



DESCRIPTION

The AM2318 is available in SOT-23 package.

ORDERING INFORMATION

Package Type	Part Number	
SOT-23	E3	AM2318E3R
		AM2318E3VR
Note	V: Halogen free Package R: Tape & Reel SPQ: 3,000pcs / Reel	
AiT provides all RoHS products Suffix " V " means Halogen free Package		

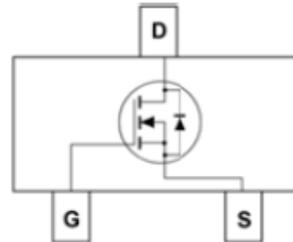
FEATURES

- 20V / 2.0A,
 $R_{DS(ON)} = 80m\Omega(MAX) @ V_{GS} = 4.5V$
 $R_{DS(ON)} = 90m\Omega(MAX) @ V_{GS} = 2.5V$
- Super High dense cell design for extremely low $R_{DS(ON)}$.
- Reliable and Rugged.
- Available in SOT-23 Package

APPLICATION

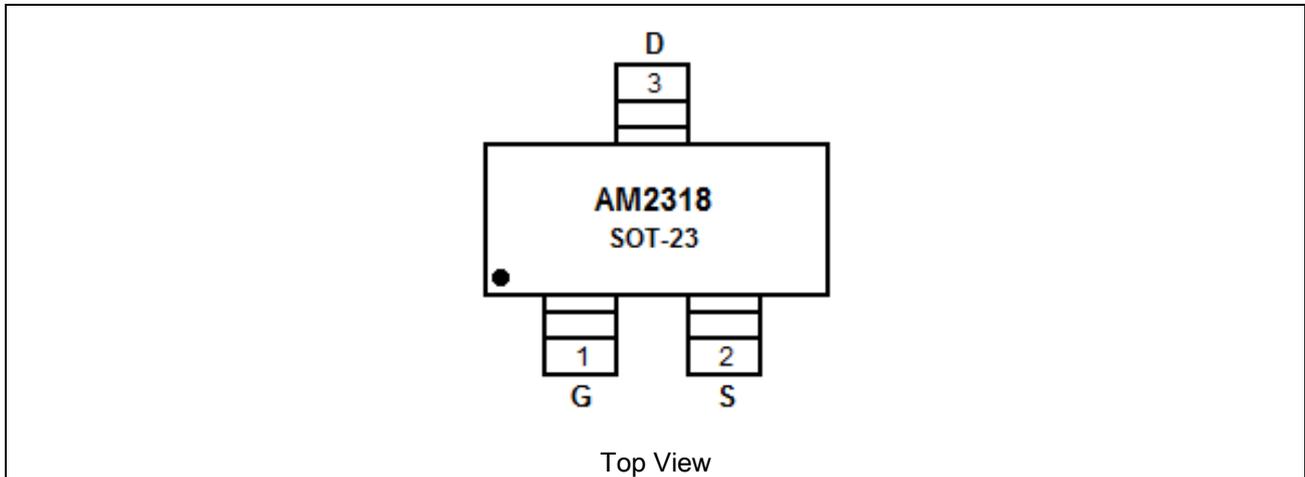
- Power Management
- Portable Equipment and Battery Power Systems.

PIN DESCRIPTION





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 noted

V_{DS} , Drain-Source Voltage	20V
V_{GS} , Gate-Source Voltage	$\pm 8\text{V}$
I_D , Drain Current-Continuous	2.0A

Stress beyond above listed "Absolute Maximum Ratings" may lead permanent damage to the device. These are stress ratings only and operations of the device at these or any other conditions beyond those indicated in the operational sections of the specifications are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.



