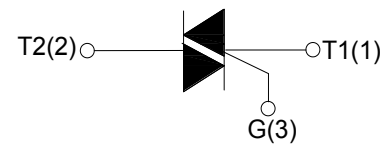
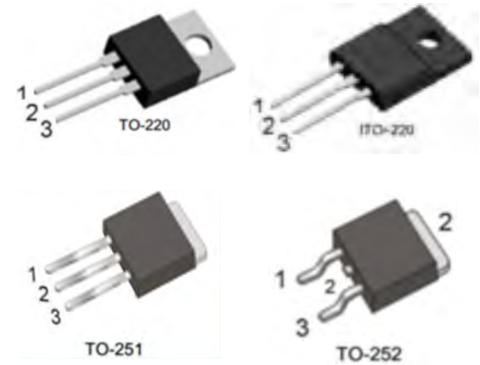


**DESCRIPTION:**

BT134 series triacs, with high ability to withstand the shock loading of large current, provide high dv/dt rate with strong resistance to electromagnetic interface. With high commutation performances, 3 quadrants products especially recommended for use on inductive load.

MAIN FEATURES

Symbol	Value	Unit
V_{DRM}/V_{RRM}	600 and 800	V
$I_{T(RMS)}$	4	A

**ORDERING INFORMATION**

BT 134 - 600 BW			
Triac series			
Current 134= 4A			
Voltage 600 = 600V 800 = 800V			
Sensitivity and type SW = $I_{GT}1-3 < 10mA$ BW = $I_{GT}1-3 < 50mA$ CW = $I_{GT}1-3 < 35mA$ TW = $I_{GT}1-3 < 5mA$ B = $I_{GT}1-3 < 50mA, I_{GT} < 100mA$ C = $I_{GT}1-3 < 25mA, I_{GT} < 50mA$ D = $I_{GT}1-3 < 5mA, I_{GT} < 10mA$ E = $I_{GT}1-3 < 10mA, I_{GT} < 25mA$			

ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		T_{stg}	-40 - 150	°C
Operating junction temperature range		T_j	-40 - 125	°C
Repetitive peak off-state voltage ($T_j=25^{\circ}C$)		V_{DRM}	600/800	V
Repetitive peak reverse voltage ($T_j=25^{\circ}C$)		V_{RRM}	600/800	V
Non repetitive surge peak Off-state voltage		V_{DSM}	$V_{DRM} + 100$	V
Non repetitive peak reverse voltage		V_{RSM}	$V_{RRM} + 100$	V
RMS on-state current	TO-251/ TO-252 ($T_C=86^{\circ}C$)	$I_{T(RMS)}$	4	A



RMS on-state current	ITO-220FP ($T_C=80^\circ\text{C}$)	$I_{T(RMS)}$	4	A
	TO-220 (Non-ins) ($T_C=90^\circ\text{C}$)			
Non repetitive surge peak on-state current (full cycle, $F=50\text{Hz}$)		I_{TSM}	40	A
I^2t value for fusing ($t_p=10\text{ms}$)		I^2t	8	A^2s
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$)		di/dt	50	$\text{A}/\mu\text{s}$
Peak gate current		I_{GM}	4	A
Average gate power dissipation		$P_{G(AV)}$	1	W
Peak gate power		P_{GM}	5	W

ELECTRICAL CHARACTERISTICS ($T_j=25^\circ\text{C}$ unless otherwise specified)

Symbol	Test Condition	Quadrant		Value				Unit
				TW	SW	CW	BW	
I_{GT}	$V_D=12\text{V}$ $R_L=33\Omega$	I - II - III	MAX	5	10	35	50	mA
V_{GT}		I - II - III	MAX	1.5				V
V_{GD}	$V_D=V_{DRM}$ $T_j=125^\circ\text{C}$ $R_L=3.3\text{K}\Omega$	I - II - III	MIN	0.2				V
I_L	$I_G=1.2I_{GT}$	I - III	MAX	10	20	50	70	mA
		II		15	35	60	80	
I_H	$I_T=100\text{mA}$		MAX	10	15	35	60	mA
dV/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^\circ\text{C}$		MIN	20	40	400	1000	$\text{V}/\mu\text{s}$

Standard (4 quadrants)

