



Jiangsu Weida Semiconductor Co., Ltd.

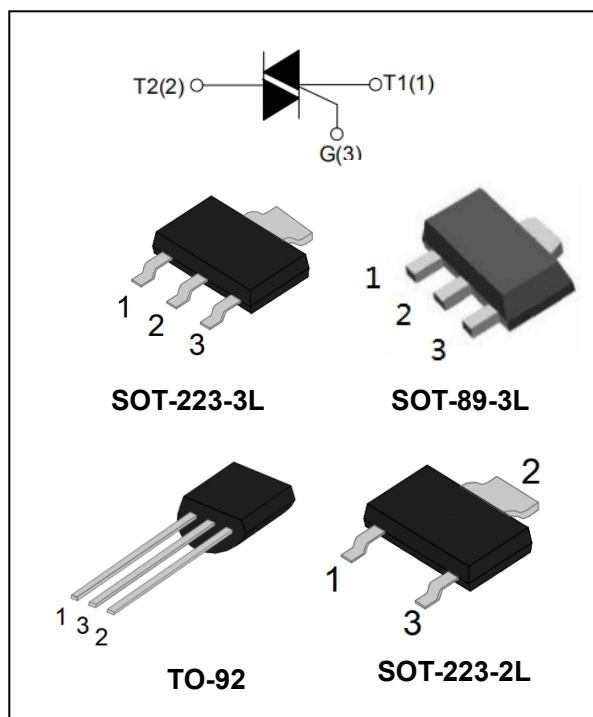
BT131 Series 1A Triacs

DESCRIPTION:

With low holding and latching current, BT131 Series triacs are especially recommended for use on middle and small resistance type power load.

MAIN FEATURES:

symbol	value	unit
$I_{T(RMS)}$	1	A
V_{DRM}/V_{RRM}	600/800	V
V_{TM}	≤ 1.5	V



ABSOLUTE MAXIMUM RATINGS:

Parameter		Symbol	Value	Unit
Storage junction temperature range		T_{stg}	-40~150	$^{\circ}C$
Operating junction temperature range		T_j	-40~125	$^{\circ}C$
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
RMS on-state current		$I_{T(RMS)}$	1	A
Non repetitive surge peak on-state current (full cycle, $F=50Hz$)		I_{TSM}	16	A
I^2t value for fusing ($t_p=10ms$)		I^2t	1.28	A^2s
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$)	di/dt	I - II - III	50	A/ μs
		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



BT131 Series 1A Triacs

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

Parameter	Test Condition	Quadrant	Value		Unit	
			T	D		
I_{GT}	$V_D=12\text{V}, R_L=33\Omega$	I - II - III	MAX	3	5	mA
		IV		5	10	
V_{GT}		I - II - III - IV		1.3		V
V_{GD}	$V_D=V_{DRM}$	I - II - III - IV	MIN	0.2		V
I_H	$I_T=100\text{mA}$		MAX	5	7	mA
I_L	$I_G=1.2I_{GT}$	I - III - IV	MAX	5	5	mA
		II		10	20	
dV/dt	$V_D=0.66 \times V_{DRM}$ $T_j=125^{\circ}\text{C}$ Gate open		MIN	20	50	V/ μs

STATIC CHARACTERISTICS

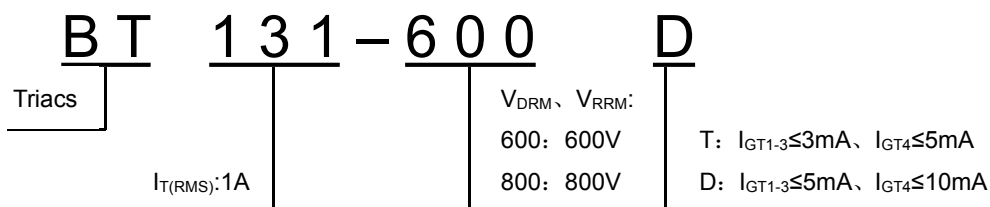
Symbol	Test Condition			Value	Unit
V_{TM}	$I_{TM}=1.4\text{A}$ $t_p=380\mu\text{s}$	$T_j=25^{\circ}\text{C}$	MAX	1.5	V
I_{DRM} I_{RRM}	$V_{DRM}=V_{RRM}$	$T_j=25^{\circ}\text{C}$	MAX	5	μA
		$T_j=125^{\circ}\text{C}$		0.5	mA