ELECTRICAL CHARACTERISTICS

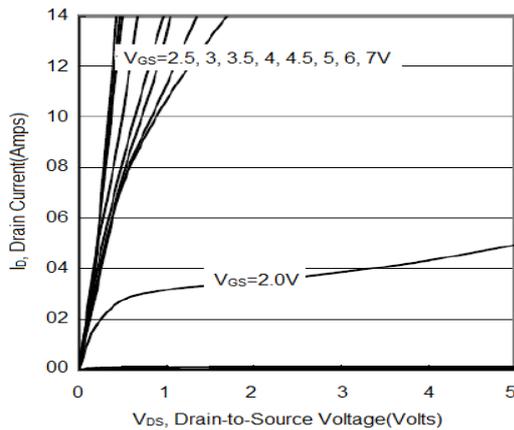
T_A=25°C, unless otherwise noted

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} = 0V, I _D = 250uA	20			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} = 12V, V _{GS} = 0V			1	uA
Gate Body Leakage Current, Forward	I _{GSSF}	V _{GS} = 8V, V _{DS} = 0V			100	nA
Gate Body Leakage Current, Reverse	I _{GSSR}	V _{GS} = -8V, V _{DS} = 0V			-100	nA
On Characteristics						
Gate Threshold Voltage	V _{GS(th)}	V _{GS} =V _{DS} , I _D = 250uA	0.4		1.3	V
Static Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} = 4.5V, I _D = 3.6A		70	80	mΩ
		V _{GS} = 2.5V, I _D = 3.1A		75	90	
Source-Drain Diode						
Drain-Source Diode Forward Voltage	V _{SD}	V _{GS} = 0V, I _S = 0.94A			1.2	V
Switching Characteristics						
Turn-On Delay Time	t _{d(on)}	V _{DD} = 10V, I _D = 1A, V _{GS} = 4.5V, R _G = 6Ω		5	15	ns
Turn-On Rise Time	t _r			8.5	17	ns
Turn-Off Delay Time	t _{d(off)}			11	20	ns
Turn-Off Fall Time	t _f			3	10	ns
Total Gate Charge	Q _g	V _{DS} = 10V, I _D = 1.7A, V _{GS} = 4.5V		3.5	5	nC
Gate-Source Charge	Q _{gs}			0.55		nC
Gate-Drain Charge	Q _{gd}			0.95		nC

