

**DESCRIPTION**

The AM2034 is available in DFN1006-3L Packages.

BVDSS	RDSON	ID
20V	230mΩ@4.5V	0.75A

APPLICATION

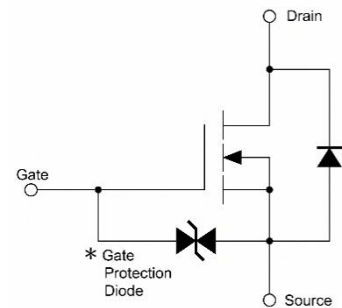
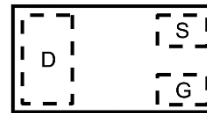
- Load/Power Switching
- Interfacing Switching
- Battery Management for Ultra Small Portable Electronics
- Logic Level Shift

ORDERING INFORMATION

Package Type		Part Number	
DFN1006-3L SPQ: 10,000pcs/Reel	J3	AM2034J3R	
		AM2034J3VR	
Note	R: Tape & Reel V: Halogen free Package		
AiT provides all RoHS products			

FEATURE

- Lead Free Product is Acquired
- $R_{DS(ON)}$, Typ= 230mΩ @ $V_{GS}=4.5V$
- Surface Mount Package
- N-Channel Switch with Low $R_{DS(on)}$
- Operated at Low Logic Level Gate Drive

PIN DESCRIPTION

Pin#	Symbol	Function
1	G	Gate
2	S	Source
3	D	Drain

ABSOLUTE MAXIMUM RATINGS

$T_A = 25^\circ\text{C}$, unless otherwise specified.

Parameter	Symbol	Value	Unit
Drain-to-Source Voltage	V_{DS}	20	V
Gate-to-Source Voltage	V_{GS}	± 12	V
Continuous Drain Current ⁽¹⁾	I_D	0.75	A
Pulsed Drain Current	I_{DM}	1.8	A
Power Dissipation ⁽¹⁾	P_D	100	mW
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150	$^\circ\text{C}$
Thermal Resistance Junction to Ambient ⁽¹⁾	$R_{\theta JA}$	1250	$^\circ\text{C/W}$
Lead Temperature for Soldering Purposes (1/8" from case for 10s)	T_L	260	$^\circ\text{C}$

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.



ELECTRICAL CHARACTERISTICS

T_A = 25°C, unless otherwise specified.

Parameter	Symbol	Conditions	Min	Typ.	Max	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V, I _D =250μA	20	-	-	V
Drain to Source Leakage Current	I _{DSS}	V _{DS} =20V, V _{GS} =0V	-	-	1	μA
Gate to Source Leakage Current	I _{GSS}	V _{GS} = ±10V, V _{DS} =0V	-	-	±20	μA
Drain-to-Source On-Resistance ²	R _{DS(ON)}	V _{GS} =4.5V, I _D =150mA	-	230	300	mΩ
		V _{GS} =2.5V, I _D =150mA	-	290	390	
		V _{GS} =1.8V, I _D =150mA	-	380	570	
		V _{GS} =1.5V, I _D =20mA	-	460	-	
		V _{GS} =1.2V, I _D =10mA	-	1200	-	
Gate Threshold Voltage ²	V _{GS(TH)}	V _{DS} = V _{GS} , I _D = 250μA	0.35	0.75	1.1	V
Forward Transconductance	g _{fs}	V _{DS} =10V, I _D =150mA	150	-	-	mS
Dynamic Characteristics ⁴						
Input Capacitance	C _{iss}	V _{GS} = 0V, V _{DS} = 16V f = 1.0MHz	-	79	120	pF
Output Capacitance	C _{oss}		-	13	20	
Reverse Transfer Capacitance	C _{rss}		-	9	15	
Switching Characteristics ⁴						
Turn-on Delay Time ³	t _{d(on)}	V _{GS} =4.5V, V _{DS} =10V, I _D =500mA, R _G =10Ω	-	6.7	-	ns
Rise Time ³	t _r		-	4.8	-	
Turn-Off Delay Time ³	t _{d(off)}		-	17.3	-	
Fall Time ³	t _f		-	7.4	-	
Drain-Source Body Diode Characteristics						
Diode Forward Voltage ³	V _{DS}	I _S =0.15A, V _{GS} =0V	-	-	1.2	V

Notes:

- 1.Surface mounted on FR4 board using the minimum recommended pad size.
- 2.Pulse Test : Pulse Width=300μs, Duty Cycle=2%.
- 3.Switching characteristics are independent of operating junction temperatures.