THERMAL RESISTANCES

Symbol	Test Condition		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-92	60	$^{\circ}\text{C/W}$
		SOT-89/SOT-223 SOT-223-2L	31	$^{\circ}\text{C/W}$



ORDERING INFORMATION



Cycle Code

W D X Y

WD:WeiDa

X: year

ID	A	B	C	D	E	F	G	...
year	2018	2019	2020	2021	2022	2023	2024	...

Y: Code

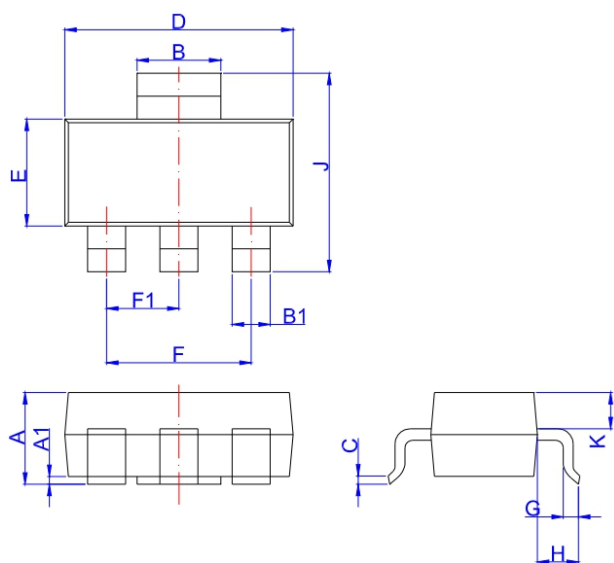
code	week		code	week		code	week		code	week
A	1		N	14		a	27		n	40
B	2		O	15		b	28		o	41
C	3		P	16		c	29		p	42
D	4		Q	17		d	30		q	43
E	5		R	18		e	31		r	44
F	6		S	19		f	32		s	45
G	7		T	20		g	33		t	46
H	8		U	21		h	34		u	47
I	9		V	22		i	35		v	48
J	10		W	23		j	36		w	49
K	11		X	24		k	37		x	50
L	12		Y	25		l	38		y	51
M	13		Z	26		m	39		z	52、53



Jiangsu Weida Semiconductor Co., Ltd.

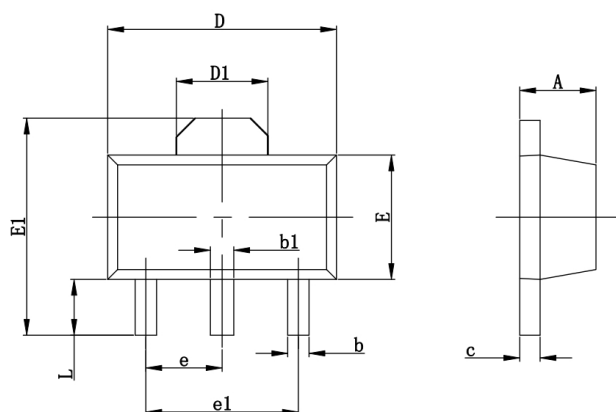
BT131 Series 1A Triacs

PACKAGE MECHANICAL DATA



SOT-223

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.5	1.6	1.8	0.059	0.063	0.071
A1	0.01	0.06	0.10	0.001	0.002	0.004
B	2.9	3.0	3.1	0.114	0.118	0.122
B1	0.6	0.7	0.8	0.024	0.028	0.031
C	0.22	0.25	0.32	0.009	0.010	0.013
D	6.3	6.5	6.7	0.248	0.256	0.264
E	3.3	3.5	3.7	0.130	0.138	0.146
F		4.6	6.8	0.252	0.181	
F1		2.3			0.091	
G	0.7	0.9	1.1	0.028	0.035	0.043
H	1.5	1.75	2.0	0.059	0.069	0.079
J	6.7	7.0	7.3	0.264	0.276	0.287
K	0.8	0.9	1.0	0.031	0.035	0.039



