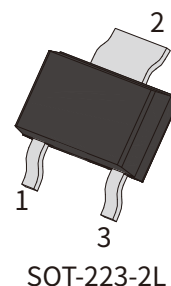


FEATURES

- 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	V
RMS on-state current		$I_{T(RMS)}$	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 $I_G=2I_{GT}$ 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		$P_{G(AV)}$	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

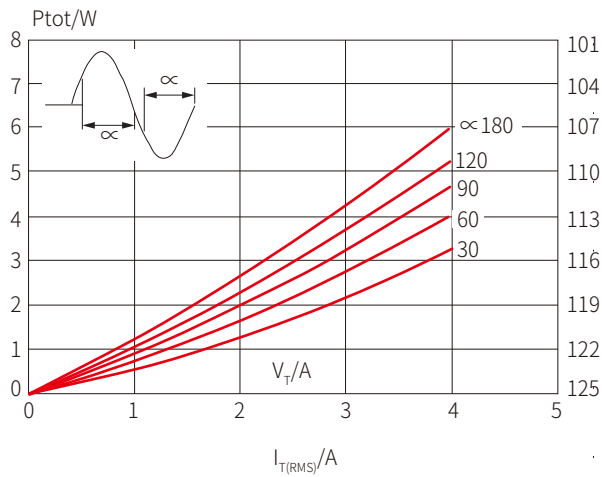
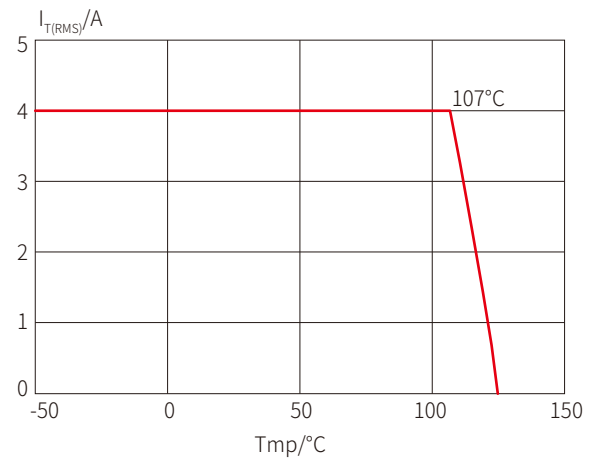
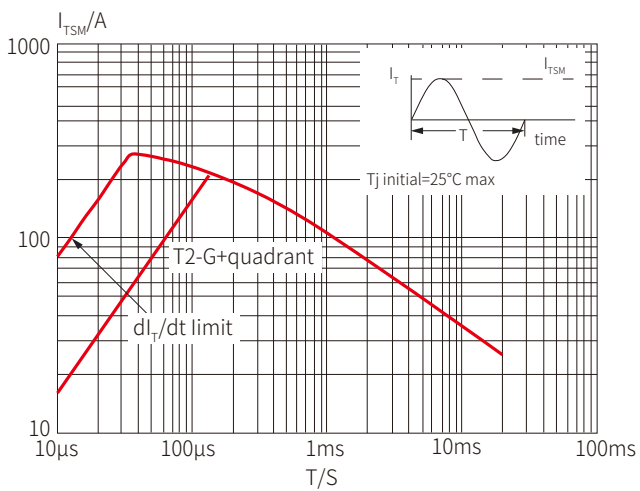
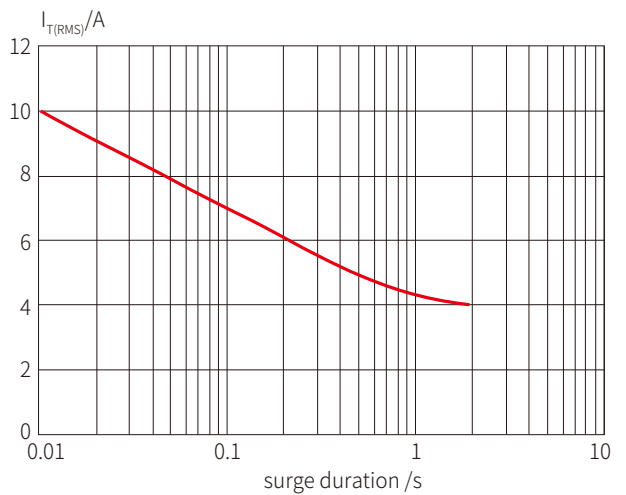
FIG.1:

FIG.2:

FIG.3:

FIG.4:


FIG.5:

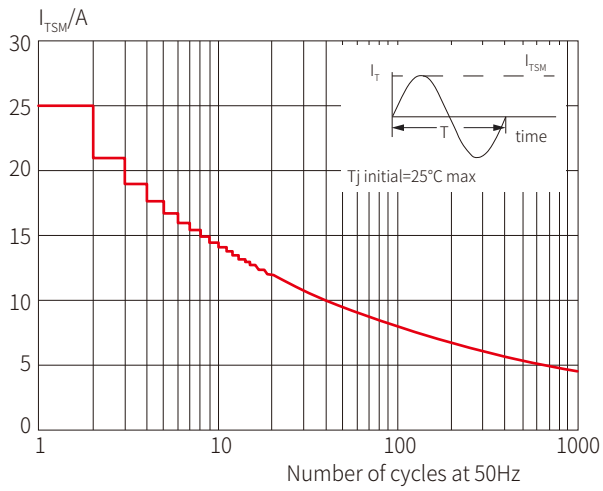


FIG.6:

