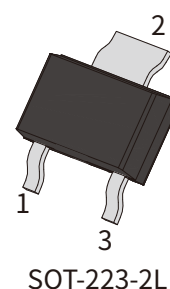


FEATURES

- | Direct interfacing to logic level ICs
- | Direct interfacing to low power gate drive circuits
- | High blocking voltage capability
- | Planar passivated for voltage ruggedness and reliability
- | Triggering in all four quadrant
- | UL-94, V0 flammability package resin compliance



Schematic Symbol

APPLICATIONS

- | General purpose motor control circuits
- | Phase control operations in light dimmers and motor speed controllers
- | Home appliances

ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Repetitive peak off-state voltage		V_{DRM}	600/800	V
RMS on-state current		$I_{\text{T(RMS)}}$	4	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	t=20ms Tj=25°C	I_{TSM}	25	A
	t=16.7ms Tj=25°C		27	
I ² t value for fusing (t=10ms)		I ² t	3.1	A ² S
Critical rate of rise of on-state current $I_{\text{G}}=2I_{\text{GT}}$ tr≤100ns F=120Hz	I - II - III	di/dt	50	A/μs
	IV		10	
Peak gate current Tj=125°C tp=20μs		I_{GM}	2	A
Average gate power dissipation Tj=125°C		$P_{\text{G(AV)}}$	0.5	W
Peak gate power Tj=125°C		P_{GM}	5	W
Operating junction temperature range		T_{j}	-40~+125	°C
Storage junction temperature range		T_{STG}	-40~+150	

ELECTRICAL CHARACTERISTICS (T_j=25°C)

Symbol	Test Condition		Quadrant	Value	Unit
I _{GT}	V _D =12V, R _L =100Ω	T2(+),G(+)	I	≤10	mA
		T2(+),G(-)	II	≤10	
		T2(-),G(-)	III	≤10	
		T2(-),G(+)	IV	≤25	
V _{GT}	V _D =12V, R _L =100Ω	T2(+),G(+)	I	≤2	V
		T2(+),G(-)	II	≤2	
		T2(-),G(-)	III	≤2	
		T2(-),G(+)	IV	≤2.5	
V _{GD}	V _D =V _{DRM} , T _j =125°C		I - II - III - IV	≥0.2	V
I _H	V _D =12V, I _{GT} =100mA			≤30	mA
dV/dt	V _{DM} =67%V _{DRM} , T _j =125°C Gate open			50	V/μs
V _{TM}	I _T =5A, tp=380μs		T _j =25°C	≤1.65	V
I _{DRM}	V _{DRM} =V _{RRM}		T _j =25°C	≤5	μA
I _{RRM}			T _j =125°C	≤1	mA

PARAMETER CHARACTERISTIC CURVE

FIG.1:

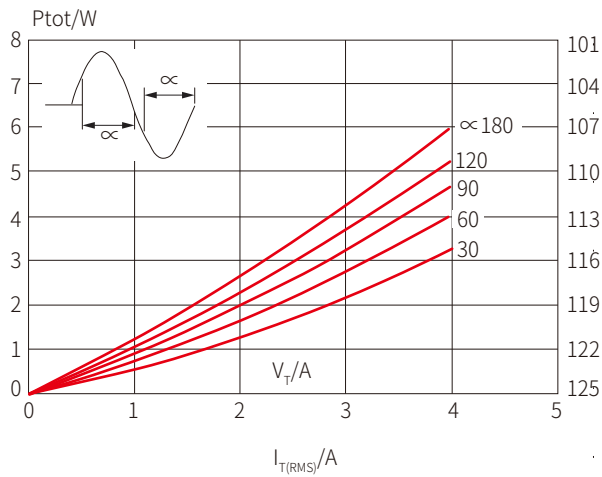


FIG.2:

