

N-Channel MOSFET

Features

- 20V/3.6A, $R_{DS(ON)}=80m\Omega(Max)@V_{GS}=4.5V$
 $R_{DS(ON)}=90m\Omega(Max)@V_{GS}=2.5V$
- Super High dense cell design for extremely low $R_{DS(ON)}$
- Reliable and Rugged
- SC-59 for Surface Mount Package

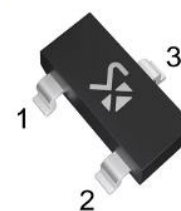
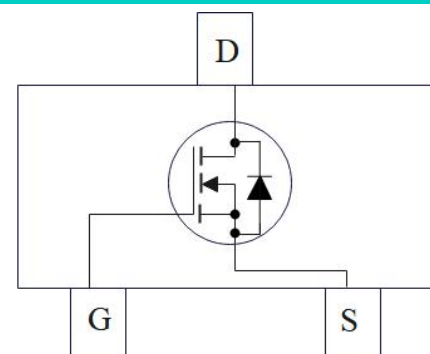
Applications

- Power Management
- Portable Equipment and Battery Powered Systems.

Absolute Maximum Ratings

$T_A=25^{\circ}C$, unless otherwise noted.

Parameter	Symbol	Limit	Unit
Drain-source Voltage	V_{DS}	20	V
Gate-source Voltage	V_{GS}	± 8	V
Drain Current-Continuous	I_D	3.6	A



SC-59

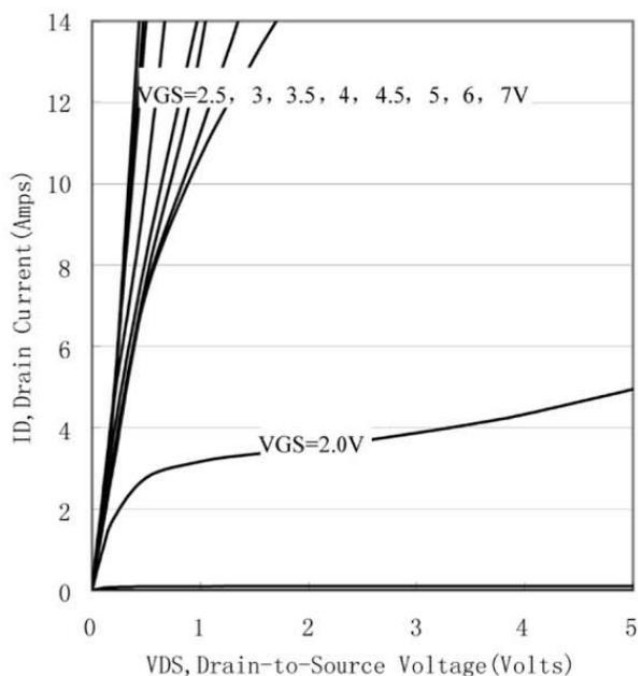
Electrical Characteristics

$T_A=25^{\circ}C$, unless otherwise noted.

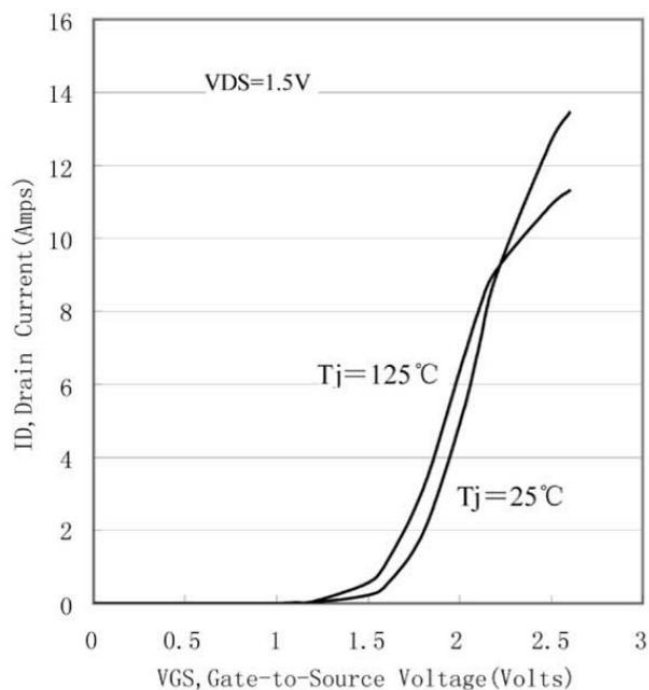
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Off Characteristics						
Drain-source breakdown voltage	BV _{DSS}	V _{GS} =0V, I _D =250μA	20			V
Drain-source leakage current	I _{DSS}	V _{DS} =12V, V _{GS} =0V			1	μA
Gate-source leakage current,Forward	I _{GSSF}	V _{GS} =8V, V _{DS} =0V			100	nA
Gate-source leakage current,Reverse	I _{GSSR}	V _{GS} =-8V, V _{DS} =0V			-100	nA
On Characteristics						
Gate Threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.4		1.3	V
Drain-source on resistance	R _{DS(on)}	V _{GS} = 4.5V, I _D = 3.6A		70	80	m Ω
		V _{GS} = 2.5V, I _D = 3.1A		75	90	
Drain-Source Diode Characteristics and Maximum Ratings						
Diode forward voltage drop	V _{SD}	V _{GS} =0V, I _S =0.94A			1.2	V