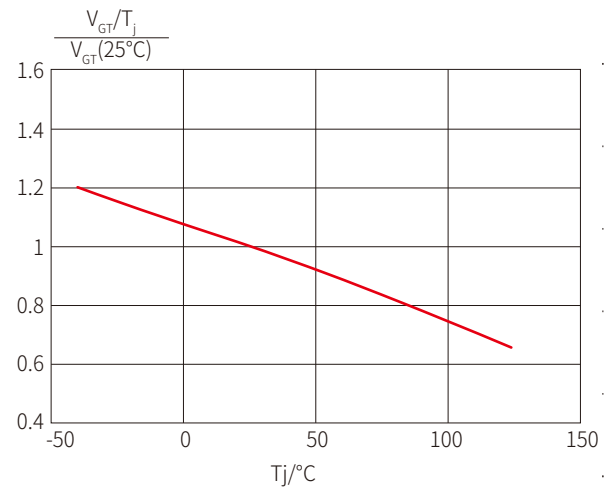


FIG.7:

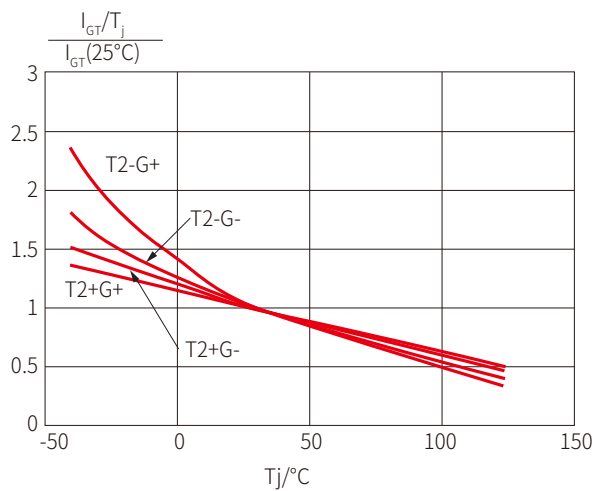


FIG.8:

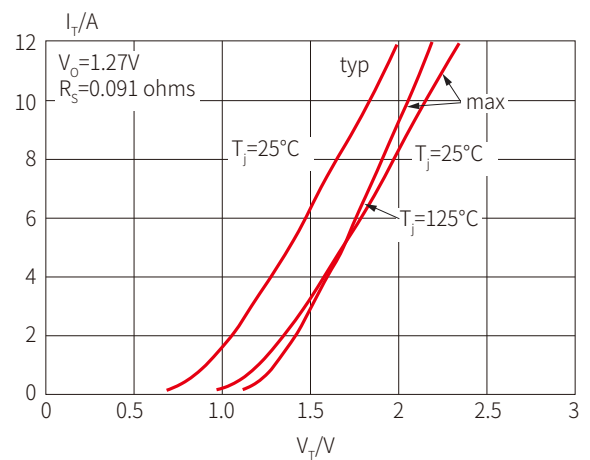


FIG.9:

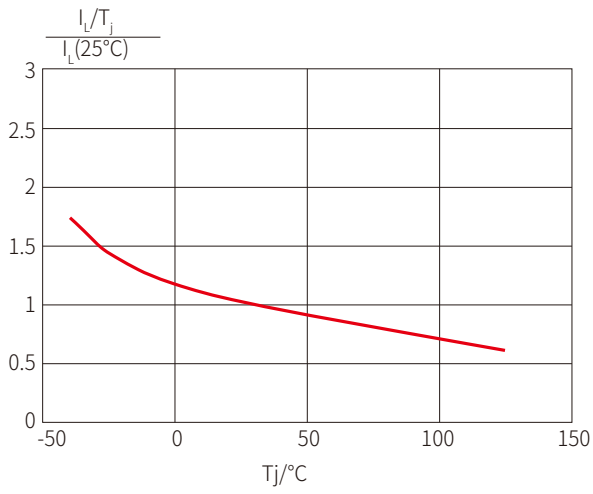


FIG.10:

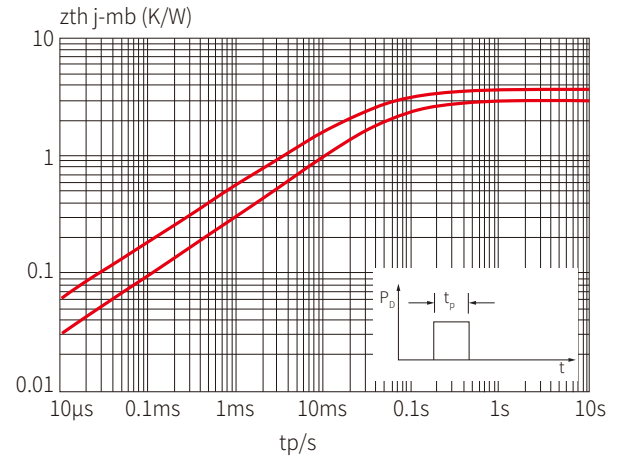


FIG.11:

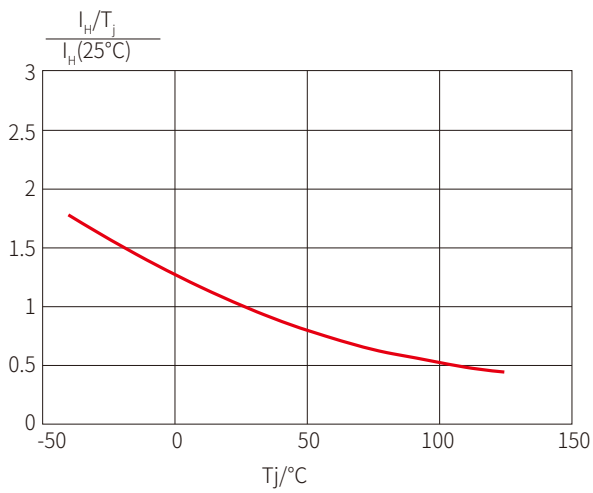
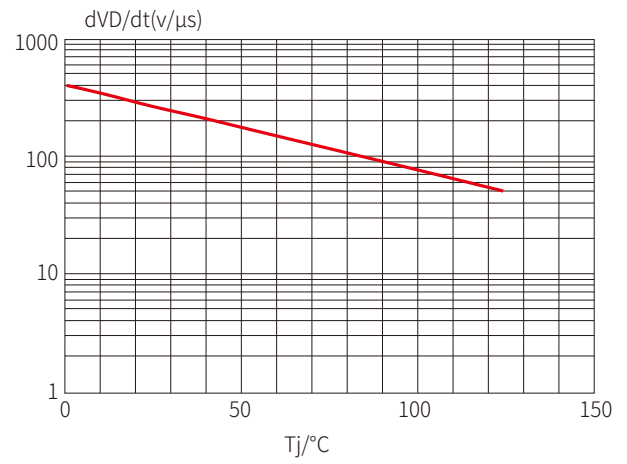
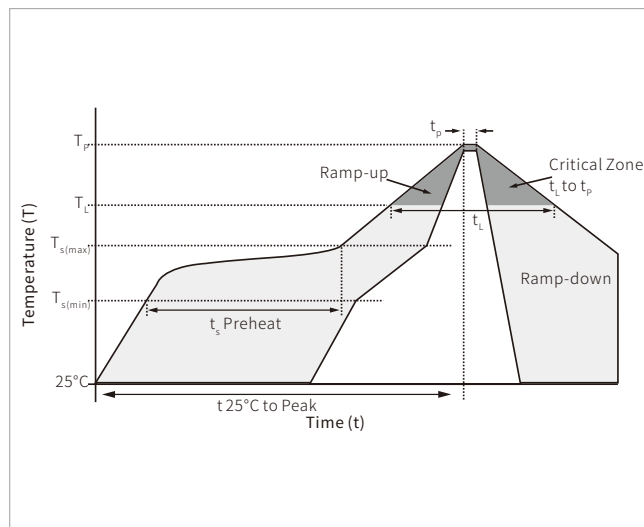


FIG.12:

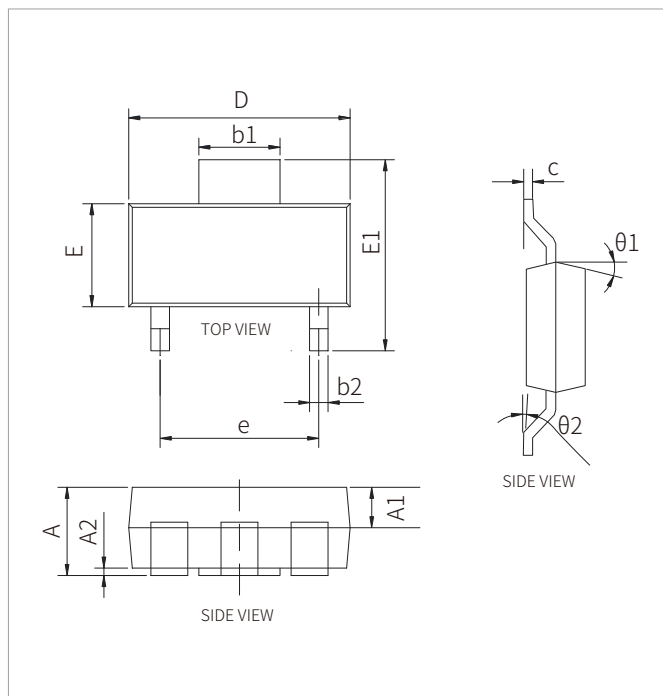


SOLDERING PARAMETERS

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
BT134-600	SOT-223-2L	BT134	2500PCS	13"

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By QR Code

Website



Wechat

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

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