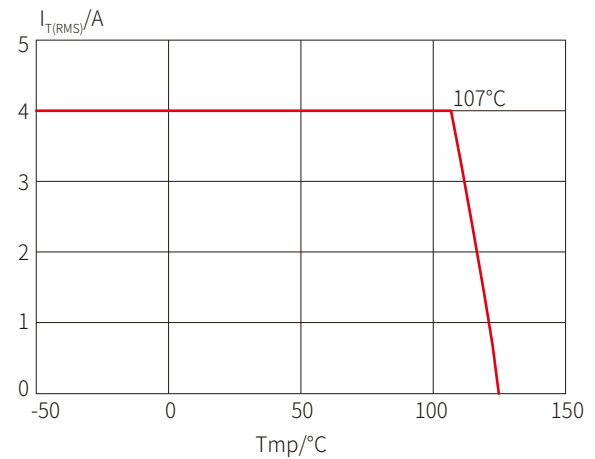


FIG.3:

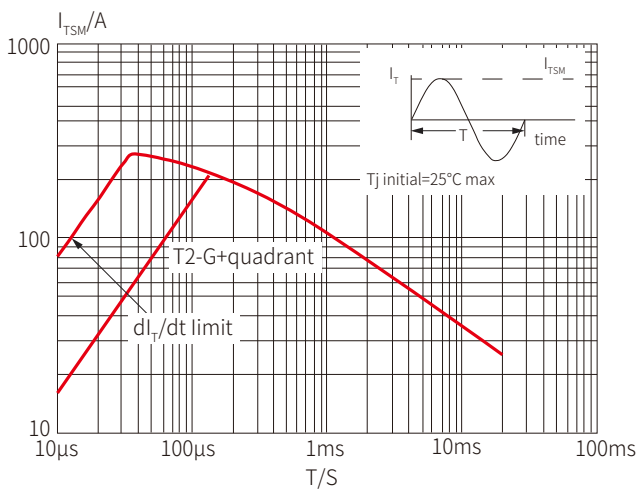


FIG.4:

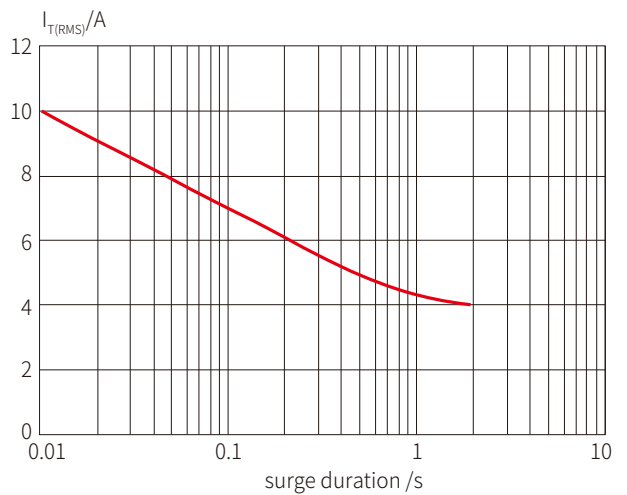


FIG.5:

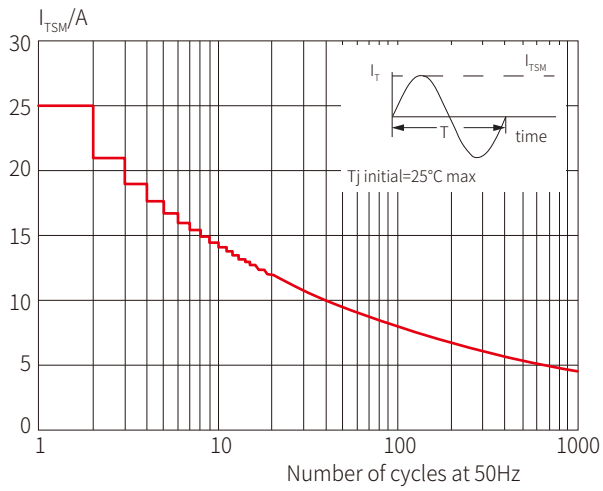


FIG.6:

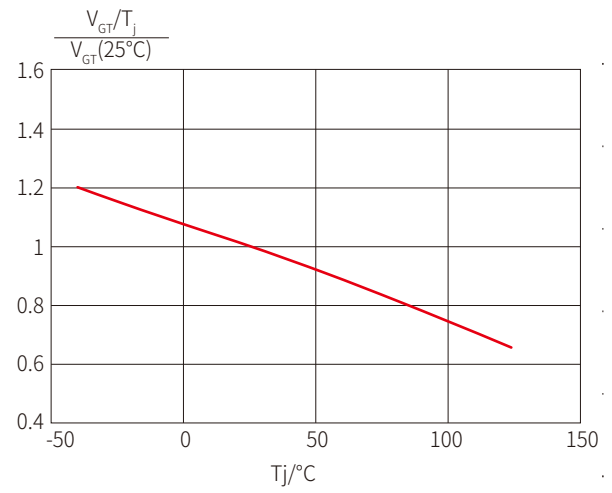


FIG.7:

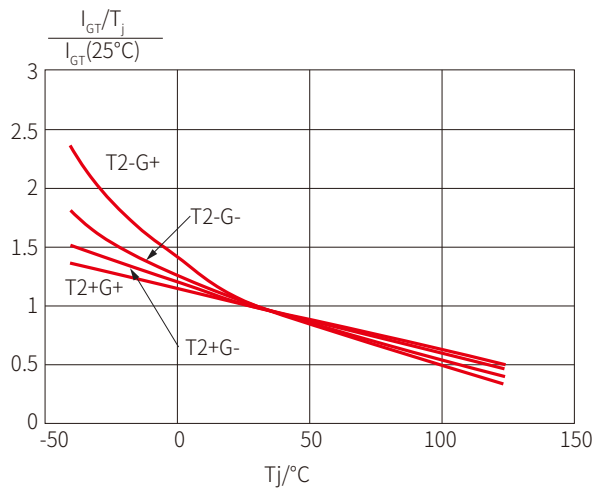


FIG.8:

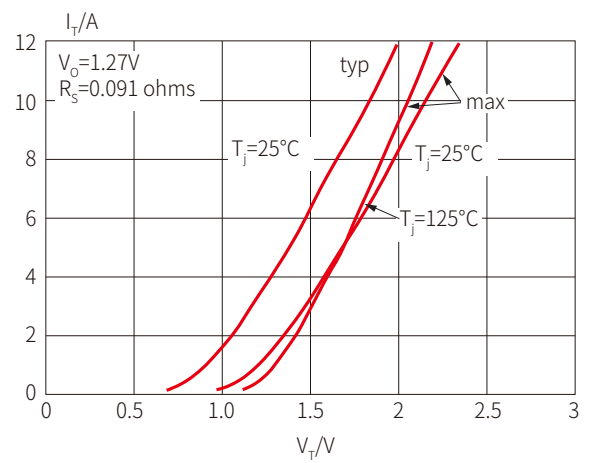


FIG.9:

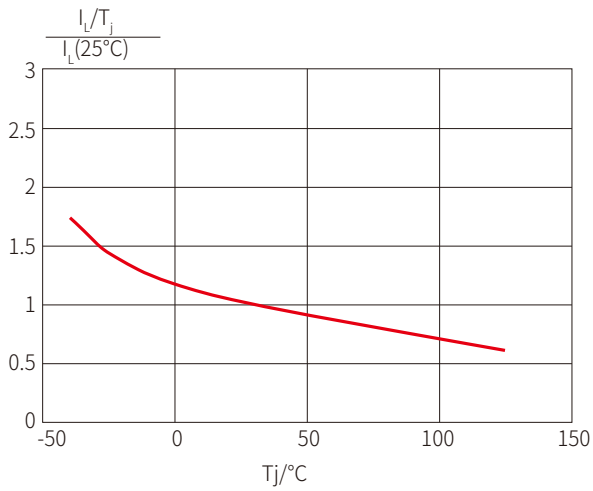


FIG.10:

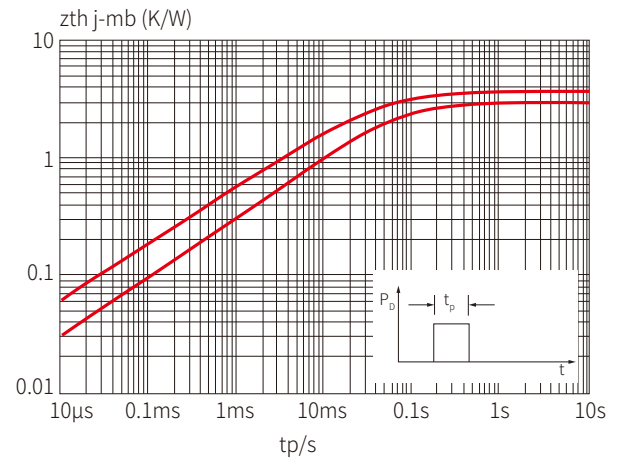


FIG.11:

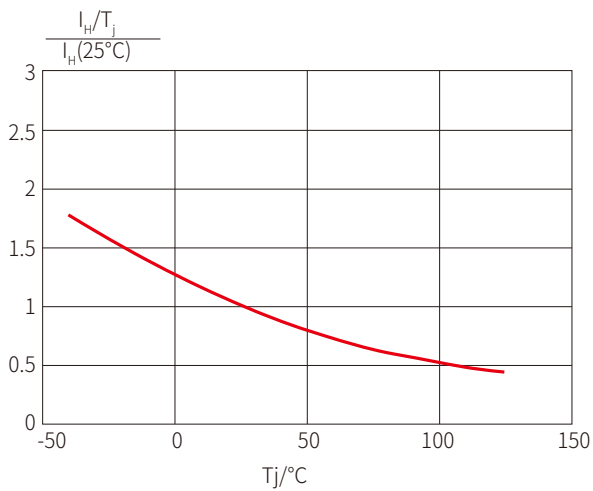
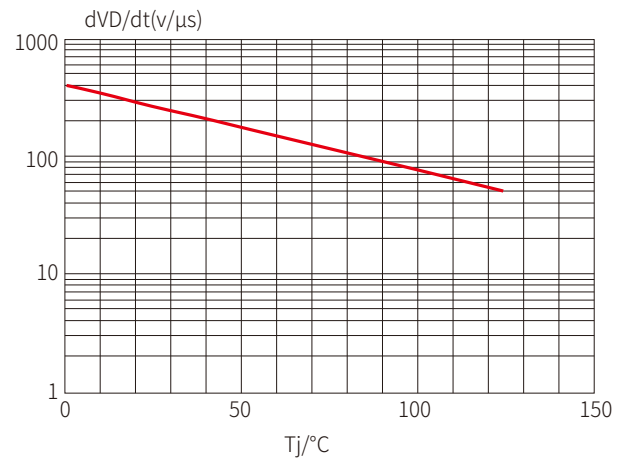
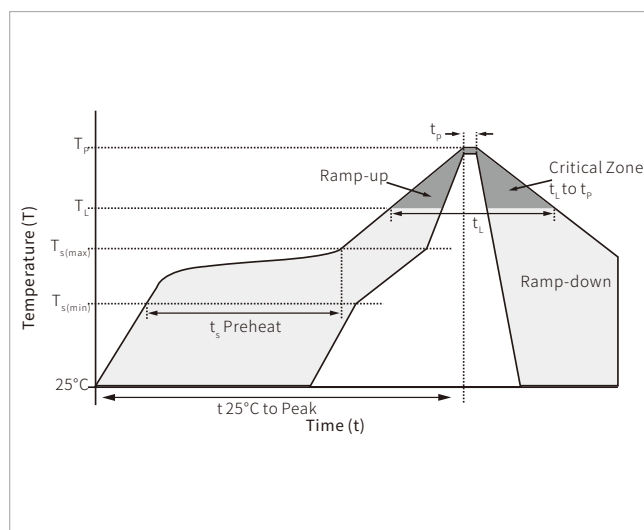