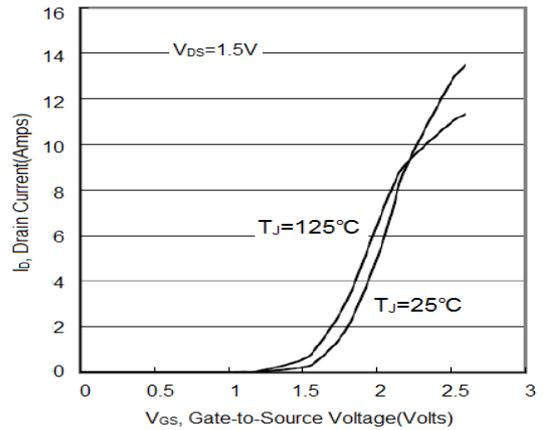


TYPICAL PERFORMANCE CHARACTERISTICS

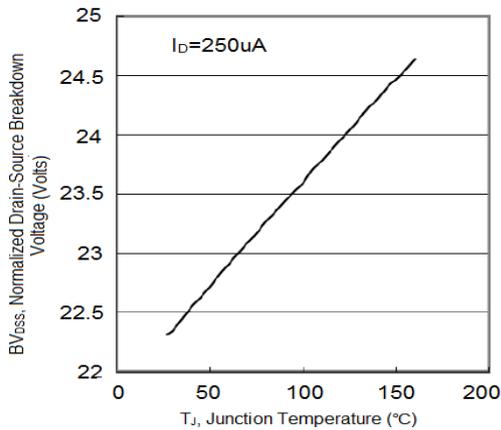
1. Output Characteristics



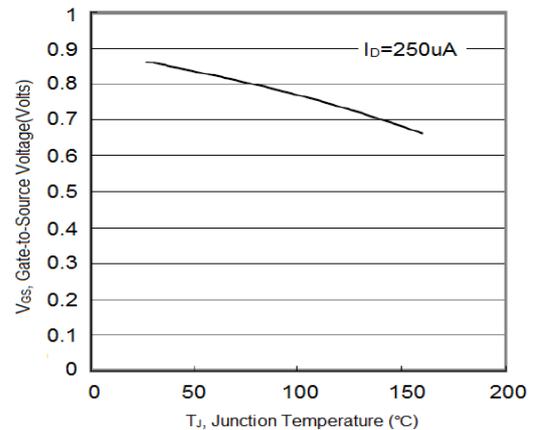
2. Transfer Characteristics



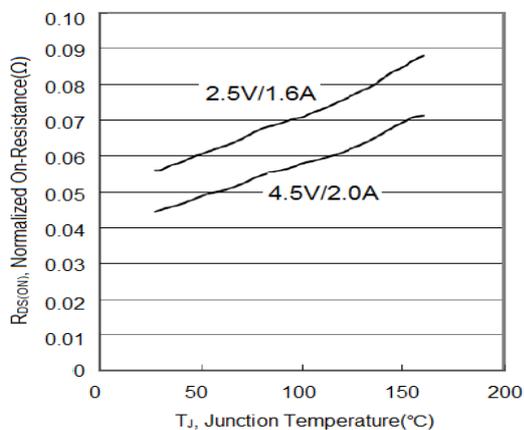
3. Breakdown Voltage Variation with Temperature



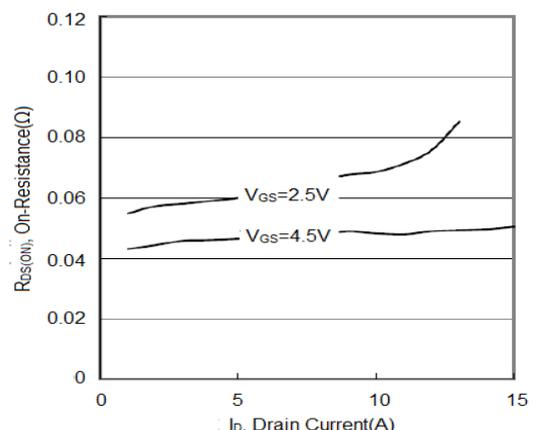
4. Gate Threshold Variation with Temperature