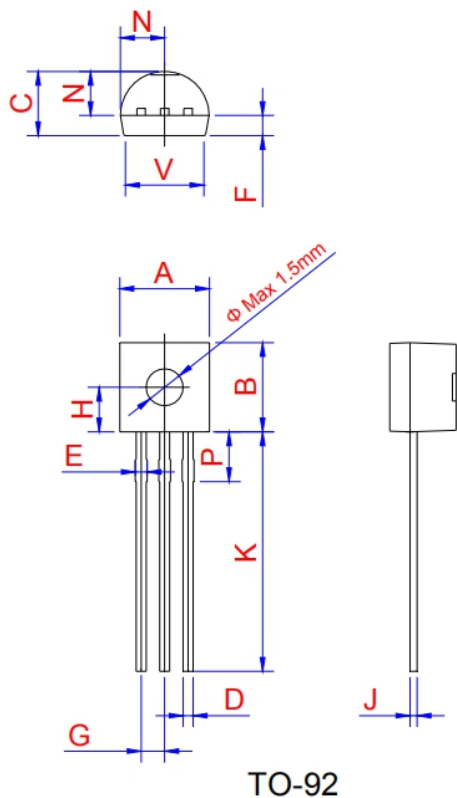
SOT-89-3L

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.4		1.6	0.055		0.063
b	0.35		0.52	0.013		0.197
b1	0.4		0.58	0.016		0.023
c	0.35		0.44	0.014		0.017
D	4.4		4.6	0.173		0.181
D1		1.55			0.061	
E	2.35		2.55	0.091		0.102
E1	3.94		4.25	0.155		0.167
e		1.500			0.060	
e1		3.000			0.118	
L	0.9		1.1	0.035		0.047

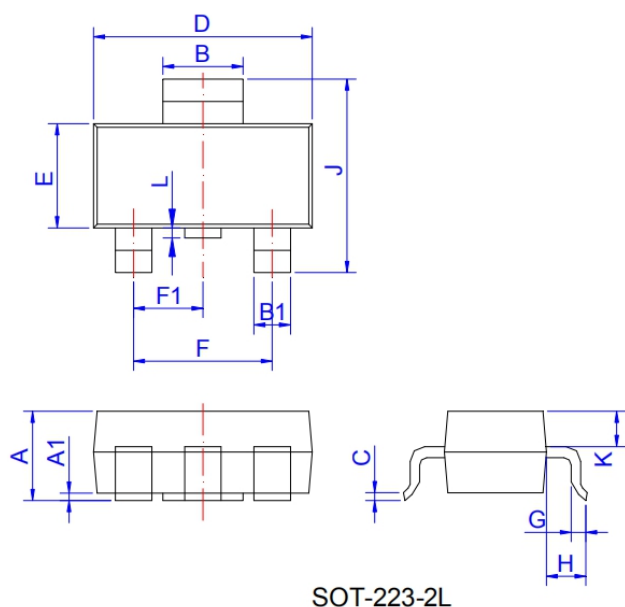


Jiangsu Weida Semiconductor Co., Ltd.

BT131 Series 1A Triacs



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.45	4.6	5.2	0.175	0.181	0.205
B	4.32	4.6	5.33	0.17	0.181	0.21
C	3.18	3.55	4.19	0.125	0.14	0.165
D	0.407		0.533	0.016		0.021
E	0.6		0.8	0.024	0	0.031
F	-	1.1	-	-	0.043	-
G	-	1.27	-	-	0.05	-
H	-	2.3	-	-	0.091	-
J	0.36	0.38	0.5	0.014	0.015	0.02
K	12.7		15	0.5		0.591
N	2.04	2.3	2.66	0.08	0.091	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	1.5	1.6	1.8	0.059	0.063	0.071
A1	0.01	0.06	0.10	0.001	0.002	0.004
B	2.9	3.0	3.1	0.114	0.118	0.122
B1	0.6	0.7	0.8	0.024	0.028	0.031
C	0.22	0.26	0.32	0.009	0.010	0.013
D	6.3	6.5	6.7	0.248	0.256	0.264
E	3.3	3.5	3.7	0.130	0.138	0.146
F		4.6			0.181	
F1		2.3			0.091	
G	0.7	0.9	1.1	0.028	0.035	0.043
H	1.5	1.75	2	0.059	0.069	0.079
J	6.7	7.0	7.3	0.264	0.276	0.287
K		0.9			0.035	
L	0	0.1	0.2	0	0.004	0.008



Jiangsu Weida Semiconductor Co., Ltd.