TYPICAL PERFORMANCE CHARACTERISTICS

Fig1. Typical Output Characteristics

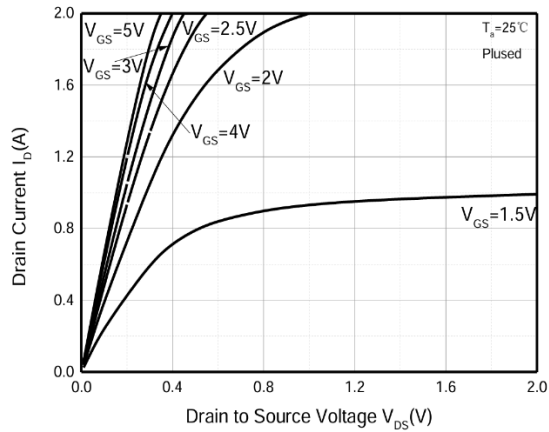


Fig 2. Typical Transfer Characteristics

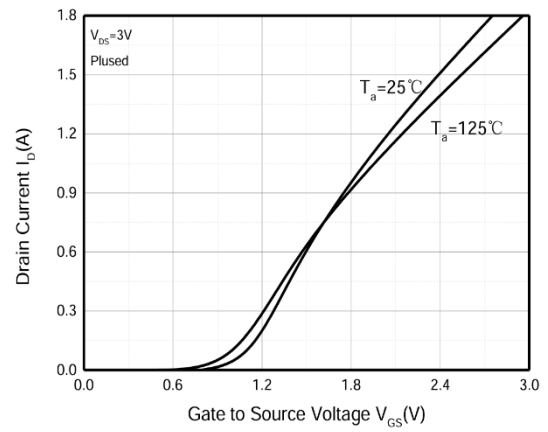


Fig 3. Forward Characteristics of Reverse

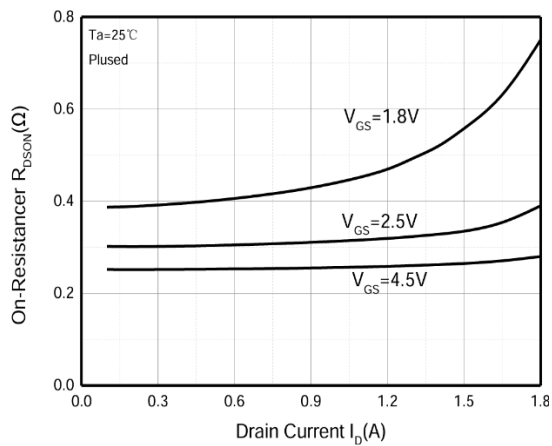


Fig 4. $R_{DS(on)}$ vs. V_{GS}

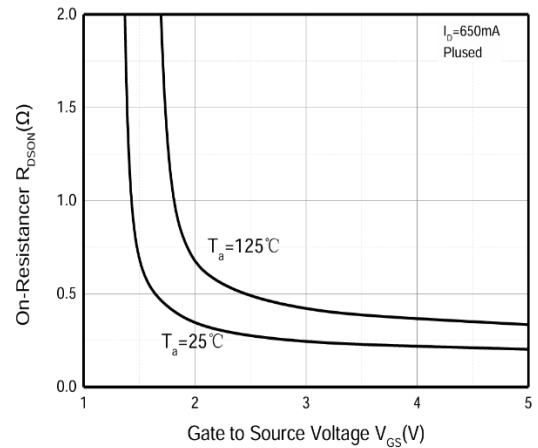


Fig 5. I_S vs. V_{SD}

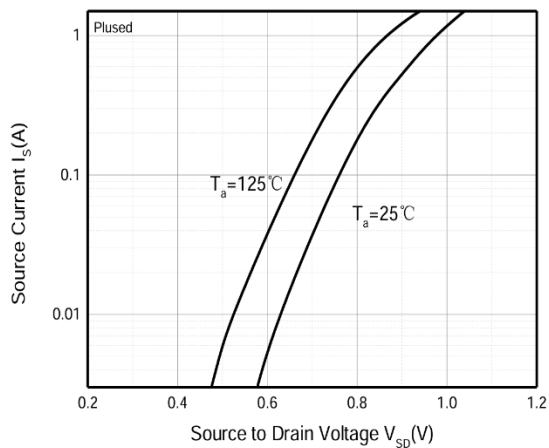