Symbol	Test Conditions	Quadrant		Value				Unit
				B	C	D	E	
$I_{GT}(1)$	$V_D=12\text{V}$ $R_L=30\Omega$	I - II - III IV	MAX.	50 100	25 50	5 10	10 25	mA
V_{GT}		ALL	MAX.	1.5				V
V_{GD}	$V_D=V_{DRM}$ $R_L=3.3\text{k}\Omega$ $T_j=125^\circ\text{C}$	ALL	MIN.	0.2				V
I_H	$I_T=500\text{mA}$		MAX.	50	25	10	15	mA
I_L	$I_G=1.2I_{GT}$	I - III - IV	MAX.	50	40	10	15	mA
		II		100	80	15	20	
dV/dt	$V_D=67\%V_{DRM}$ gate open $T_j=125^\circ\text{C}$		MIN.	400	200	10	20	$\text{V}/\mu\text{s}$



STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V_{TM}	$I_{TM}=5.5A$ $t_p=380\mu s$	$T_j=25^\circ C$	1.55	V
I_{DRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25^\circ C$	10	μA
I_{RRM}		$T_j=125^\circ C$	0.75	mA

THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-251/ TO-252	4.2	$^\circ C/W$
		TO-220(Non-Ins)	2.4	
		ITO-220(Ins)	4.5	

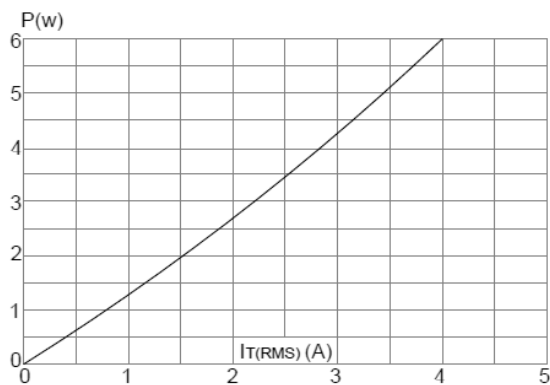
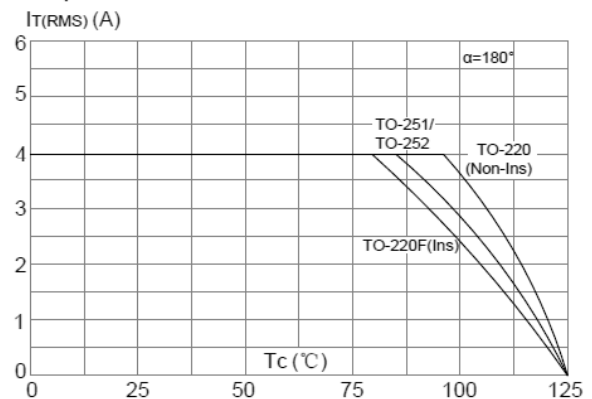
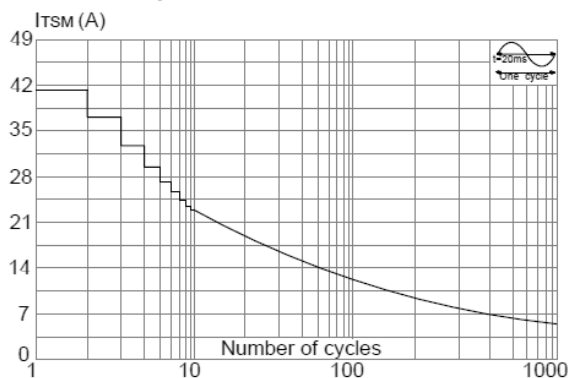
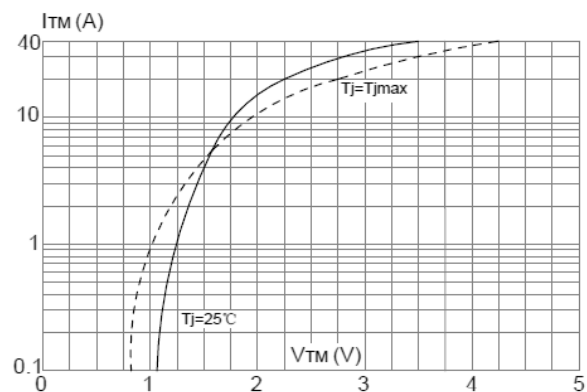
FIG.1: Maximum power dissipation versus RMS on-state current**FIG.2:** RMS on-state current versus case temperature**FIG.3:** Surge peak on-state current versus number of cycles**FIG.4:** On-state characteristics (maximum values)

FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$ and corresponding value of I^2t ($di/dt < 50\text{A}/\mu\text{s}$)

