Foshan city Hexin semiconductor Co., Ltd.

BT134 TRIAC

FEATURES

Glass passivated triacs in a plastic, intended
for use in applications requiring high
bidirectional transient and blocking
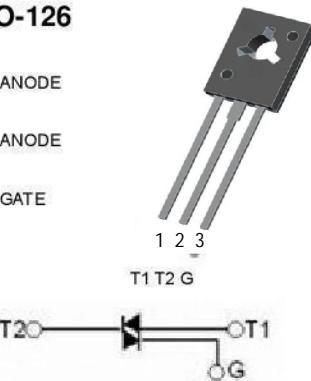voltage capability and high thermal
cycling performance.
Typical applications include motor control,
industrial and domestic lighting ,
heating and static switching.

TO-126

1. ANODE

2. ANODE

3. GATE

1 2 3

T1 T2 G

T2○———|◁|———○T1
                    ○G

MAXIMUM RATINGS(Ta=25℃ unless otherwise noted)

Symbol	Parameter	Test conditions	Value	Unit
V_{DRM}/V_{RRM}	Repetitive peak off-state/reverse voltages		600	V
$I_{T(RMS)}$	RMS on-state current Non-repetitive peak on-state current	full sine wave ;Tmb≦107℃	4	A
I^2t	I^2t for fusing	t=10ms	3.1	A^2s
dI_T/dt	Repetitive rate of rise of on-state current after tiggering	dI_G/dt=0.2A/us		
		T2+G+	50	A/us
		T2+G-	50	A/us
		T2-G-	50	A/us
		T2-G+	10	A/us
I_{GM}	Peak gate current		2	A
V_{GM}	Peak gate voltage		5	V
P_{GM}	Peak gate power		5	W
$P_{G(AV)}$	Average gate power	over any 20 ms period	0.5	W
T_{stg}	Storage Temperature		-40~150	℃
T_j	Operating junction Temperature		125	℃

ELECTRICAL CHARACTERISTICS(T$_a$=25℃ unless otherwise specified)

Parameter		Symbol	Test conditions		Min	Typ	Max	Unit
Rated repetitive peak off-state current		I$_{DRM}$	V$_D$=V$_{DRM}$				10	μA
On-state voltage		V$_{TM}$	I$_T$=3A			1.4	1.7	V
Gate trigger current		I$_{GT}$	T$_2$(+), G(+)	V$_D$=12V				7	mA
			T$_2$(+), G(-)				7	mA
			T$_2$(-), G(-)	R$_L$=100Ω			7	mA
			T$_2$(-), G(+)				20	mA
Gate trigger voltage		V$_{GT}$	T$_2$(+), G(+)	V$_D$=12V			1.45	V
			T$_2$(+), G(-)				1.45	V
			T$_2$(-), G(-)	R$_L$=100Ω			1.45	V
			T$_2$(-), G(+)				2	V
Holding current		I$_H$	I$_T$=100mA I$_G$=20mA				15	mA
Thermal Resistance Junction to mounting base		R$_{th\ j\text{-}mb}$	full cycle				3.0	K/W
			half cycle				3.7	K/W
Thermal Resistance Junction to ambient		R$_{th\ j\text{-}a}$	In free air			60		K/W

ITM(A)

30.0

10.0

Tj=Tj max.

1.0

Tj=25℃

0.0

VTM(V)

0   1   2   3   4

IT(RMS) (A)

4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0

TO-126/TO-126P   α =180°

TO-220

TO-252/SOT-223

Tc(℃)

0   25   50   75   100   125   150

P(W)

6.6
5.5
4.4
3.3
2.2
1.1
0.0

IT(RMS)(A)

0   1   2   3   4   5

ITSM(A)

28
24
20
16
12
8
4

t=20ms
One cycle

Number of cycles

1   10   100   1000

IGT[Tj]/IGT[Tj=25℃]

3.

0

IGT4

2.

IGT1&IGT2

5

2.

Tj(℃)

IGT3

-40   -20   0   20   40   60   80   100   120

IH[Tj]/IH[Tj=25℃]

3.

0

2

IH1&IH3

5

2

Tj(℃)

-40   -20   0   20   40   60   80   100   120