BT131 Series 1A Triacs

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

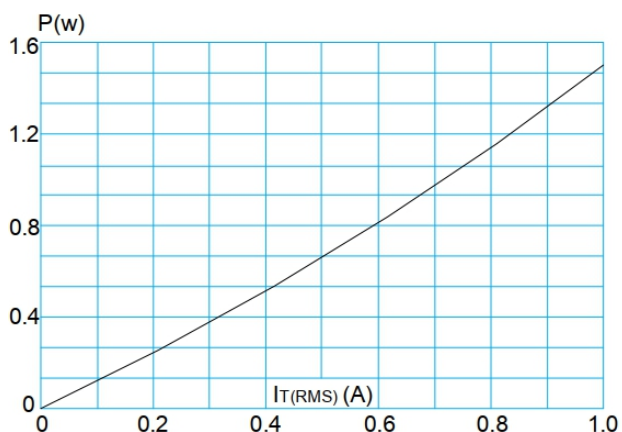


FIG.2: RMS on-state current versus case temperature

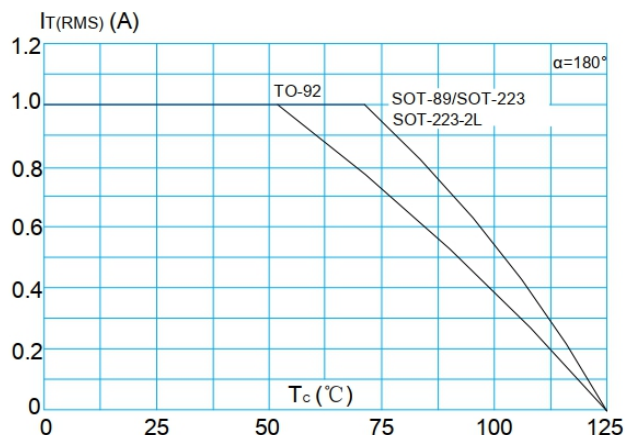


FIG.3: Surge peak on-state current versus number of cycles

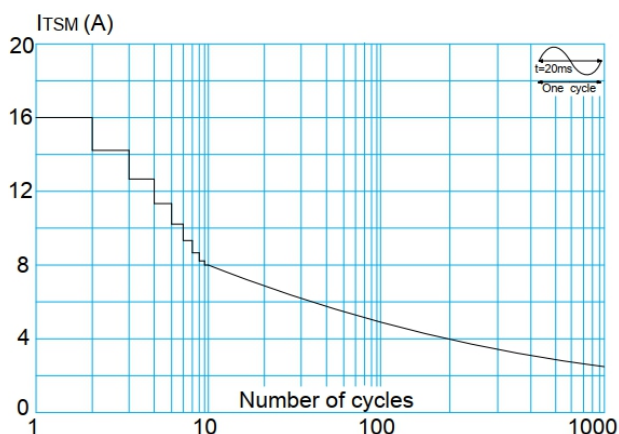


FIG.4: On-state characteristics (maximum values)

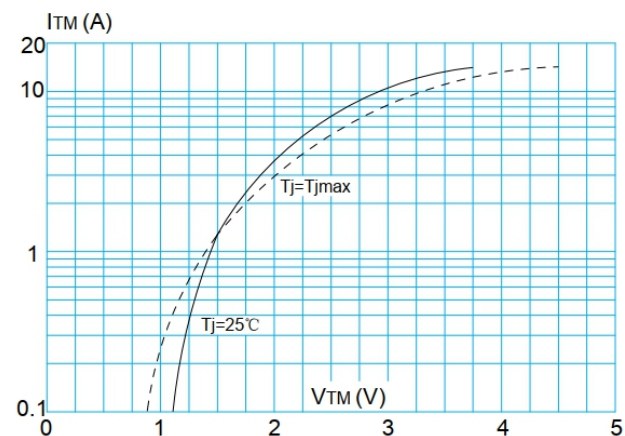


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20ms$, and corresponding value of $I^2 t$ ($di/dt < 50A/\mu s$)

