

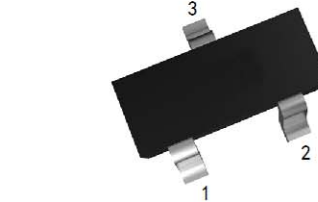
N-Channel Enhancement Mode MOSFET

●Feature

30V/3.6A, $R_{DS(ON)} = 70\text{m}\Omega(\text{MAX})$ @ $V_{GS} = 10\text{V}$.
 $R_{DS(ON)} = 100\text{m}\Omega(\text{MAX})$ @ $V_{GS} = 4.5\text{V}$.

Super High dense cell design for extremely low $R_{DS(ON)}$.
 Reliable and Rugged.
 SOT-23 for Surface Mount Package.

SOT-23



1: Gate
 2: Source
 3: Drain

●Applications

Power Management
 Portable Equipment and Battery Powered Systems.

●Absolute Maximum Ratings TA=25°C Unless Otherwise noted

Parameter	Symbol	Limit	Units
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current-Continuous	I_D	3.6	A

●Electrical Characteristics TA=25°C Unless Otherwise noted

Parameter	Symbol	Test Conditions	Min	Typ.	Max	Units
Off Characteristics						
Drain to Source Breakdown Voltage	BVDSS	VGS=0V, ID=250μA	30	-	-	V
Zero-Gate Voltage Drain Current	IDSS	VDS=30V, VGS=0V	-	-	1	μA
Gate Body Leakage Current, Forward	IGSSF	VGS=20V, VDS=0V	-	-	100	nA
Gate Body Leakage Current, Reverse	IGSSR	VGS=-20V, VDS=0V	-	-	-100	nA
On Characteristics						
Gate Threshold Voltage	VGS(th)	VGS= VDS, ID=250μA	1.1	-	2.2	V
Static Drain-source On-Resistance	RDS(ON)	VGS =10V, ID =3.6A	-	50	70	mΩ
		VGS =4.5V, ID =3.1A	-	80	100	mΩ
Drain-Source Diode Characteristics and Maximum Ratings						
Drain-Source Diode Forward Voltage	VSD	VGS =0V, IS=1.0A			1.2	V

Dynamic					
Q _g	Total Gate Charge	V _{DS} =15V, V _{GS} =10V, I _D =2A		8.5	12
Q _{gs}	Gate-Source Charge			1.1	
Q _{gd}	Gate-Drain Charge			1.8	
t _{on}	Turn-on Time	V _{DD} =15V, I _D =2A, V _{GS} =10V, R _G =6Ω			40
t _{d(ON)}	Turn-on Delay time			11	
t _r	Turn-on Rise Time			17	
t _{d(off)}	Turn-off Delay Time			37	
t _f	Turn-off Fall Time			20	
t _{off}	Turn-off Time				60

Typical Characteristics

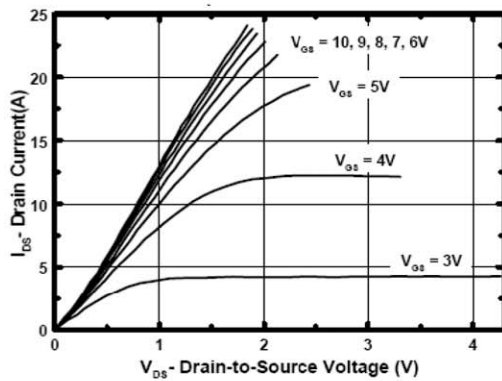


Figure 1. Output Characteristics

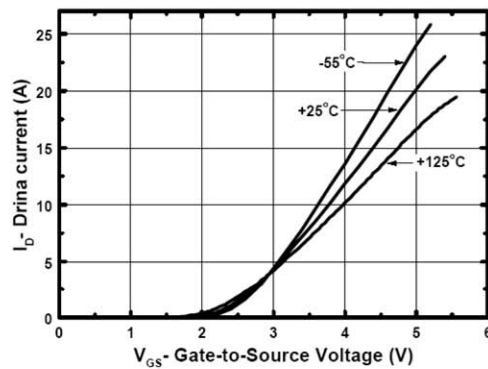


Figure 2. Transfer Characteristics

Typical Characteristics

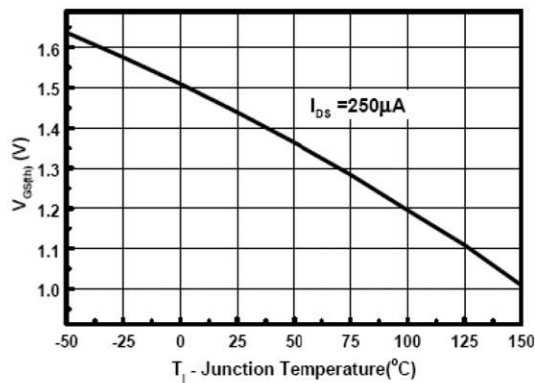


Figure 3. Gate Threshold Variation with Temperature

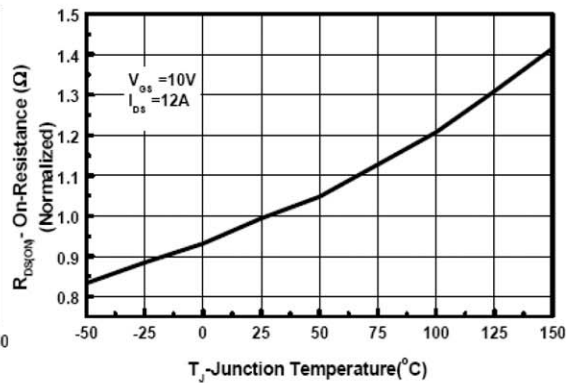


Figure 4. On-Resistance Variation with Temperature

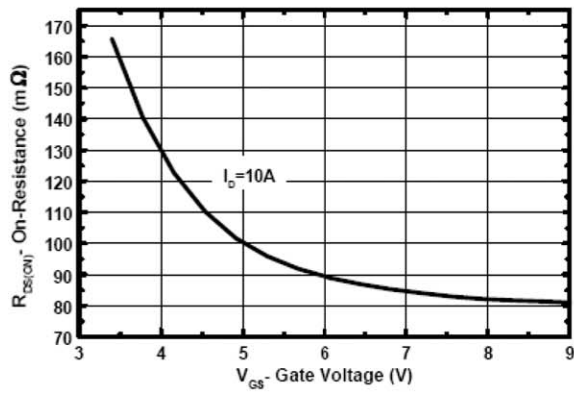


Figure 5. On-Resistance vs. Gate-to-Source Voltage

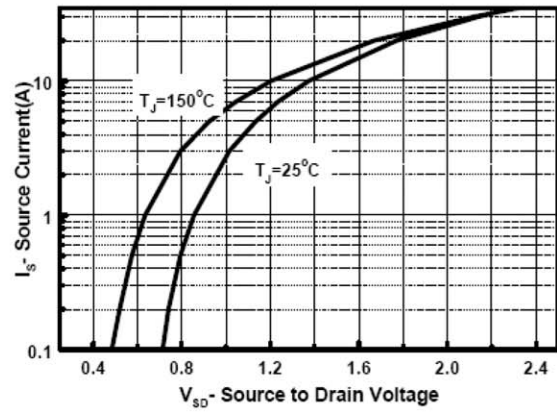


Figure 6. Source-Drain Diode Forward

Package Outline Dimensions (UNIT: mm)

SOT-23

