

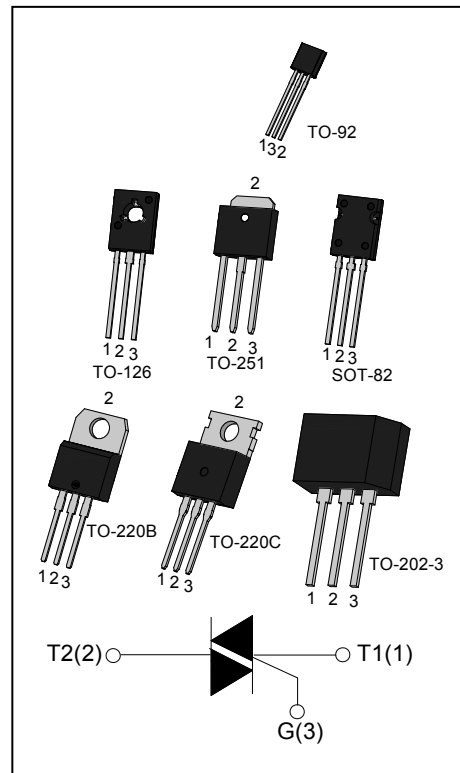


DESCRIPTION:

JST134 series triacs with low holding and latching current are especially recommended for use on middle and small resistance type power load. All the packages mentioned are RoHS compliant. (2011/65/EU)

MAIN FEATURES

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



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($T_j=25^\circ\text{C}$)		V_{DRM}	600/800	V
Repetitive peak reverse voltage($T_j=25^\circ\text{C}$)		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 ($T_c=100^\circ\text{C}$)	$I_{T(RMS)}$	4	A
	TO-220B(Non-Ins)/ TO-220C($T_c=103^\circ\text{C}$)			
	TO-202-3 ($T_c=95^\circ\text{C}$)			
	SOT-82 /TO-126 ($T_c=97^\circ\text{C}$)			
	TO-92 ($T_c=50^\circ\text{C}$)			

Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	25	A
I^2t value for fusing ($t_p = 10ms$)	I^2t	3.1	A^2s
Critical rate of rise of on-state current ($I_G = 2 \times I_{GT}$)	I - II - III	50	$A/\mu s$
	IV	10	
Peak gate current	I_{GM}	2	A
Average gate power dissipation	$P_{G(AV)}$	0.5	W
Peak gate power	P_{GM}	5	W

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

Symbol	Test Condition	Quadrant		Value			Unit
				T	D	E	
I_{GT}	$V_D = 12V$ $R_L = 33\Omega$	I - II - III	MAX	5	5	10	mA
		IV		5	10	25	
V_{GT}		ALL	MAX	1.3			V
V_{GD}	$V_D = V_{DRM}$ $T_j = 125^\circ C$ $R_L = 3.3K\Omega$	ALL	MIN	0.2			V
I_L	$I_G = 1.2I_{GT}$	I - III - IV	MAX	8	10	20	mA
		II		12	15	35	
I_H	$I_T = 100mA$		MAX	5	10	20	mA
dV/dt	$V_D = 2/3V_{DRM}$ Gate Open $T_j = 125^\circ C$		MIN	20	50	100	$V/\mu s$
$(dV/dt)_c$	$(dI/dt)_c = 1.1A/ms$ $T_j = 125^\circ C$		MIN	0.5	1	5	$V/\mu s$

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V_{TM}	$I_{TM} = 5A$ $t_p = 380\mu s$	$T_j = 25^\circ C$	1.7	V
I_{DRM}	$V_D = V_{DRM}$ $V_R = V_{RRM}$	$T_j = 25^\circ C$	5	μA
I_{RRM}		$T_j = 125^\circ C$	0.5	mA

