

**P-Channel Enhancement Mode MOSFET**
**Feature**

-20V/-3A, R<sub>DS(ON)</sub> = 120mΩ(MAX) @V<sub>GS</sub> = -4.5V.

R<sub>DS(ON)</sub> = 150mΩ(MAX) @V<sub>GS</sub> = -2.5V.

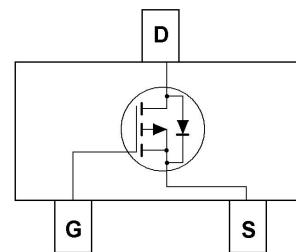
Super High dense cell design for extremely low R<sub>DS(ON)</sub>

Reliable and Rugged

SOT-23 for Surface Mount Package



SOT-23


**Applications**

- Power Management

Portable Equipment and Battery Powered Systems.

**Absolute Maximum Ratings**

T<sub>A</sub>=25°C Unless Otherwise noted

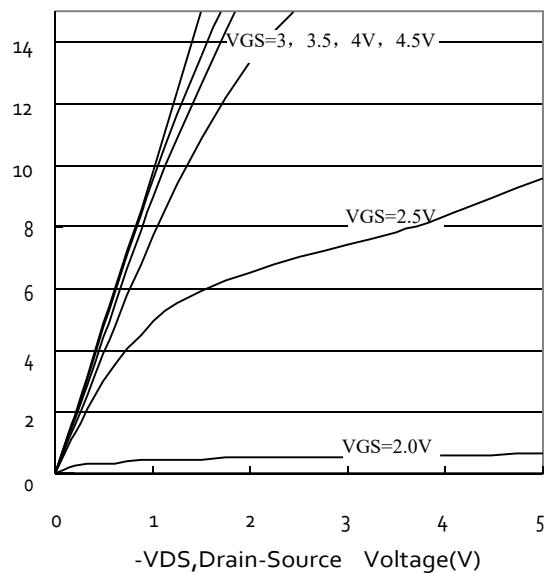
Parameter	Symbol	Limit	Units
Drain-Source Voltage	V <sub>DS</sub>	-20	V
Gate-Source Voltage	V <sub>GS</sub>	±10	V
Drain Current-Continuous	I <sub>D</sub>	-3	A

**Electrical Characteristics**

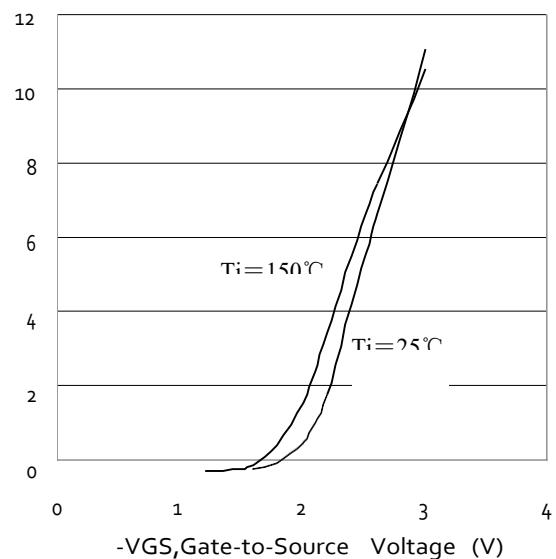
T<sub>A</sub>=25°C Unless Otherwise noted

Parameter	Symbol	Test Conditions	Min	Typ.	Max	Units
<b>Off Characteristics</b>						
Drain to Source Breakdown Voltage	BVDSS	V <sub>GS</sub> =0V, ID=-250μA	-20	-	-	V
Zero-Gate Voltage Drain Current	IDSS	V <sub>DS</sub> =-20V, V <sub>GS</sub> =0V	-	-	-1	μA
Gate Body Leakage Current, Forward	IGSSF	V <sub>GS</sub> =10V, V <sub>DS</sub> =0V	-	-	100	nA
Gate Body Leakage Current, Reverse	IGSSR	V <sub>GS</sub> =-10V, V <sub>DS</sub> =0V	-	-	-100	nA
<b>On Characteristics</b>						
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>GS</sub> = V <sub>DS</sub> , ID=-250μA	-0.4	-	-1.0	V
Static Drain-source	R <sub>DS(ON)</sub>	V <sub>GS</sub> =-4.5V, ID=-3.0A	-	--	120	mΩ
On-Resistance		V <sub>GS</sub> =-2.5V, ID=-2.0A	-	--	150	mΩ
<b>Drain-Source Diode Characteristics and Maximum Ratings</b>						
Drain-Source Diode Forward Voltage	V <sub>SD</sub>	V <sub>GS</sub> =0V, IS=-1.25A	-	-	-1.2	V