FIG.12:

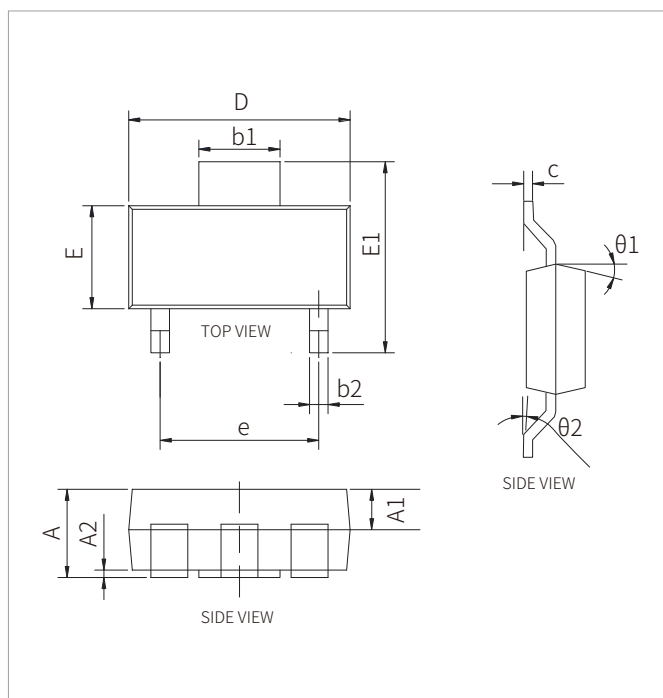


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C



SOT-223-2L PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.55	1.65	0.061	0.065
A1	0.77	0.83	0.030	0.033
A2	0.00	0.10	0.000	0.004
D	6.30	6.40	0.248	0.252
E	3.45	3.55	0.136	0.140
E1	6.80	7.07	0.268	0.278
b1	2.95	3.05	0.116	0.120
b2	0.66	0.76	0.026	0.030
e	4.60BSC		181BSC	
c	0.20	0.30	0.008	0.012
θ1	13° Typ		13° Typ	
θ2	0°	7°	0°	7°

ORDERING INFORMATION

Part Number	Component Package	Marking	QTY/Reel	Reel Size
BT134	SOT-223-2L	BT134	2500PCS	13"

Headquarters

No.3387 Shendu Road
Pujiang I&E Park
Minhang Shanghai China
201000

Hotline

400-021-5756

Web

<https://www.semiware.com>

Sales Center

Tel: 86-21-3463-7458
Email: sales18@semiware.com

Customer Service

Tel: 86-21-5484-1001
Email: sales17@semiware.com

Technical Support

Tel: 86-21-3463-7654
Email: fae01@semiware.com

Complaint & Suggestions

Tel: 86-21-3463-7172
Ext: 8868
Email: cs03@semiware.com

By QR Code

Website



Wechat

To find your local partner within Semiware's global website: www.semiware.com

© 2022 Semiware Semiconductor Inc.

The content of this document has been carefully checked and understood. However, neither Semiware nor its subsidiaries assume any liability whatsoever for any errors or inaccuracies of this document and the consequences thereof. Published specifications are subject to change without notice. Product suitability for any area of application must ultimately be determined by the customer. In all cases, products must never be operated outside their published specifications. Semiware does not guarantee the availability of all published products. This disclaimer shall be governed by substantive Chinese law and resulting disputes shall be settled by the courts at the place of business of Semiware. Latest publications and a complete disclaimer can be downloaded from the Semiware website. All trademarks recognized.