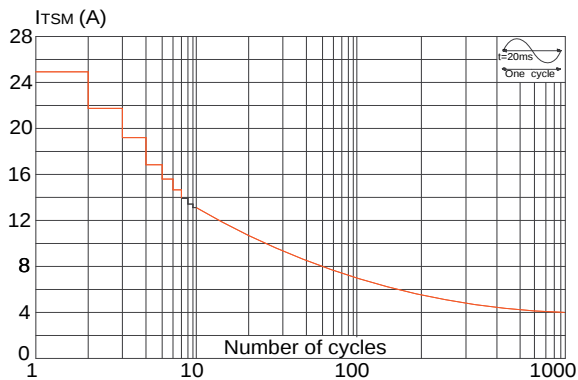


FIG4

On-state characteristics (maximum values)

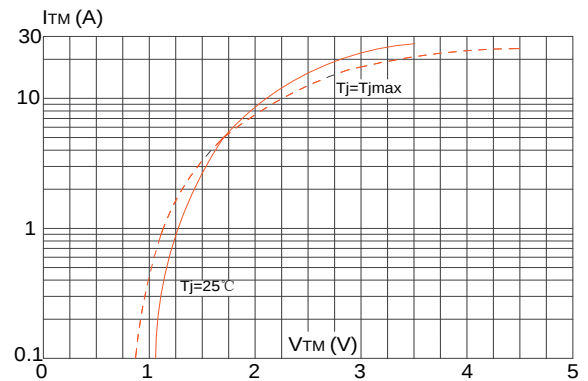


FIG5

Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$, and corresponding value of I^2t ($di/dt < 100\text{A}/\mu\text{s}$)

