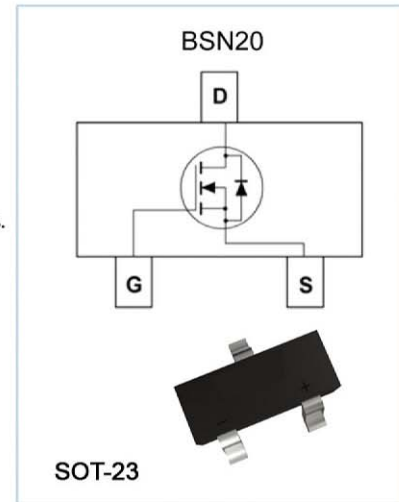


N-Channel Enhancement Mode MOSFET

Feature

- 50V/0.1A, $R_{DS(ON)} = 3.5 \Omega$ (MAX) @ $V_{GS} = 5V$ $I_D = 0.1A$
 $R_{DS(ON)} = 10 \Omega$ (MAX) @ $V_{GS} = 2.75V$, $I_D = 0.1A$
- Super High dense cell design for extremely low $R_{DS(ON)}$.
- Reliable and Rugged.
- Low Threshold Voltage (0.5V—1.5V) Make it Ideal for Low Voltage Applications.
- SOT-23 for Surface Mount Package.



Applications

- Power Management in DC/DC Converters、 Portable and Battery-powered Products.

Absolute Maximum Ratings

$T_A = 25^\circ\text{C}$ Unless Otherwise noted

Parameter	Symbol	Limit	Units
Drain-Source Voltage	V_{DS}	50	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current-Continuous	I_D	0.1	A

Electrical Characteristics

$T_A = 25^\circ\text{C}$ Unless Otherwise noted

Parameter	Symbol	Test Conditions	Min	Typ.	Max	Units
Off Characteristics						
Drain to Source Breakdown Voltage	BVDSS	$V_{GS} = 0V, I_D = 250\mu A$	50	-	-	V
Zero-Gate Voltage Drain Current	IDSS	$V_{DS} = 50V, V_{GS} = 0V$	-	-	0.5	μA
		$V_{DS} = 25V, V_{GS} = 0V$	-	-	0.1	
Gate Body Leakage Current, Forward	IGSSF	$V_{GS} = 20V, V_{DS} = 0V$	-	-	100	nA
Gate Body Leakage Current, Reverse	IGSSR	$V_{GS} = -20V, V_{DS} = 0V$	-	-	-100	nA
On Characteristics						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{GS} = V_{DS}, I_D = 1.0 mA$	0.5	-	1.5	V
Static Drain-source On-Resistance	$R_{DS(ON)}$	$V_{GS} = 5.0V, I_D = 0.2A$	-	-	3.5	Ω
		$V_{GS} = 2.75V, I_D = 0.2A$	-	-	10	Ω
Drain-Source Diode Characteristics and Maximum Ratings						
Drain-Source Diode Forward Voltage	VSD	$V_{GS} = 0V, I_S = 0.2A$			2.5	V