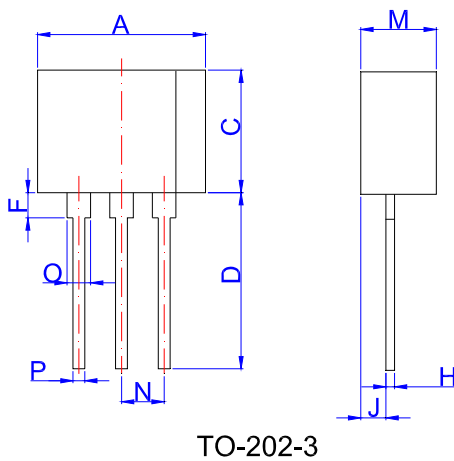
THERMAL RESISTANCES

Symbol	Parameter	Value	Unit	
$R_{th(j-c)}$	junction to case(AC)	TO-251	3.7	°C/W
		TO-220B(Non-Ins)/ TO-220C	3.1	
		TO-202-3	4.5	
		SOT-82/TO-126	4.1	
		TO-92	11.2	

ORDERING INFORMATION

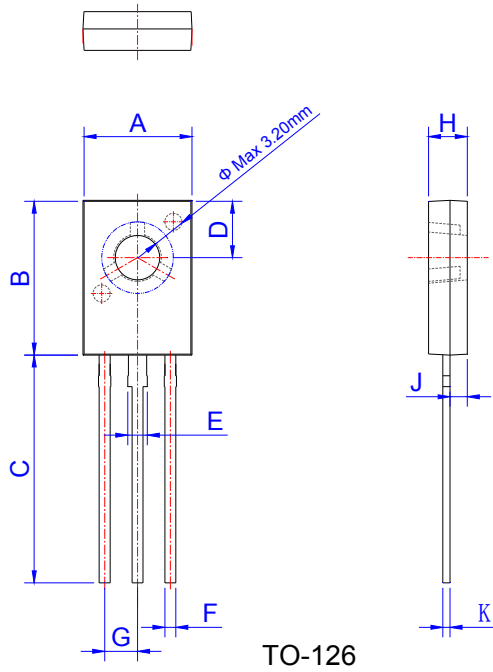
J	ST	134	B	-600	D
JieJie Microelectronics Co.,Ltd					
TRIACs					
$I_{T(RMS)}:4A$					
T: $I_{GT1-3} \leq 5mA$ $I_{GT4} \leq 5mA$ D: $I_{GT1-3} \leq 5mA$ $I_{GT4} \leq 10mA$ E: $I_{GT1-3} \leq 10mA$ $I_{GT4} \leq 25mA$					
600: $V_{DRM} / V_{RRM} \geq 600V$ 800: $V_{DRM} / V_{RRM} \geq 800V$					
C:TO-220C S3:TO-202-3 B:TO-220B(Non-Ins) U:TO-92 QP:SOT-82 Q:TO-126 H:TO-251					

PACKAGE MECHANICAL DATA

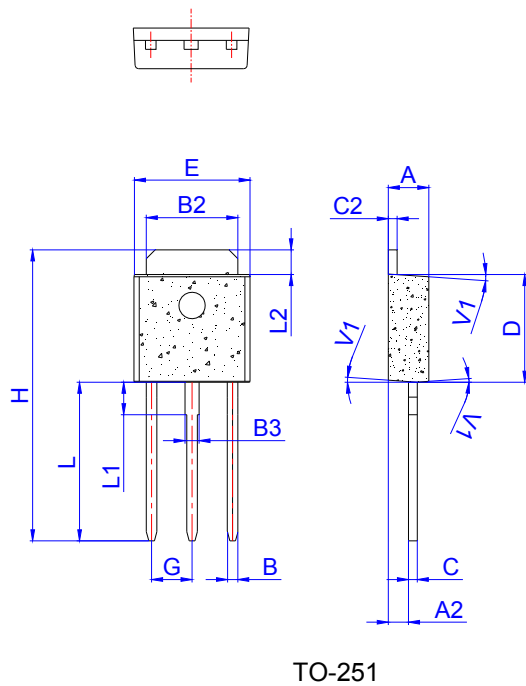


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	9.30		9.90	0.366		0.390
C	7.0		7.6	0.276		0.299
D	10.5		11.5	0.413		0.453
F	1.50		2.50	0.059		0.098
H	0.45		0.55	0.018		0.022
J	1.50		1.90	0.059		0.075
M	4.40		4.70	0.173		0.185
N		2.54			0.100	
O	1.20		1.50	0.047		0.059
P	0.60		0.80	0.024		0.031