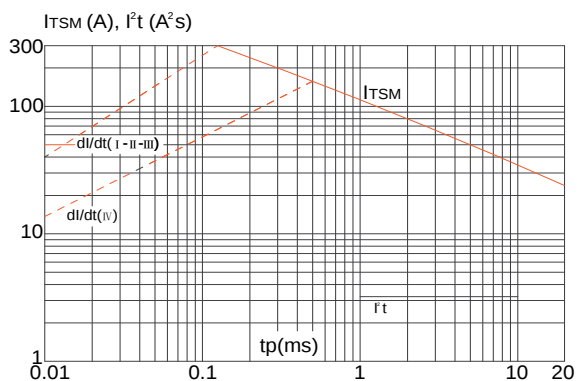


FIG6

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

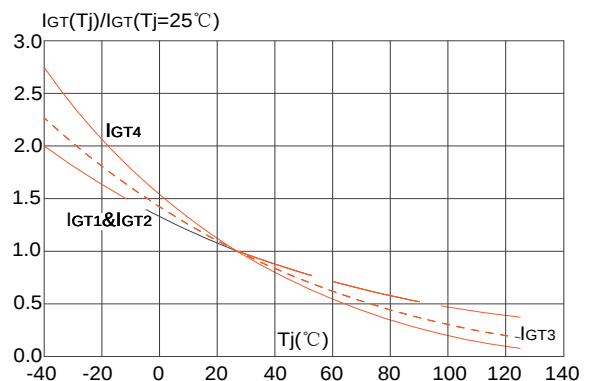


FIG7

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

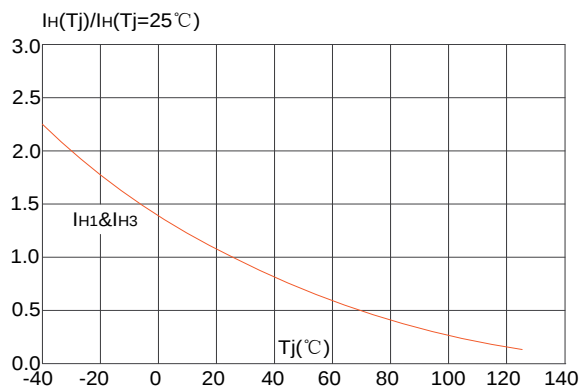
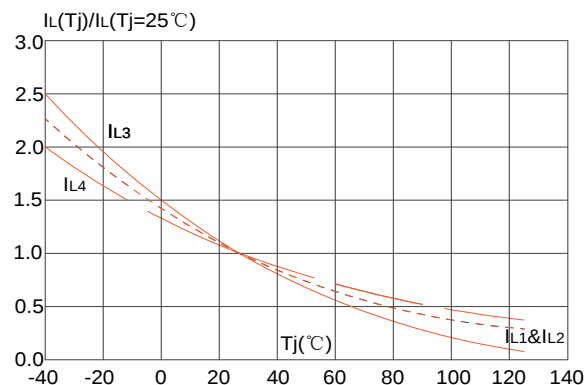
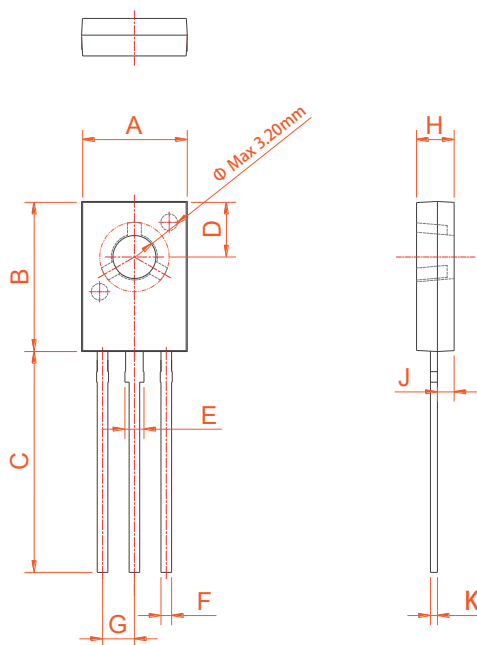


FIG8

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

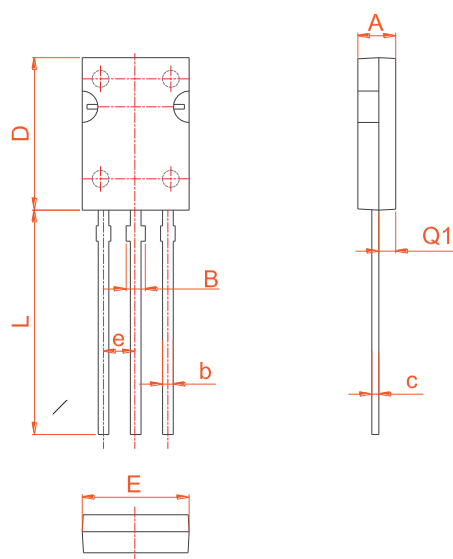


PACKAGE MECHANICAL DATA



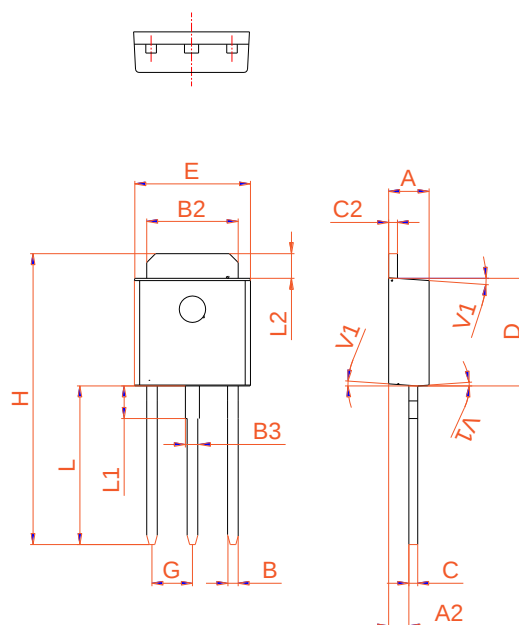
TO-126

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	7.40		7.80	0.291		0.307
B	10.6		11.2	0.417		0.441
C	15.3		16.3	0.602		0.642
D	3.90		4.10	0.154		0.161
E	1.17		1.47	0.046		0.058
F	0.66		0.86	0.026		0.034
G		2.29			0.090	
H	2.50		2.90	0.098		0.114
J	1.10		1.50	0.043		0.059
K	0.45		0.60	0.018		0.024