5. On-Resistance Variation with Temperature

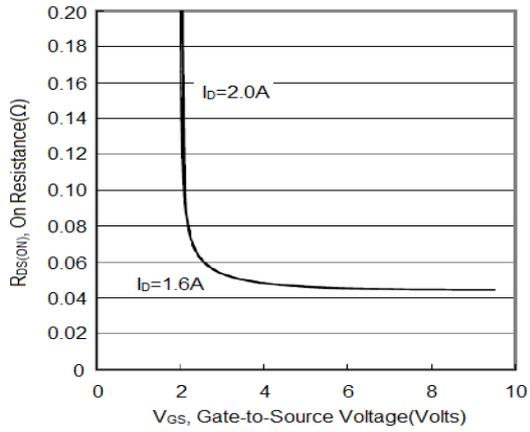


6. On-Resistance vs. Drain Current

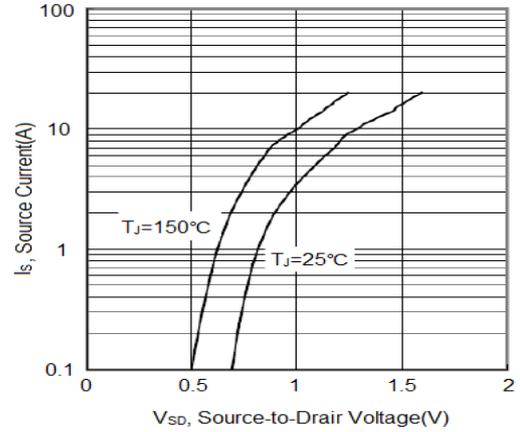




7. On-Resistance vs. Gate-to-Source Voltage



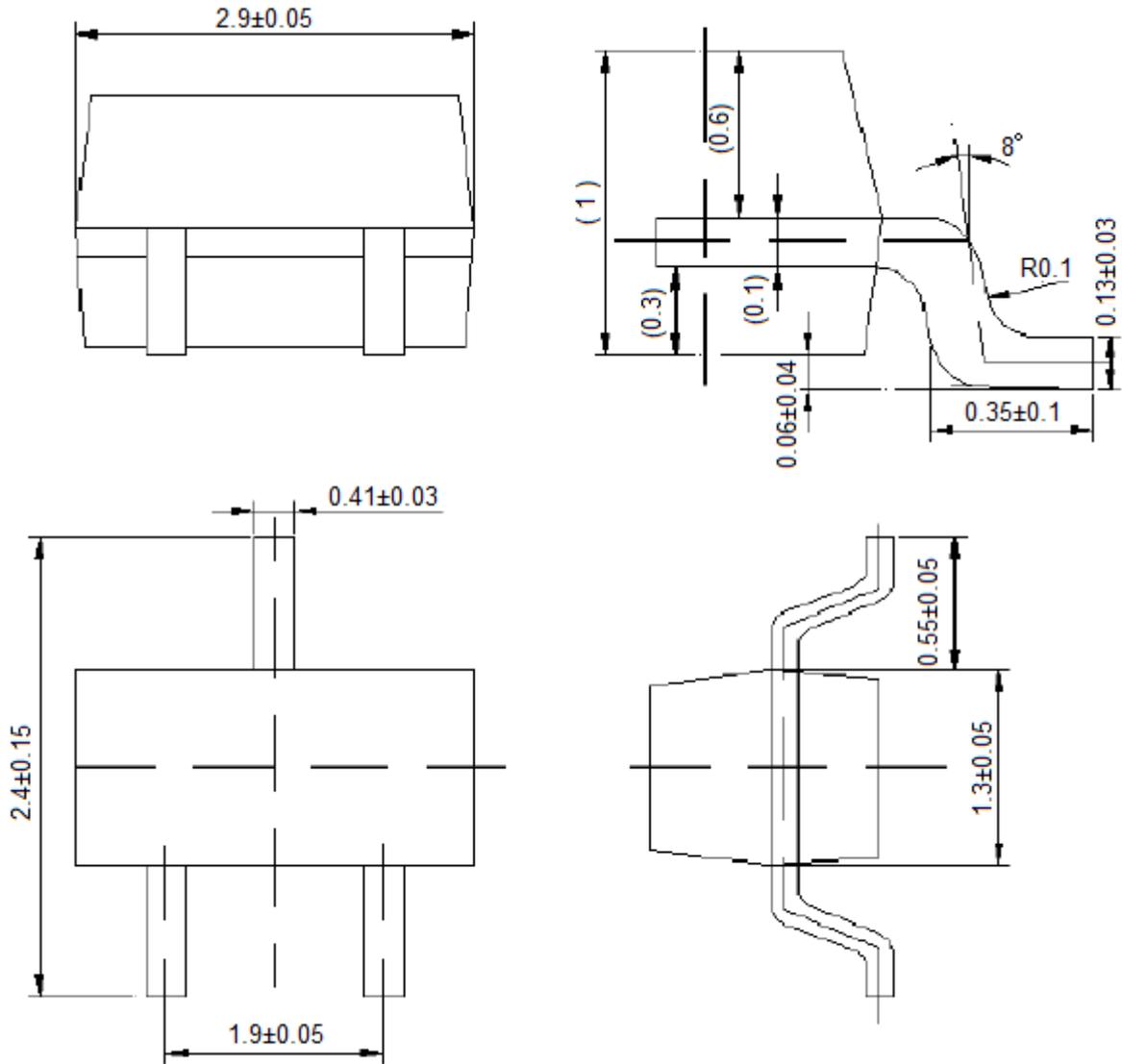
8. Source-Drain Diode Forward Voltage





PACKAGE INFORMATION

Dimension in SOT-23 (Unit: mm)





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