PACKAGE MECHANICAL DATA

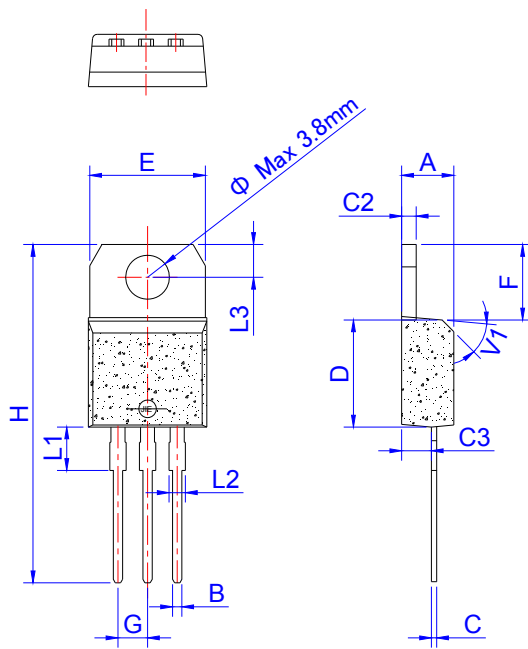


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	7.40		7.80	0.291		0.307
B	10.6		11.2	0.417		0.441
C	15.3		16.3	0.602		0.642
D	3.90		4.10	0.154		0.161
E	1.17		1.47	0.046		0.058
F	0.66		0.86	0.026		0.034
G		2.29			0.090	
H	2.50		2.90	0.098		0.114
J	1.10		1.50	0.043		0.059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



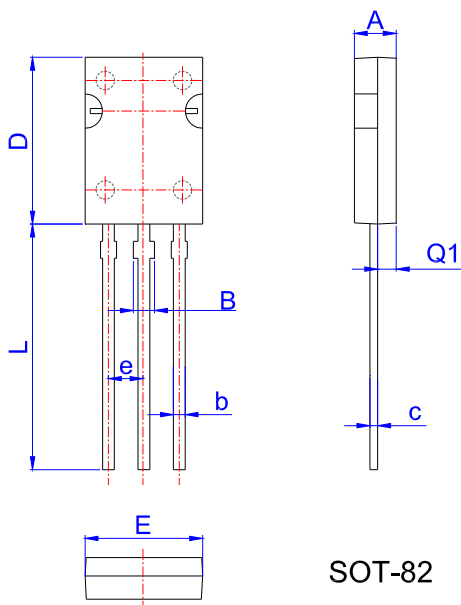
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.20		2.40	0.086		0.095
A2	0.90		1.20	0.035		0.047
B	0.55		0.65	0.022		0.026
B2	5.10		5.40	0.200		0.213
B3	0.76		0.85	0.030		0.033
C	0.45		0.62	0.018		0.024
C2	0.48		0.62	0.019		0.024
D	6.00		6.20	0.236		0.244
E	6.40		6.70	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°	

PACKAGE MECHANICAL DATA



TO-220B Non-Ins

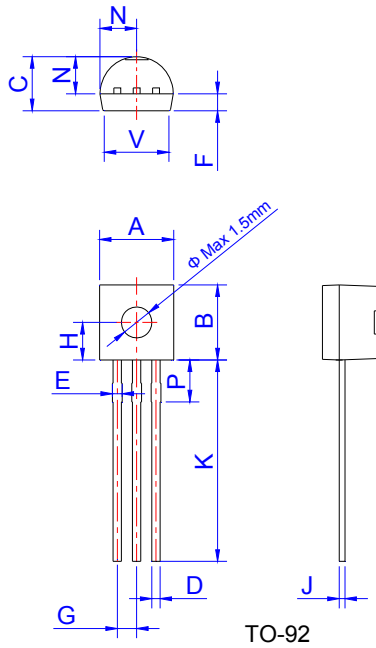
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.60		10.4	0.378		0.409
F	6.20		6.60	0.244		0.260
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.75			0.148	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
V1		45°			45°	