Typical Characteristics

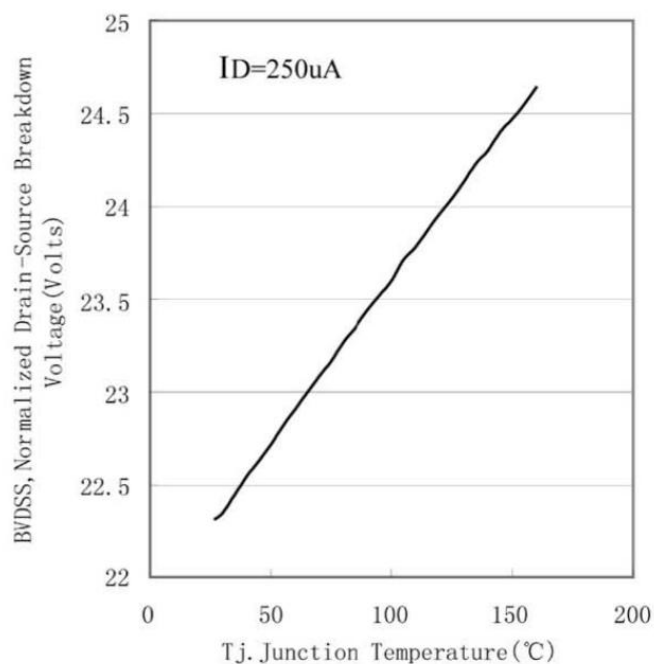
1. Output Characteristics



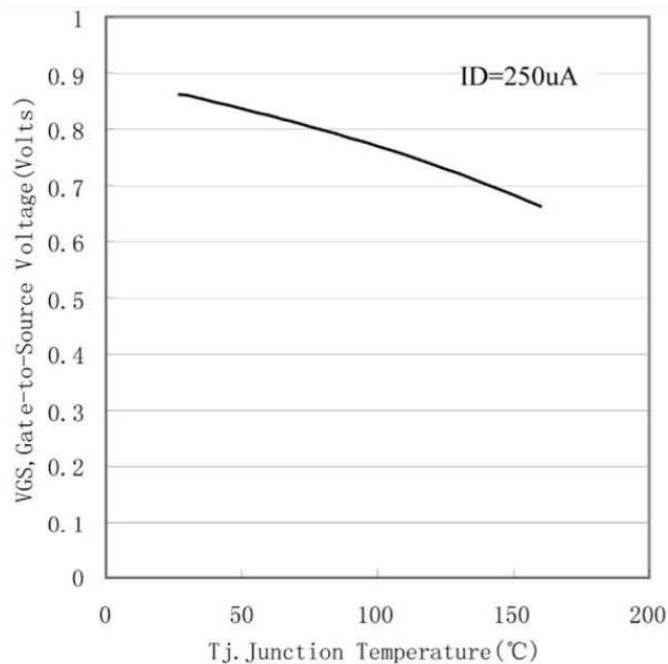
2. Transfer Characteristics



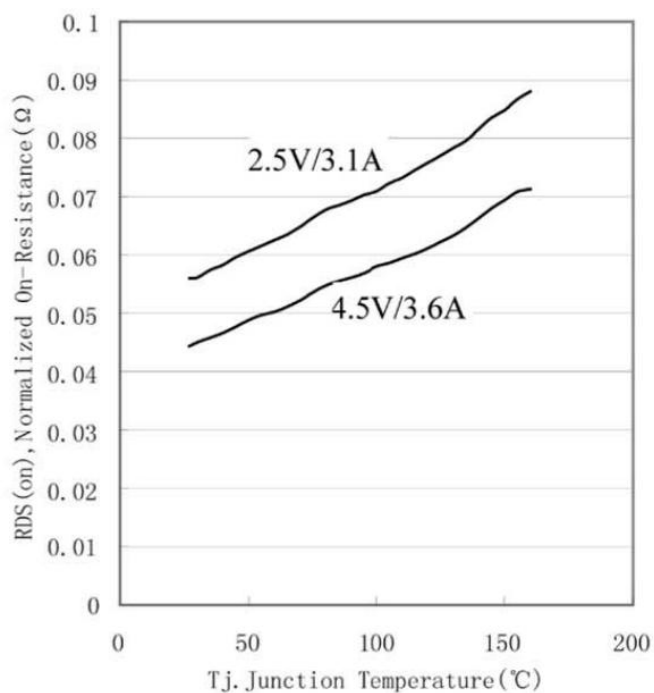
3. Breakdown Voltage Variation with Temperature



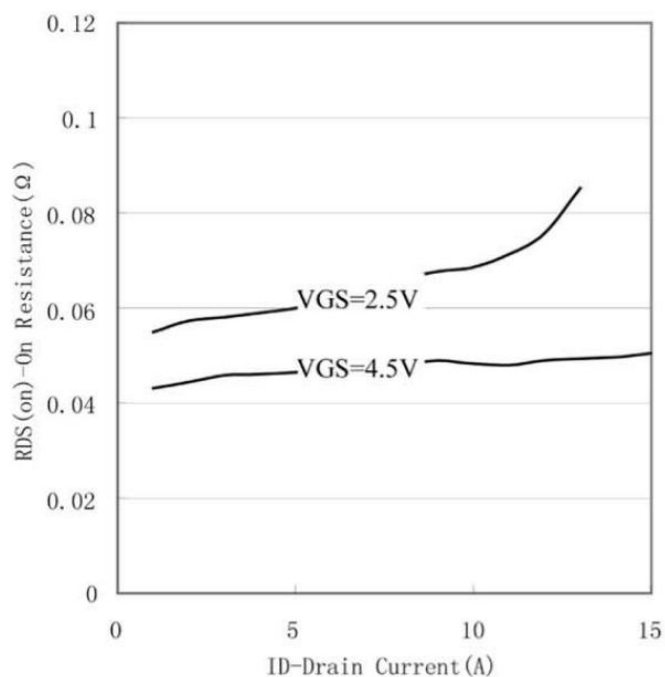