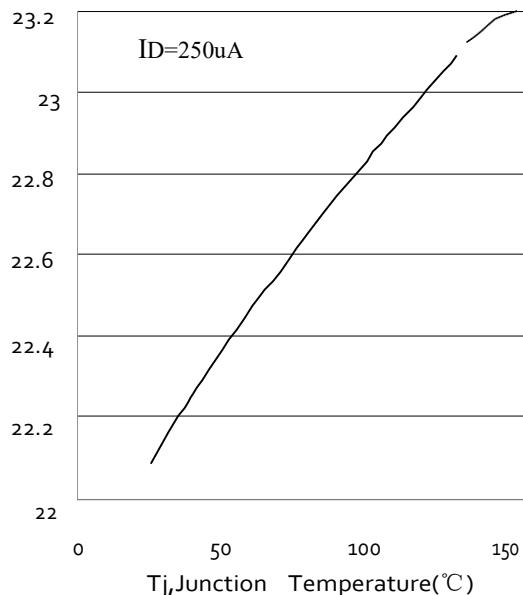
## Typical Characteristics



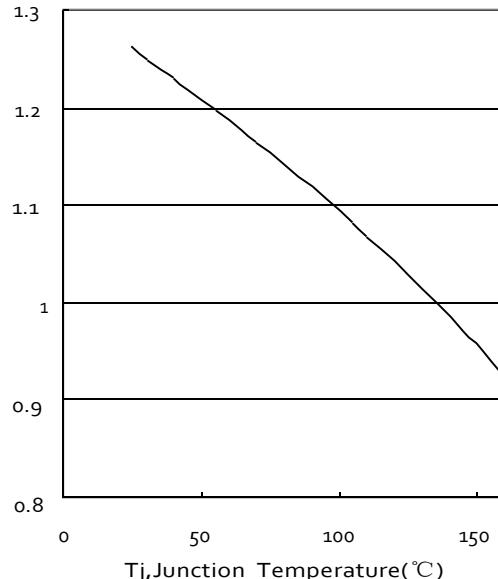
**Figure 1.** Output Characteristics



**Figure 2.** Transfer Characteristics

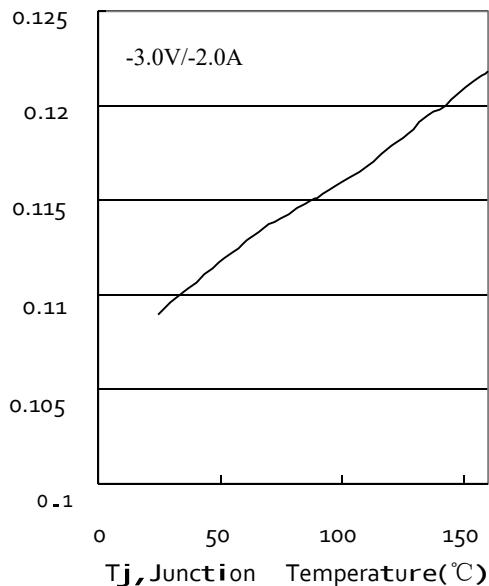


**Figure 3.** Breakdown Voltage Variation with Temperature

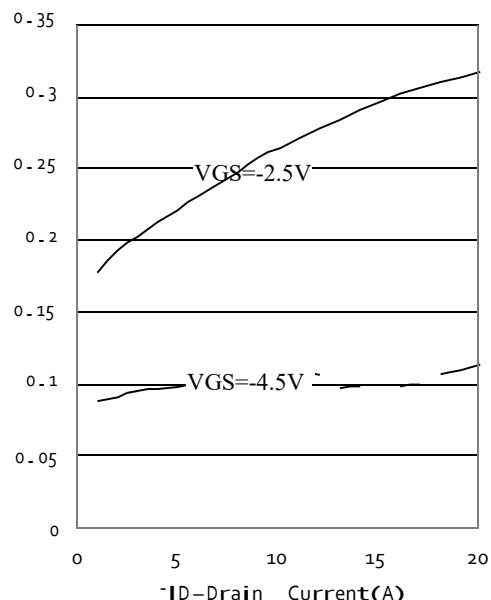


**Figure 4.** Gate Threshold Variation with Temperature

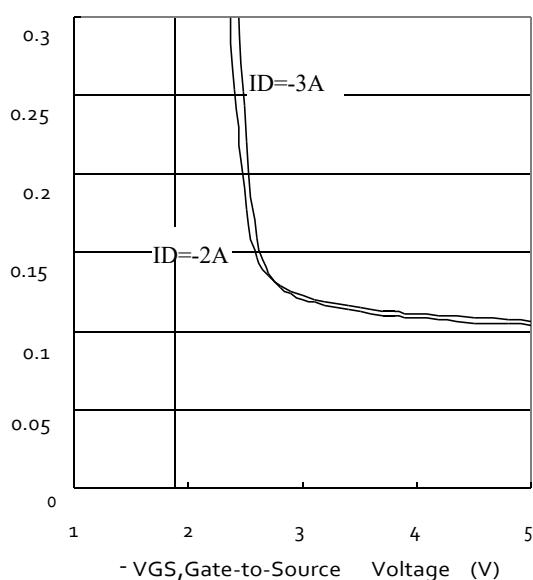
