

/ Descriptions

N- CHANNEL MOSFET in a SOT-23 Plastic Package.

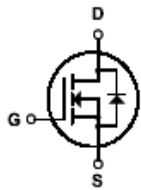
/ Features

Super high dense cell design for low $R_{DS(ON)}$, SOT-23 package.

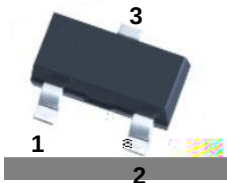
/ Applications

Battery management, High speed switch, low power DC to DC converter.

/ Equivalent Circuit



/ Pinning



PIN1 G PIN 2 S PIN 3 D

/ Marking

Marking	A2H
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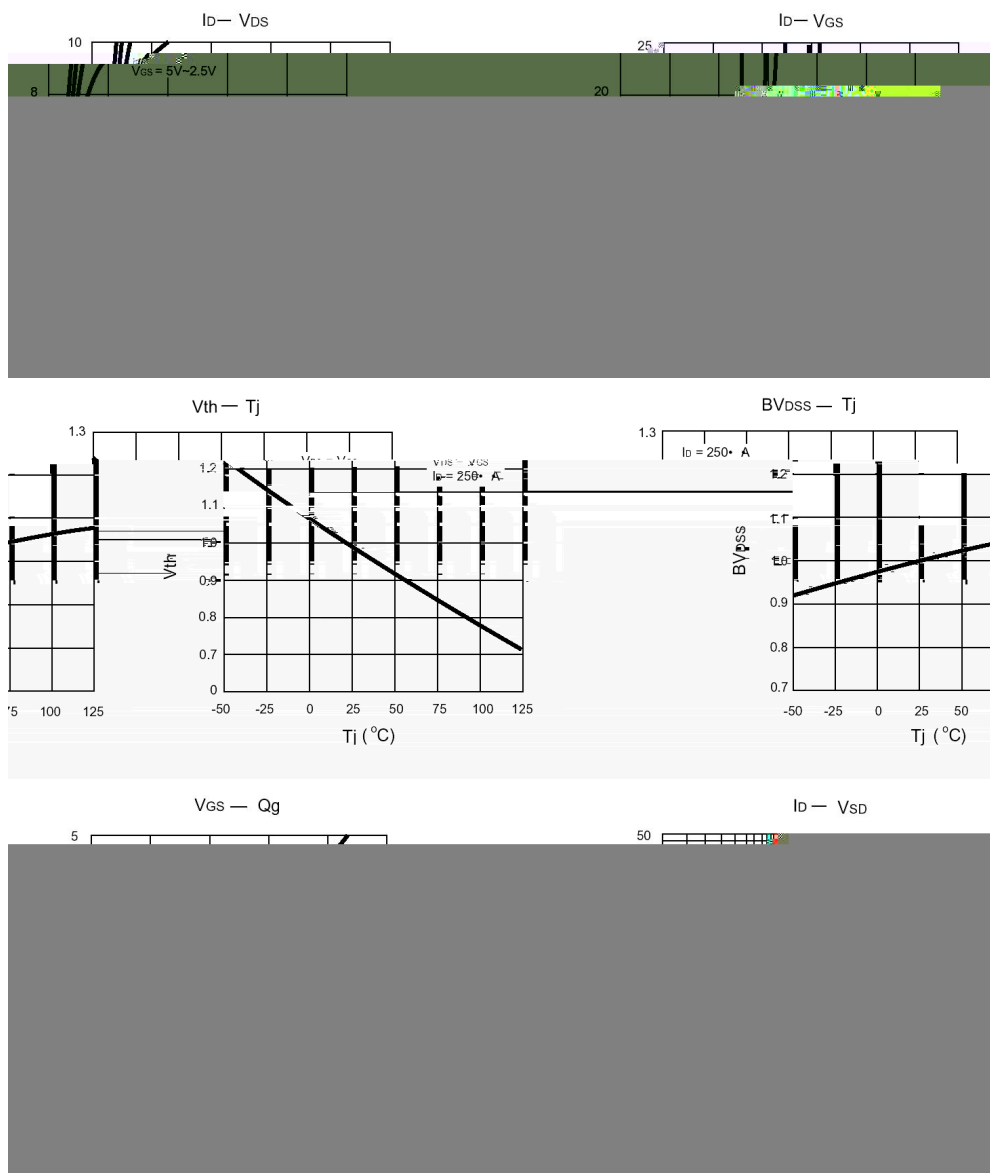