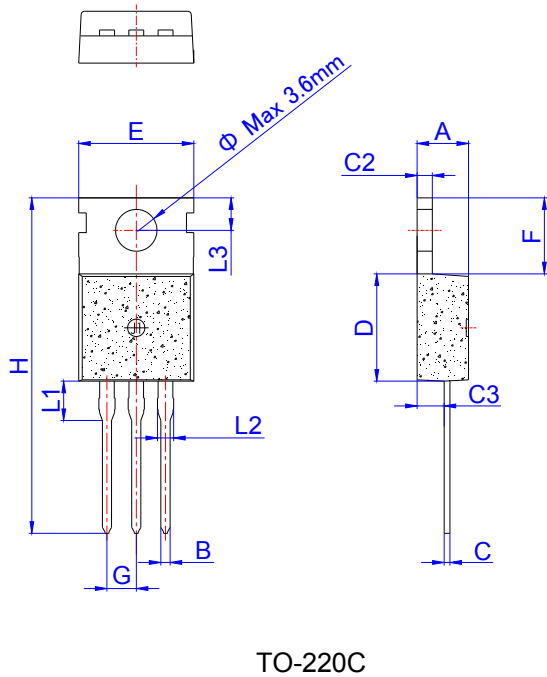
SOT-82

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

PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.45		5.20	0.175		0.205
B	4.32		5.33	0.170		0.210
C	3.18		4.19	0.125		0.165
D	0.407		0.533	0.016		0.021
E	0.50		0.70	0.020		0.028
F	-	1.1	-	-	0.043	-
G	-	1.27	-	-	0.050	-
H	-	2.30	-	-	0.091	-
J	0.36		0.50	0.014		0.020
K	12.70		15.0	0.500		0.591
N	2.04		2.66	0.080		0.105
P	1.86		2.06	0.073		0.081
V	-		4.3	-		0.169



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.70		0.90	0.028		0.035
C	0.45		0.60	0.018		0.024
C2	1.23		1.32	0.048		0.052
C3	2.20		2.60	0.087		0.102
D	8.90		9.90	0.350		0.390
E	9.90		10.3	0.390		0.406
F	6.30		6.90	0.248		0.272
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.39			0.133	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
Φ		3.6			0.142	

MARKING

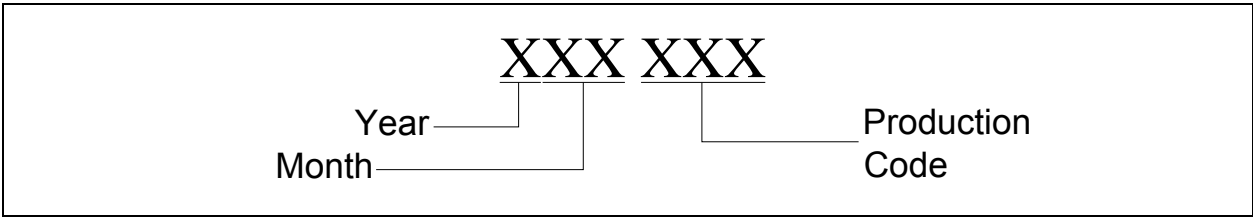
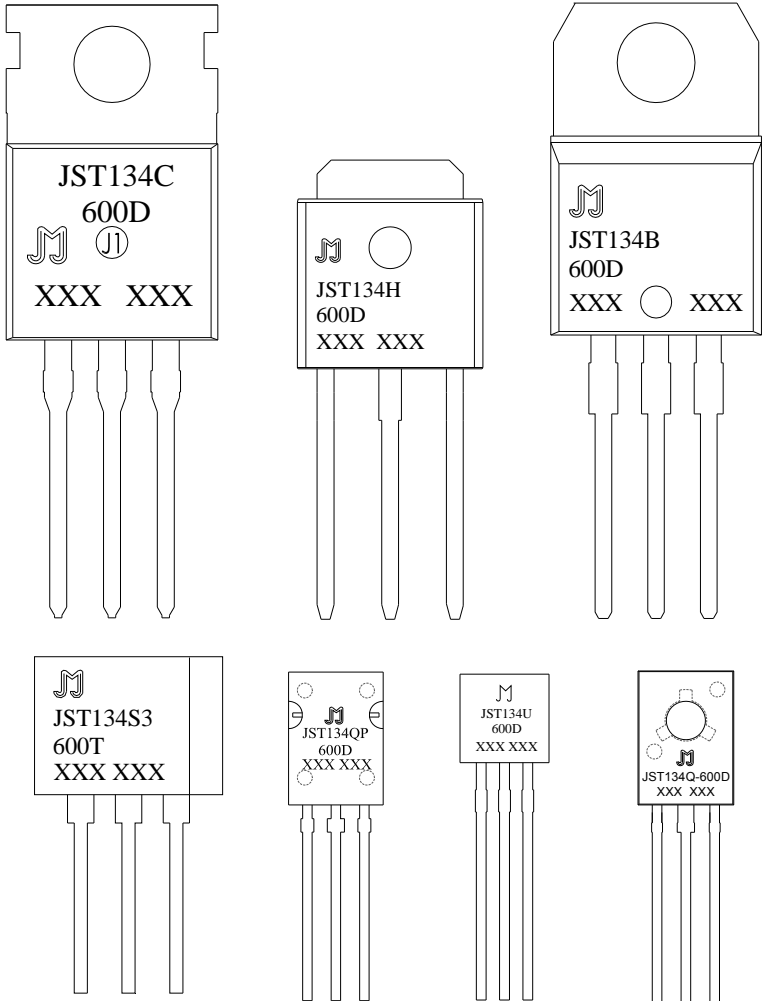


