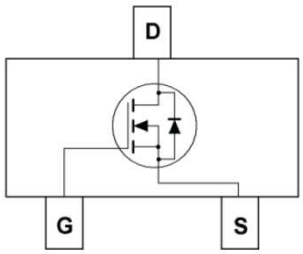
AO3416

N-Channel Enhancement Mode MOSFET

Feature

- 16V/6A, $R_{DS(ON)}$ = 50mΩ (MAX) @V_{GS} = 4.5V.
  $R_{DS(ON)}$ = 55mΩ (MAX) @V_{GS}= 2.5V.
- Super High dense cell design for extremely low $R_{DS(ON)}$.
- Reliable and Rugged .
- SC-59 for Surface Mount Package .

SC-59



Applications

- LI-ION Protection Circuit

Absolute Maximum Ratings T_A=25℃ Unless Otherwise noted

Parameter	Symbol	Limit	Units
Drain-Source Voltage	V_{DS}	16	V
Gate-Source Voltage	V_{GS}	±12	V
Drain Current-Continuous	I_D	6	A

Electrical Characteristics T_A=25℃ Unless Otherwise noted

Parameter	Symbol	Test Conditions	Min	Typ.	Max	Units
Off Characteristics						
Drain to Source Breakdown Voltage	BVDSS	VGS=0V, ID=250μA	16	-	-	V
Zero-Gate Voltage Drain Current	IDSS	VDS=6V, VGS=0V	-	-	1	μA
Gate Body Leakage Current, Forward	IGSSF	VGS=12V, VDS=0V	-	-	300	nA
Gate Body Leakage Current, Reverse	IGSSR	VGS=-12V, VDS=0V	-	-	-300	nA
On Characteristics						
Gate Threshold Voltage	VGS(th)	VGS= VDS, ID=250μA	0.4	-	1.3	V
Static Drain-source On-Resistance	RDS(ON)	VGS =4.5V, ID =6.0A	-	40	50	mΩ
		VGS =2.5V, ID =5.2A	-	44	55	mΩ
Drain-Source Diode Characteristics and Maximum Ratings						
Drain-Source Diode Forward Voltage	VSD	VGS =0V, IS=1.5A			1.2	V