/ Absolute B

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	20	V
Gate-Source Voltage	V_{GSS}	± 10	V
Drain Current – Continuous	I_D	3.0	A
Pulsed Drain Current	I_{DM}	10	A
Continuous Source Current	I_S	0.95	A
Power Dissipation	P_D	0.9	W
Storage Temperature Range	T_{stg}	-55~150	$^{\circ}\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0$ $I_D=10\mu\text{A}$	20	21		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{GS}=0$ $V_{DS}=20\text{V}$			1.0	μA
Gate–Body Leakage.	I_{GSS}	$V_{GS}=\pm 10\text{V}$ $V_{DS}=0\text{V}$			± 100	nA
Static Drain–Source On–Resistance	$R_{DS(on)1}$	$V_{GS}=4.5\text{V}$ $I_D=3.6\text{A}$		46	55	$\text{m}\Omega$
	$R_{DS(on)2}$	$V_{GS}=2.5\text{V}$ $I_D=3.1\text{A}$		59	75	$\text{m}\Omega$
Forward Transconductance	g_{FS}	$V_{DS}=5\text{V}$ $I_D=3.6\text{A}$		6		S
Drain–Source Diode Forward Voltage	V_{SD}	$V_{GS}=0\text{V}$ $I_D=1.25\text{A}$			1.2	V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=50\mu\text{A}$	0.50		1.0	V
Turn–On Delay Time	$t_{d(on)}$	$V_{DD}=10\text{V}$ $I_D=3.6\text{A}$ $V_{GEN}=4.5\text{V}$ $R_{L}=2.8\Omega$ $R_{GEN}=6\Omega$		7		ns
Turn–On Rise Time	t_r			55		
Turn–Off Delay Time	$t_{d(off)}$			15		
Turn–Off Fall Time	t_f			10		

/ Electrical Characteristic Curve



/ Package Dimensions

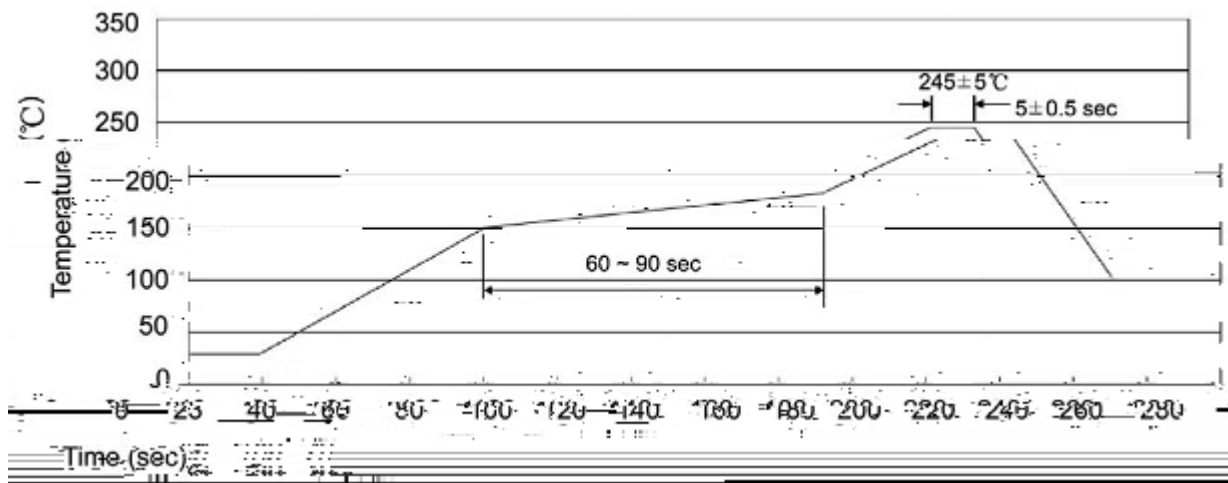


BRCS2302AMA

Rev.B Mar.-2020



() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-----|-----|----|----------|---|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 245 | 5 | 5 | 0.5sec; | 2.Peak Temp.:245 5 , Duration:5 0.5sec. |
| 3 | | | 2 | 10 /sec. | 3. Cooling Speed |