FIG.1: Maximum power dissipation versus RMS on-state current

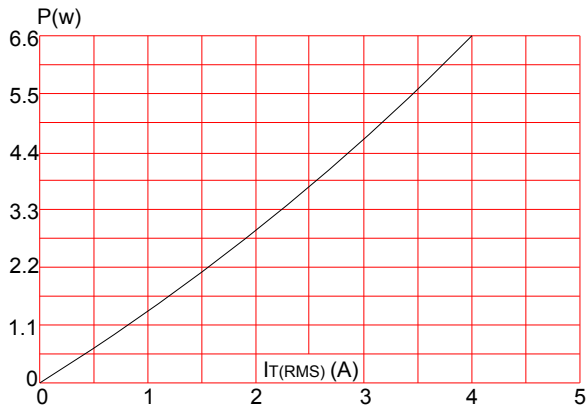


FIG.3: Surge peak on-state current versus number of cycles

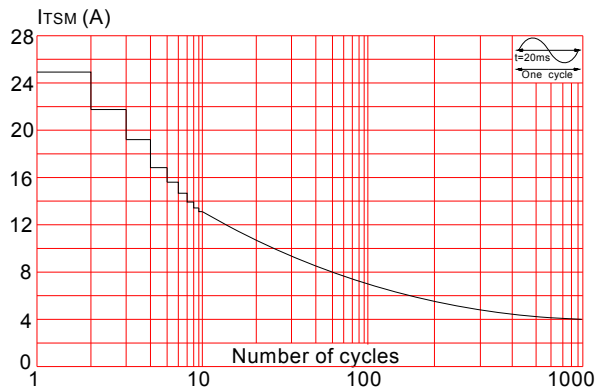


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$ and corresponding value of I^2t (I - II -III: $dI/dt < 50\text{A}/\mu\text{s}$; IV: $dI/dt < 10\text{A}/\mu\text{s}$)