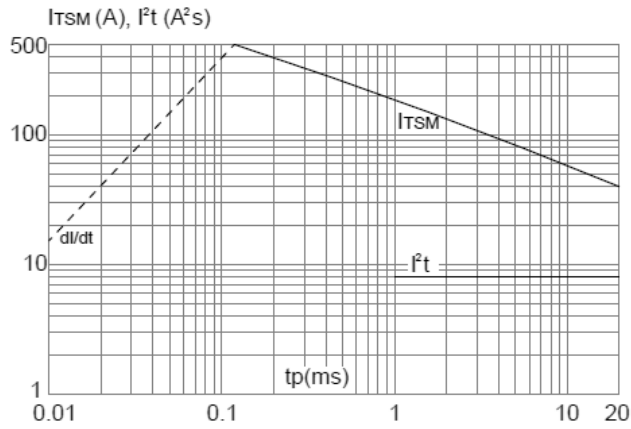
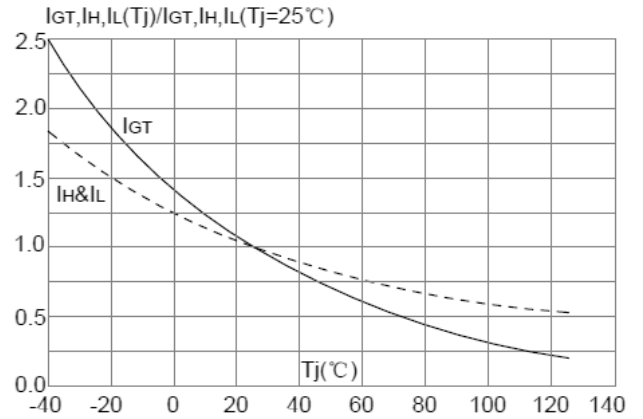
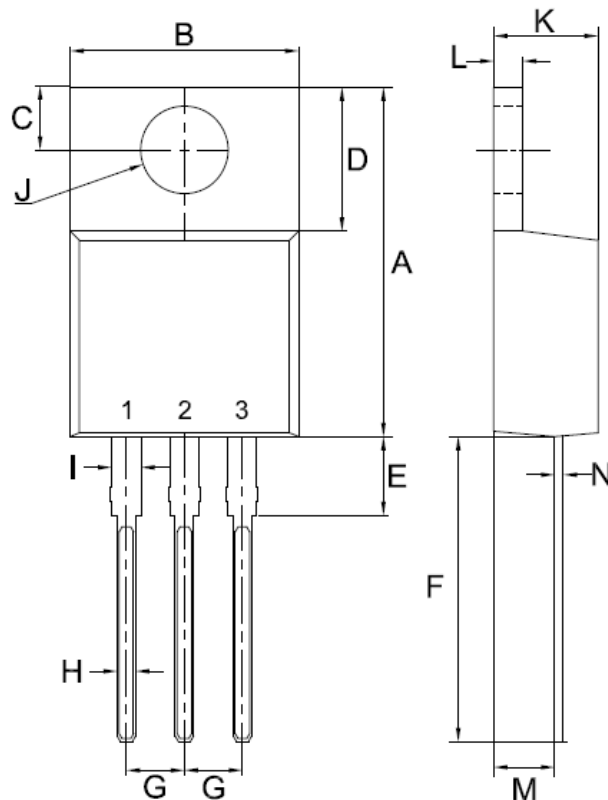


