

B	2020.03.10	1 2	" "	A



**/ Descriptions**

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

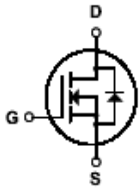
**/ Features**

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

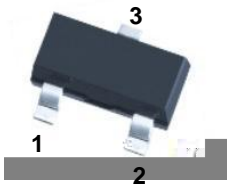
**/ Applications**

DC-DC  
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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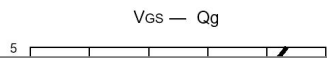
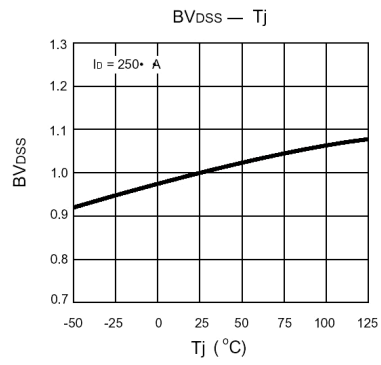
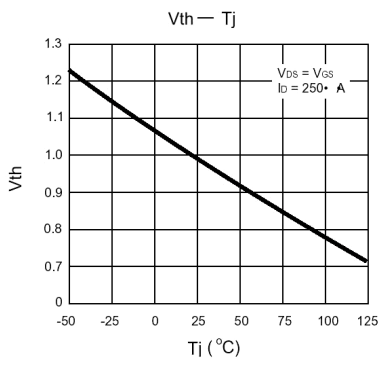
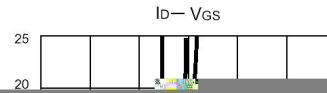
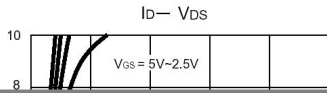
**/ Absolute Maximum Ratings(Ta=25 )**

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	°C

**/ Electrical Characteristics(Ta=25 )**

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

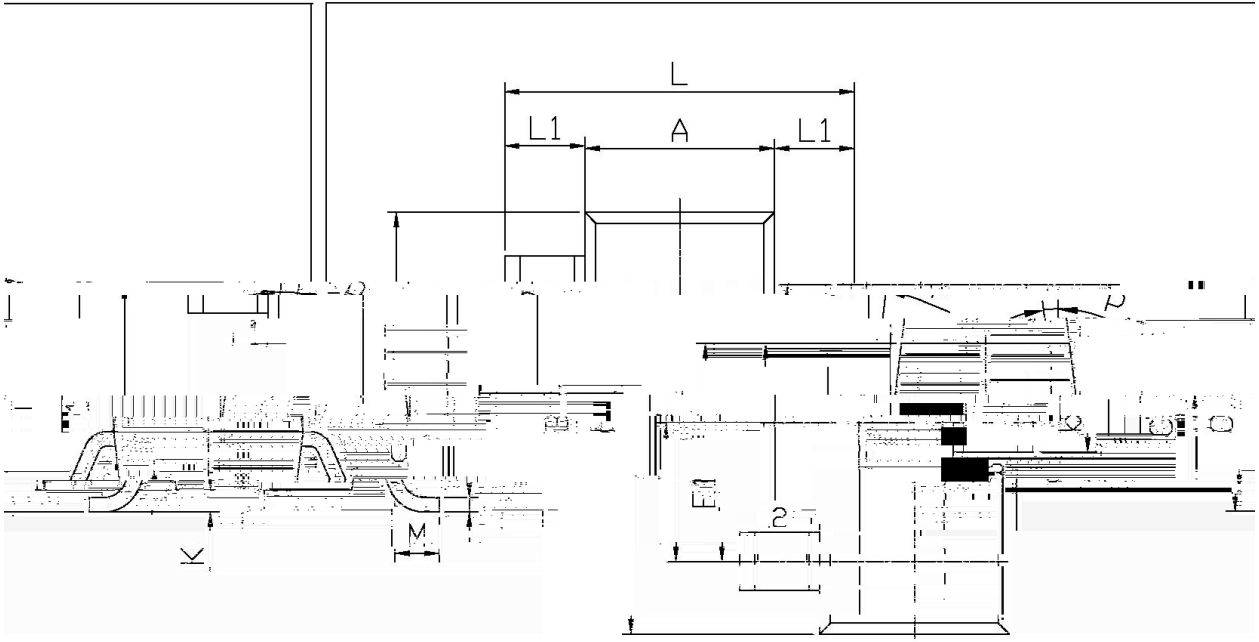
**/ Electrical Characteristic Curve**



**/ Package Dimensions**

UNIT: mm

DATE: 2020.03.05



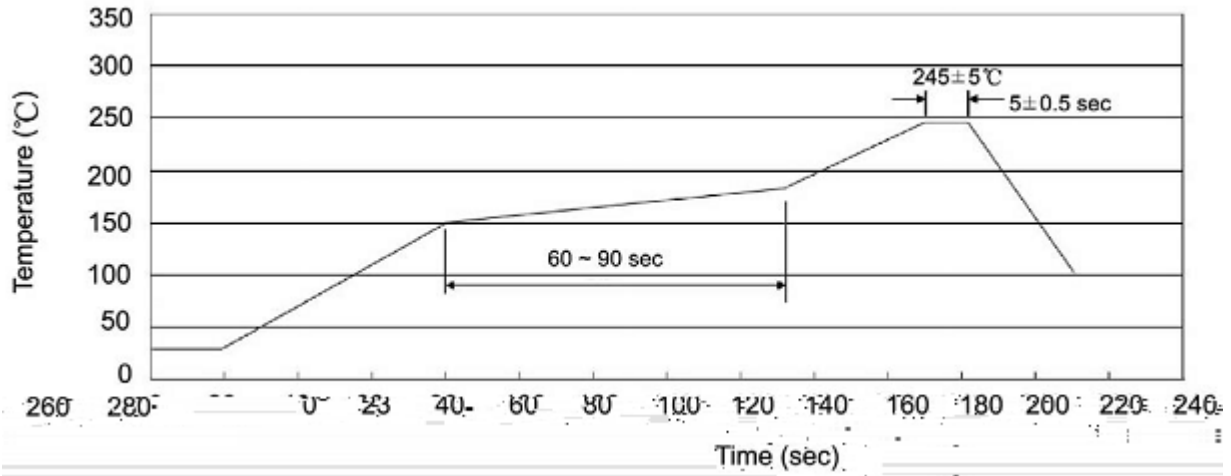
Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	e	0.05	0.20
B	2.70	3.10	K	0.10	0.10
E1	0.85	1.05	P	7°	
b	0.35	0.55			

**BRCS2302AMA**

Rev.B Mar.-2020



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



说明：

- 1、预热温度 25 ~ 150°C，时间 60 ~ 90sec;
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2 ~ 10°C/sec.

Note:

- 1.Preheating:25~150°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
- 3. Cooling Speed