4. Gate Threshold Variation with Temperature



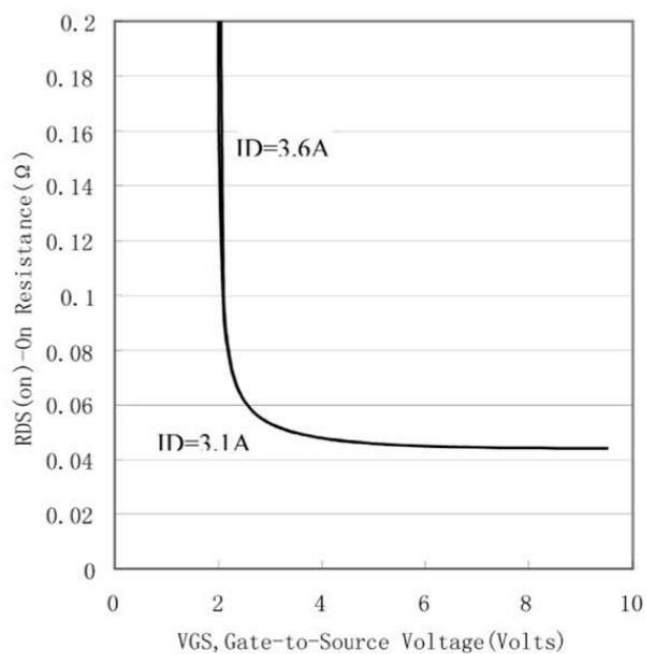
5. On-Resistance Variation with Temperature



6. On-Resistance vs. Drain Current



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



8. Source-Drain Diode Forward Voltage