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

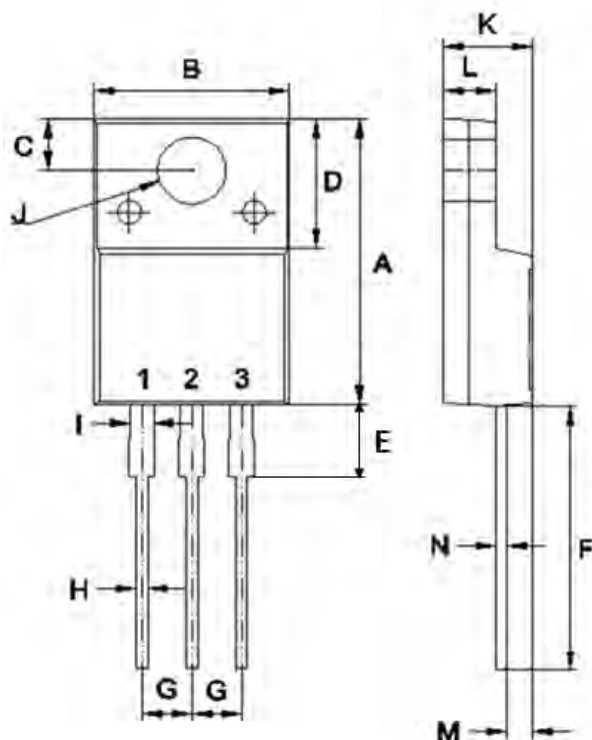


TO-220 Mechanical Drawing



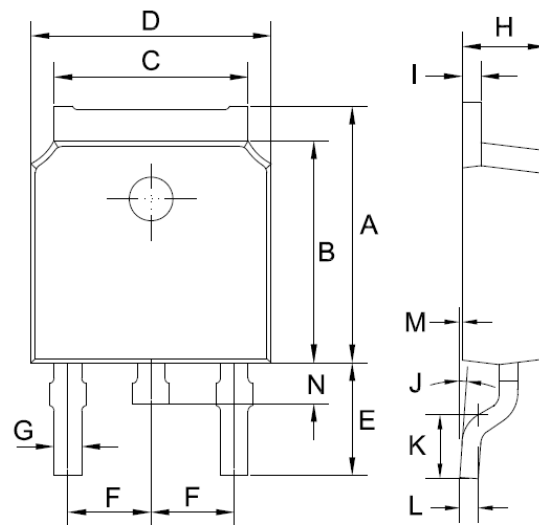
TO-220AB		
Unit:mm		
DIM	MIN	MAX
A	14.80	15.80
B	9.57	10.57
C	2.54	2.94
D	5.80	6.80
E	2.95	3.95
F	12.70	13.40
G	2.34	2.74
H	0.51	1.11
I	0.97	1.57
J	3.54 ϕ	4.14 ϕ
K	4.27	4.87
L	1.07	1.47
M	2.03	2.92
N	0.30	0.64

ITO-220 Mechanical Drawing



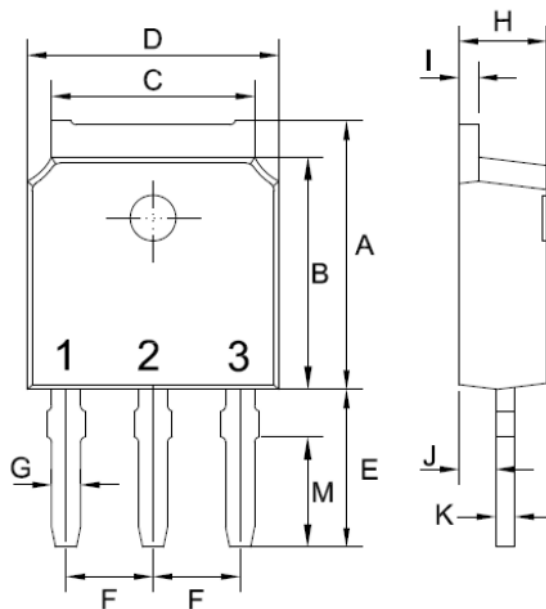
ITO-220AB		
Unit:mm		
DIM	MIN	MAX
A	14.50	15.50
B	9.50	10.50
C	2.50	2.90
D	6.30	7.30
E	3.30	4.30
F	13.00	14.00
G	2.35	2.75
H	0.30	0.80
I	0.90	1.50
J	3.20	3.80
K	4.24	4.84
L	2.52	2.92
M	1.08	1.48
N	0.47	0.64

TO-252 Mechanical Drawing



TO-252 (DPAK)		
Unit:mm		
DIM	MIN	MAX
A	6.85	7.25
B	5.90	6.30
C	5.13	5.53
D	6.40	6.80
E	2.90	3.30
F	2.19	2.39
G	0.45	0.85
H	2.20	2.40
I	0.41	0.61
J	0°	8°
K	1.45	1.85
L	0.41	0.61
M	0.00	0.12
N	0.60	1.00

TO-251 Mechanical Drawing



TO-251(IPAK)		
Unit:mm		
DIM	MIN	MAX
A	6.85	7.25
B	5.90	6.30
C	5.13	5.53
D	6.40	6.80
E	3.95	4.35
F	2.19	2.39
G	0.45	0.85
H	2.20	2.40
I	0.41	0.61
J	0.71	1.31
K	0.41	0.61
M	2.96	3.16