## Typical Characteristics



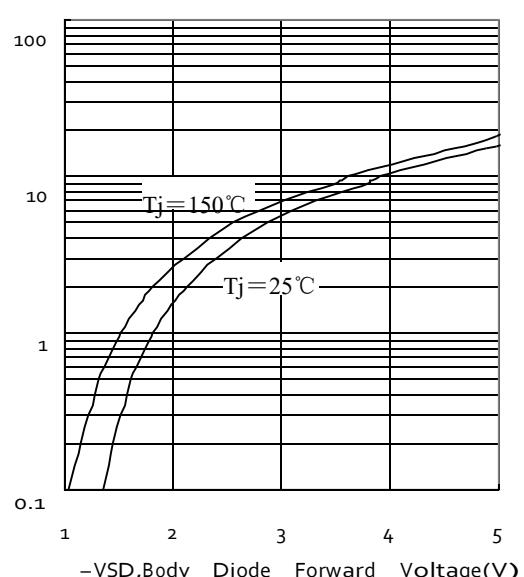
**Figure 5.** On-Resistance Variation with Temperature



**Figure 6.** On-Resistance vs. Drain Current



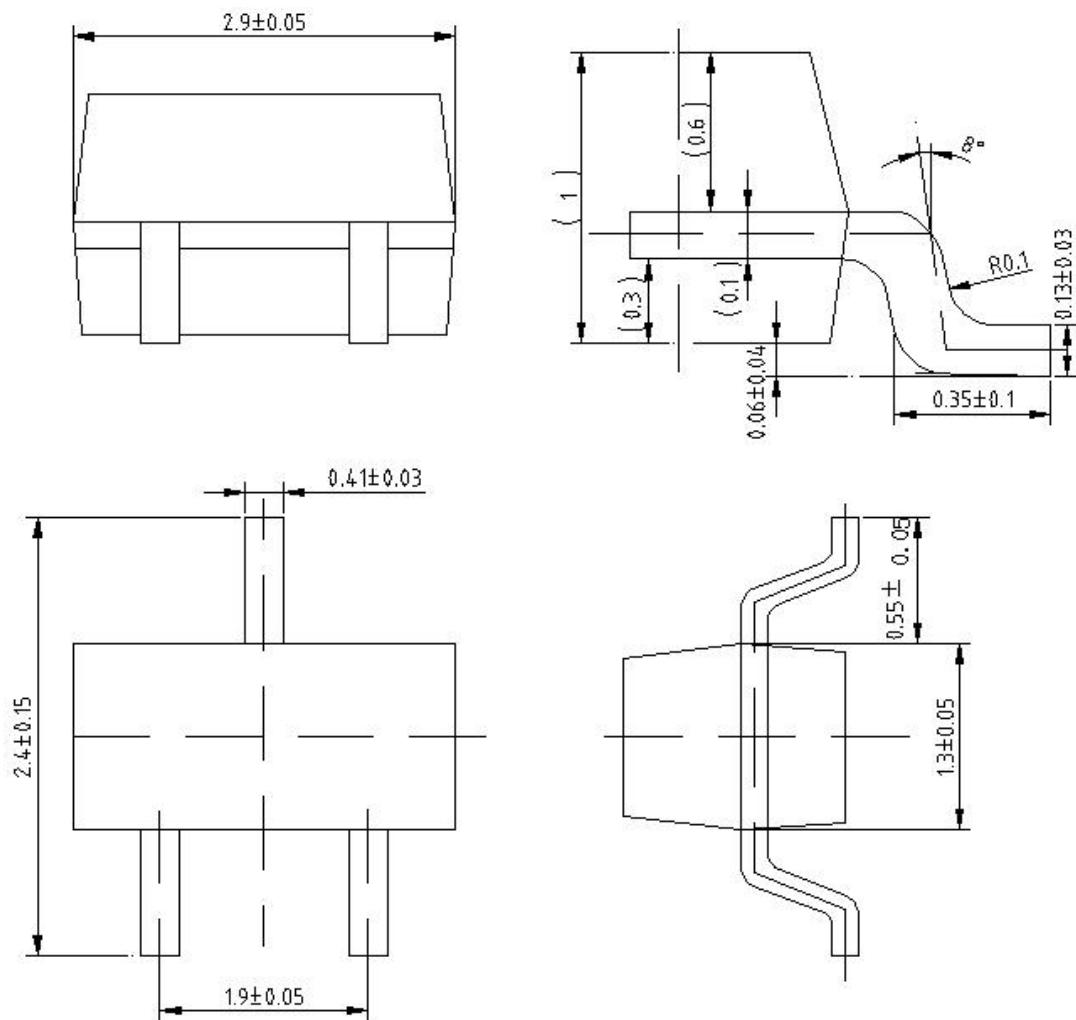
**Figure 7 .** On-Resistance vs. Gate-to-Source Voltage



**Figure 8 .** Source-Drain Diode Forward

### Package Outline Dimensions (UNIT: mm)

SOT-23



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