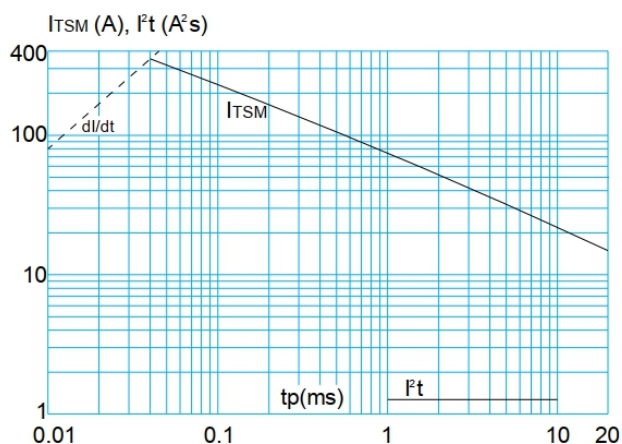
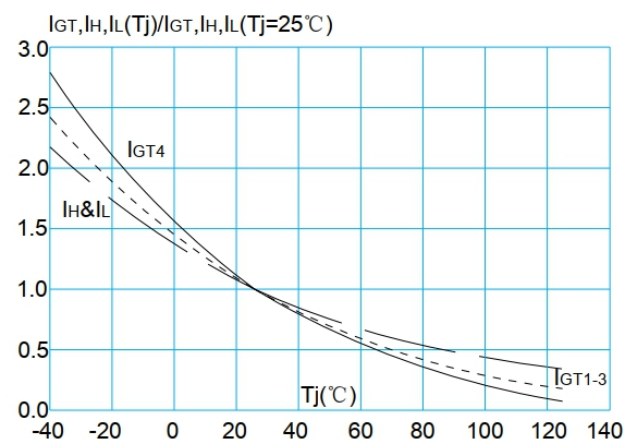


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature





Jiangsu Weida Semiconductor Co., Ltd.

BT131 Series 1A Triacs

Information furnished in this document is believed to be accurate and reliable. However, Jiangsu Weida Semiconductor Co., Ltd assumes no responsibility for the consequences of use without consideration for such information nor use beyond it.

Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu Weida Semiconductor Co., Ltd complies with the agreement.

Products and information provided in this document have no infringement of patents. Jiangsu Weida Semiconductor Co., Ltd assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [SCRs](#) category:

Click to view products by [Weida Semiconductor](#) manufacturer:

Other Similar products are found below :

[NTE5428](#) [T1500N16TOF VT](#) [T830N16TOF](#) [T880N14TOF](#) [T880N16TOF](#) [TT162N16KOF-A](#) [TT330N16AOF](#) [VS-22RIA20](#) [VS-2N685](#) [VS-80RIA120PBF](#) [BT152-400R/B](#) [T1190N16TOF VT](#) [T830N14TOF](#) [TT250N12KOF-K](#) [NTE5427](#) [VS-180RKI40](#) [T2160N28TOF VT](#) [VS-22RIA100](#) [VS-16RIA40](#) [GA301A](#) [2N1776A](#) [NTE5481](#) [NTE5519](#) [NTE5553](#) [NTE5570](#) [NTE5576](#) [NTE5584](#) [NTE5589](#) [NTE5592](#) [NTE6418](#) [NTE6419](#) [T3160N16TOF VT](#) [VS-22RIA80](#) [T1500N18TOF VT](#) [T3160N18TOF VT](#) [TN1610H-6I](#) [K1010MA650](#) [BT151-500RT,127](#) [BTW69-800RG](#) [T3035H-800B](#) [T1635H-800B](#) [TS420-600T-JSM](#) [BTB12-800CW](#) [BT136](#) [BTA41-800B](#) [BTW69-1200B](#) [C106M](#) [BTA12-800CW](#) [BTB08-800CW](#) [BTB16-600B](#)