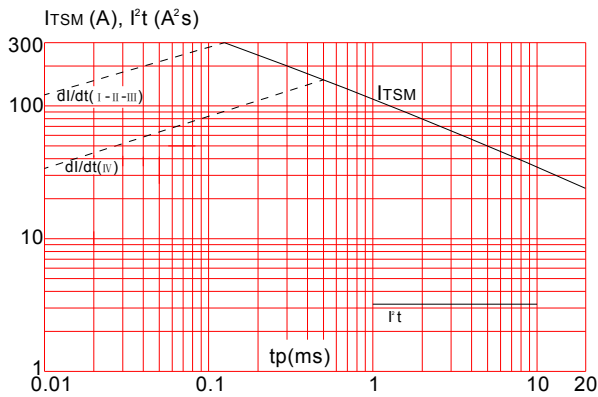


FIG.2: RMS on-state current versus case temperature

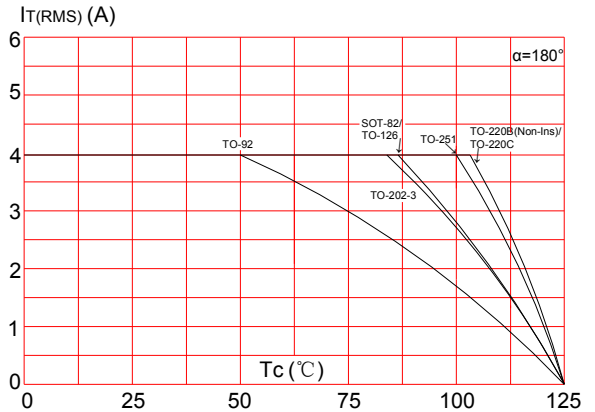


FIG.4: On-state characteristics (maximum values)

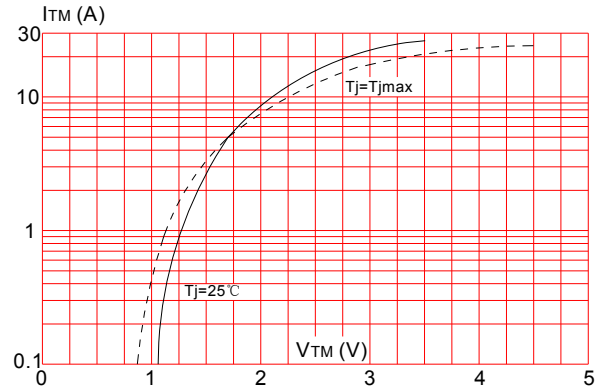


FIG.6: Relative variations of gate trigger current versus junction temperature

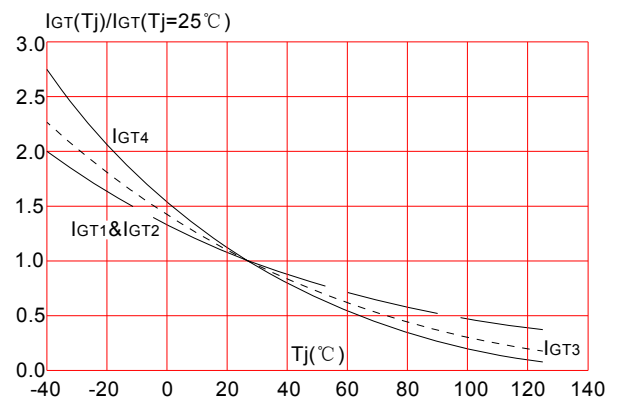


FIG.7: Relative variations of holding current versus junction temperature

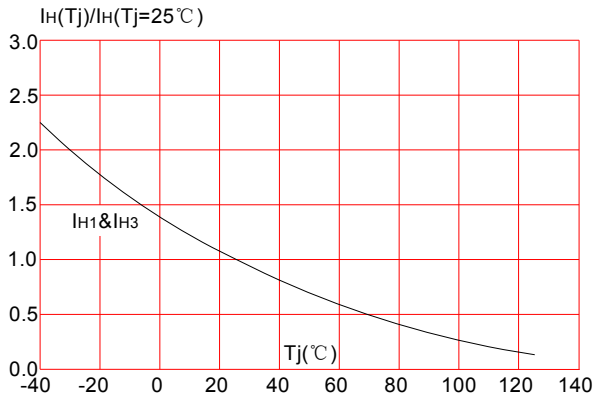
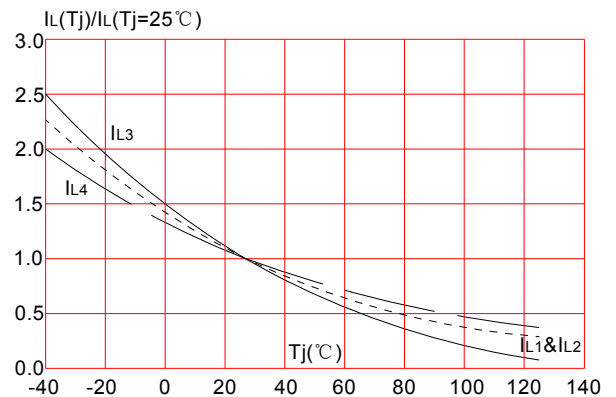


FIG.8: Relative variations of latching current versus junction temperature




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