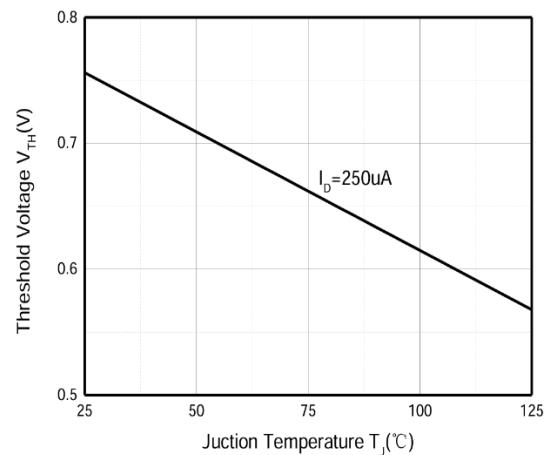


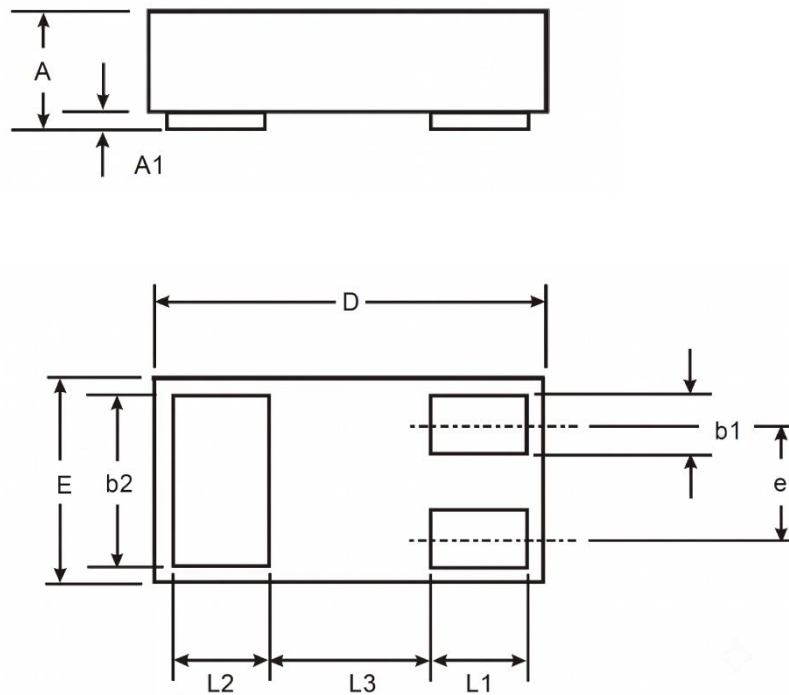
Fig 6. Threshold Voltage





PACKAGE INFORMATION

Dimension in DFN1006-3L (Unit: mm):



Symbol	Millimeters		
	Min	Typ	Max
A	0.47	0.50	0.53
A1	0	0.03	0.05
b1	0.10	0.15	0.20
b2	0.45	0.50	0.55
D	0.95	1.00	1.075
E	0.55	0.60	0.675
e	-	0.35	-
L1	0.20	0.25	0.30
L2	0.20	0.25	0.30
L3	-	0.40	-



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