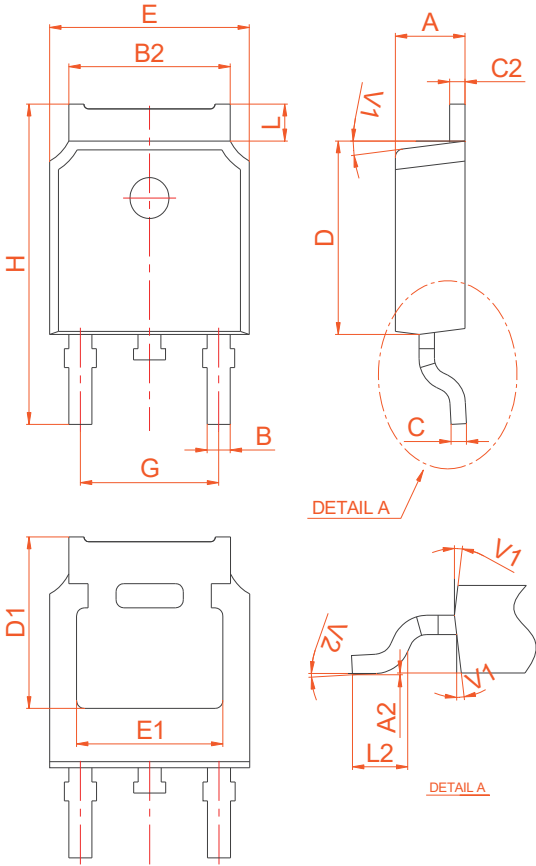
PACKAGE MECHANICAL DATA

SOT-82

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.45	2.55	2.65	0.096	0.100	0.104
b	0.71	0.76	0.81	0.028	0.030	0.032
B	1.27	1.37	1.45	0.050	0.054	0.057
c	0.48	0.50	0.52	0.019	0.020	0.021
D	10.60	10.80	11.00	0.417	0.425	0.433
E	7.30		7.70	0.287		0.303
e	2.24	2.29	2.34	0.088	0.090	0.092
L	15.30	15.60	15.90	0.602	0.614	0.626
Q1	1.17	1.27	1.37	0.046	0.050	0.054

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.20		2.40	0.086		0.095
A2	0.90		1.20	0.035		0.047
B	0.55		0.65	0.022		0.026
B2	5.10		5.40	0.200		0.213
B3	0.76		0.85	0.030		0.033
C	0.45		0.62	0.018		0.024
C2	0.48		0.62	0.019		0.024
D	6.00		6.20	0.236		0.244
E	6.40		6.70	0.252		0.264
G		2.30			0.091	
H	16.0		17.0	0.630		0.669
L	8.90		9.40	0.350		0.370
L1	1.80		1.90	0.071		0.075
L2	1.37		1.50	0.054		0.059
V1		4°			4°	


TO-251

PACKAGE MECHANICAL DATA



TO-252

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.20		2.40	0.086		0.095
A2	0.03		0.23	0.001		0.009
B	0.55		0.65	0.022		0.026
B2	5.10		5.40	0.200		0.213
C	0.45		0.55	0.018		0.022
C2	2.70		2.90	0.106		0.114
D	6.00		6.20	0.236		0.244
E	6.40		6.70	0.252		0.264
G	4.40		4.70	0.173		0.185
H	9.35		10.6	0.368		0.417
L1	1.30		1.70	0.051		0.067
L2	1.37		1.50	0.054		0.059
L3		0.8			0.031	
L4		0.8			0.031	
V1		4°			4°	
V2	0°		8°	0°		8°