Typical Characteristics

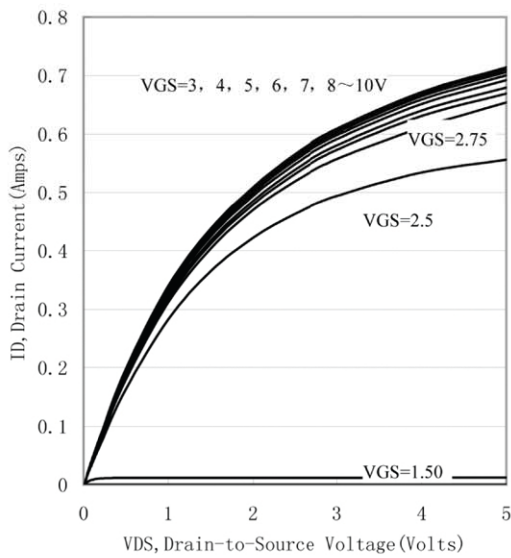


Figure 1. Output Characteristics

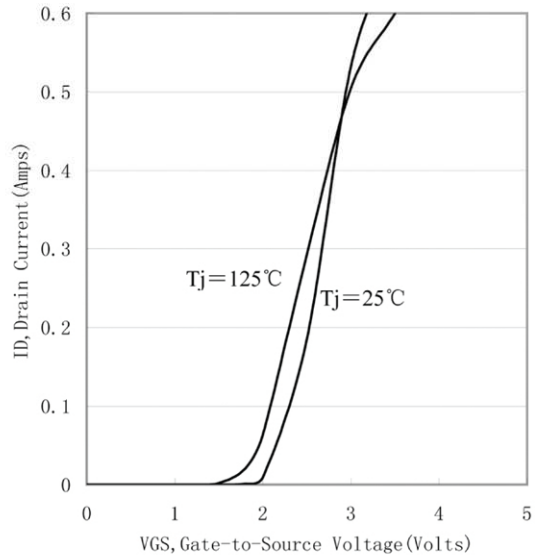


Figure 2. Transfer Characteristics

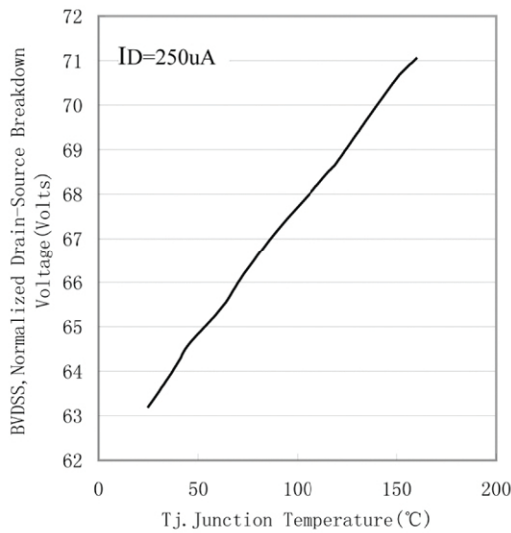


Figure 3. Breakdown Voltage Variation with Temperature

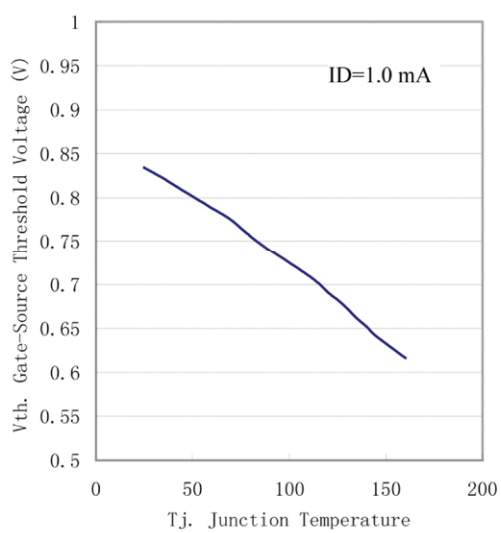


Figure 4. Gate Threshold Variation with Temperature



Typical Characteristics

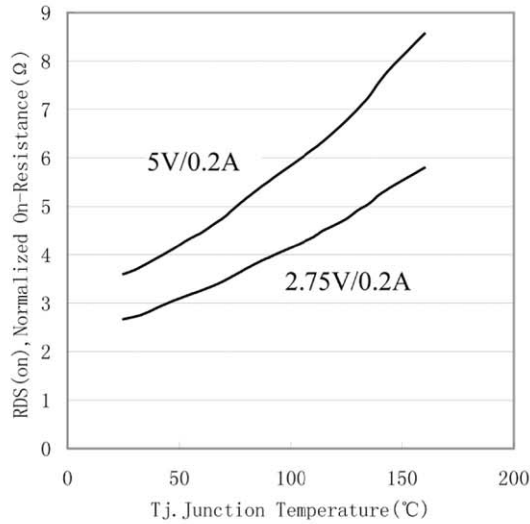


Figure 5. On-Resistance Variation with Temperature

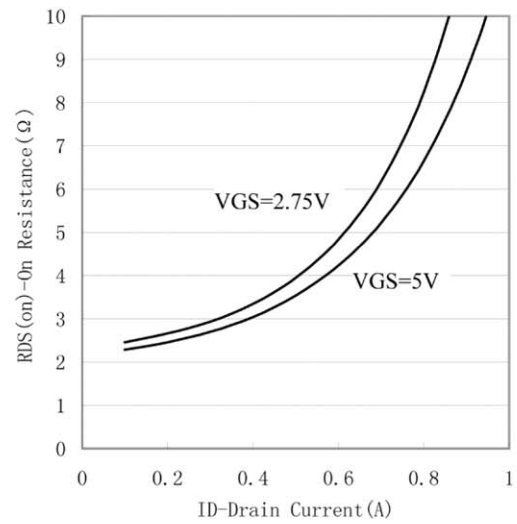


Figure 6. On-Resistance vs. Drain Current

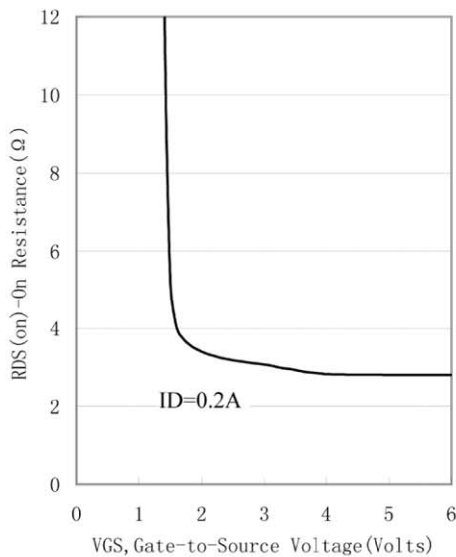


Figure 7. On-Resistance vs. Gate-to-Source Voltage

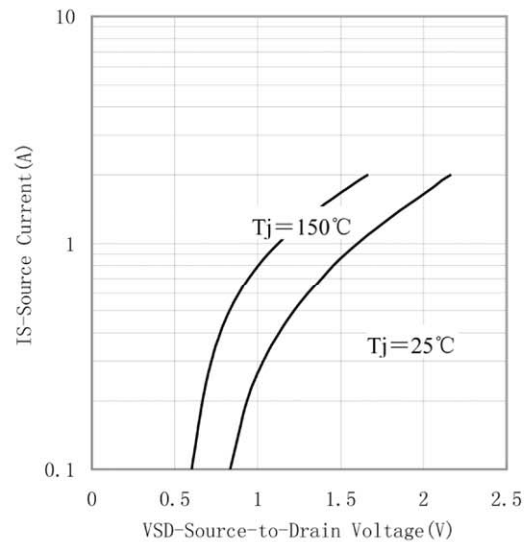


Figure 8. Source-Drain Diode Forward Voltage