Typical Characteristics

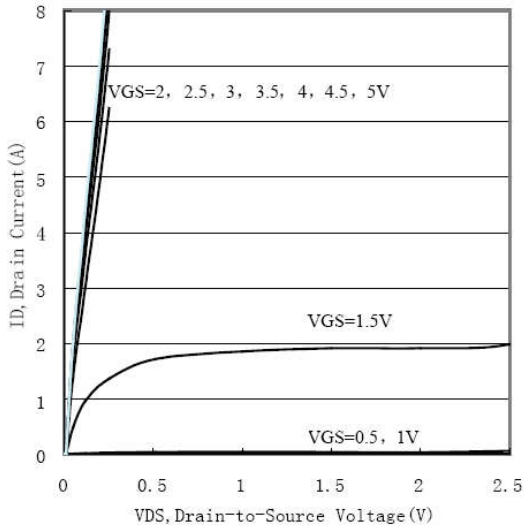


Figure 1. Output Characteristics

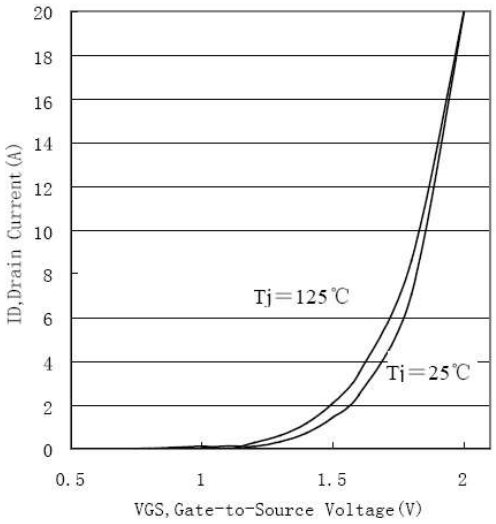


Figure 2. Transfer Characteristics

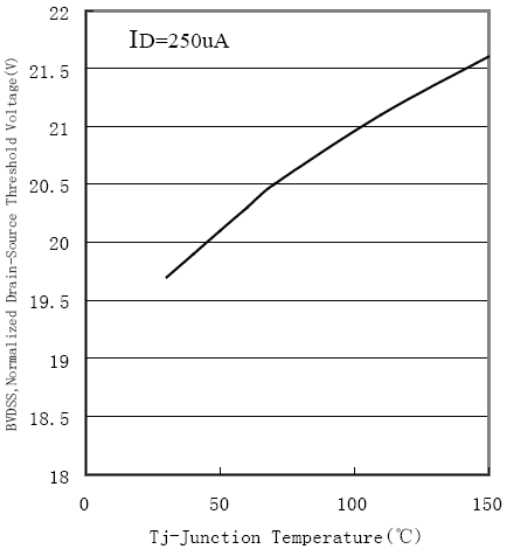


Figure 3. Breakdown Voltage Variation with Temperature

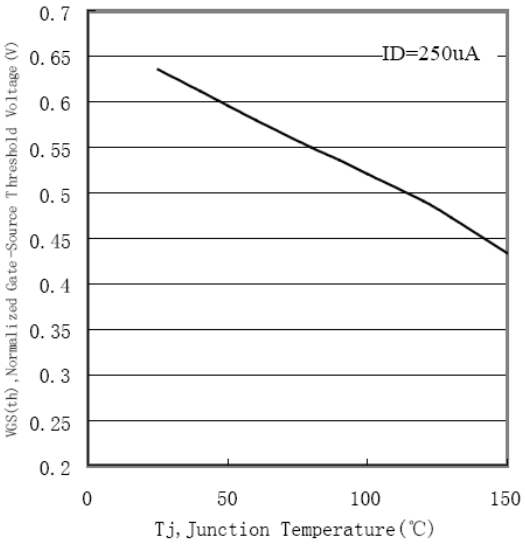


Figure 4. Gate Threshold Variation with Temperature

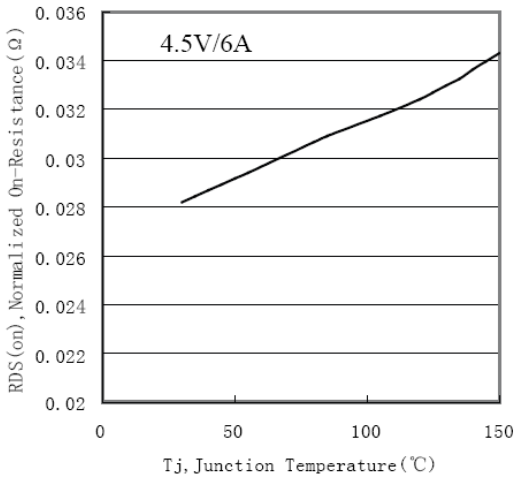


Figure 5. On-Resistance Variation with Temperature

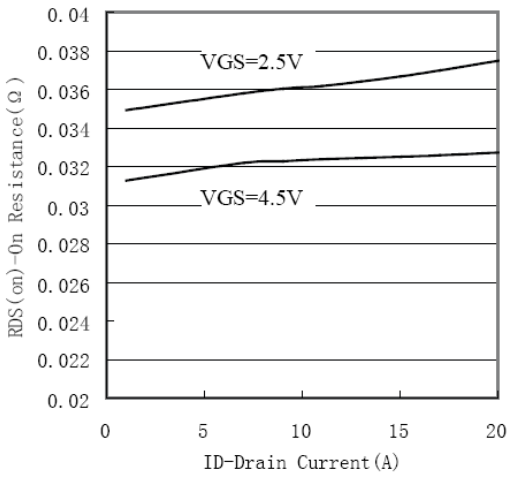


Figure 6. On-Resistance vs. Drain Current

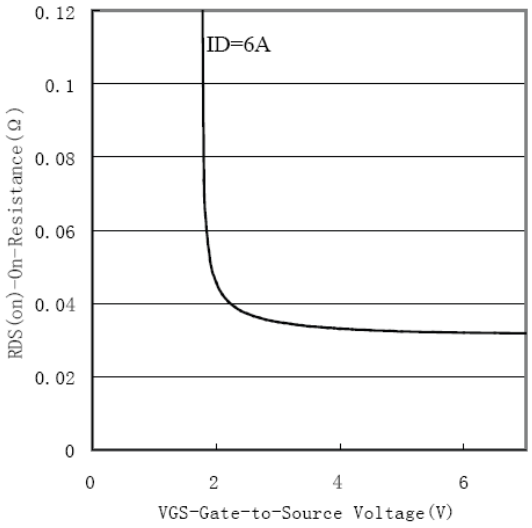


Figure 7. On-Resistance vs. Gate-to-Source Voltage

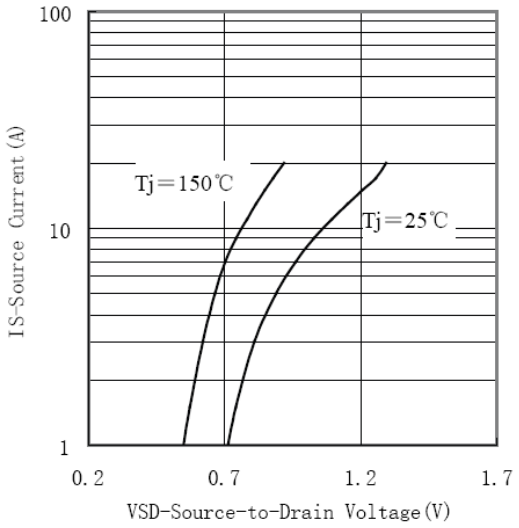


Figure 8. Source-Drain Diode Forward Voltage