

P-Channel Enhancement Mode MOSFET

Feature

-30V/-4.2A, $R_{DS(ON)} = 55\text{m}\Omega(\text{MAX}) @V_{GS} = -10\text{V}$.
 $R_{DS(ON)} = 70\text{m}\Omega(\text{MAX}) @V_{GS} = -4.5\text{V}$.
 $R_{DS(ON)} = 120\text{m}\Omega(\text{MAX}) @V_{GS} = -2.5\text{V}$.

Super High dense cell design for extremely low $R_{DS(ON)}$

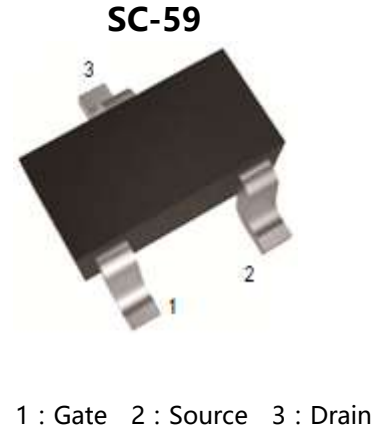
Reliable and Rugged

SC-59 for Surface Mount Package

Applications

Power Management

Portable Equipment and Battery Powered Systems.



Absolute Maximum Ratings TA=25°C Unless Otherwise noted

Parameter	Symbol	Limit	Units
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	± 12	V
Drain Current-Continuous	I_D	-4.2	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	$V_{GS}=0\text{V}, I_D=-250\mu\text{A}$	-30	-	-	V
Zero-Gate Voltage Drain Current	IDSS	$V_{DS}=-24\text{V}, V_{GS}=0\text{V}$	-	-	-1	μA
Gate Body Leakage Current, Forward	IGSSF	$V_{GS}=12\text{V}, V_{DS}=0\text{V}$	-	-	100	nA
Gate Body Leakage Current, Reverse	IGSSR	$V_{GS}=-12\text{V}, V_{DS}=0\text{V}$	-	-	-100	nA
On Characteristics						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{GS}=V_{DS}, I_D=-250\mu\text{A}$	-0.7	-	-1.3	V
Static Drain-source On-Resistance	RDS(ON)	$V_{GS}=-10\text{V}, I_D=-4.2\text{A}$	-	50	55	$\text{m}\Omega$
		$V_{GS}=-4.5\text{V}, I_D=-4.0\text{A}$	-	60	70	$\text{m}\Omega$
		$V_{GS}=-2.5\text{V}, I_D=-1.0\text{A}$	-	80	120	$\text{m}\Omega$
Drain-Source Diode Characteristics and Maximum Ratings						
Drain-Source Diode Forward Voltage	VSD	$V_{GS}=0\text{V}, I_S=-1.0\text{A}$			-1.0	V

Typical Characteristics

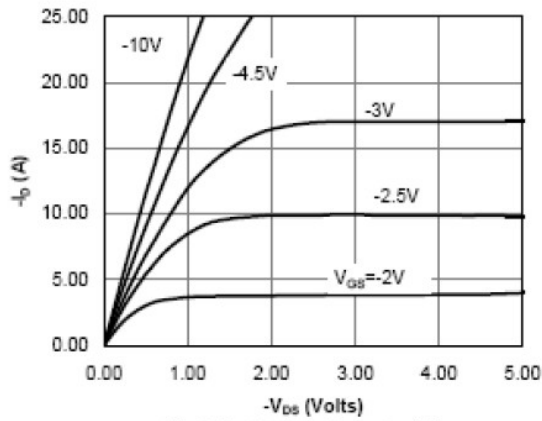


Fig 1: On-Region Characteristics

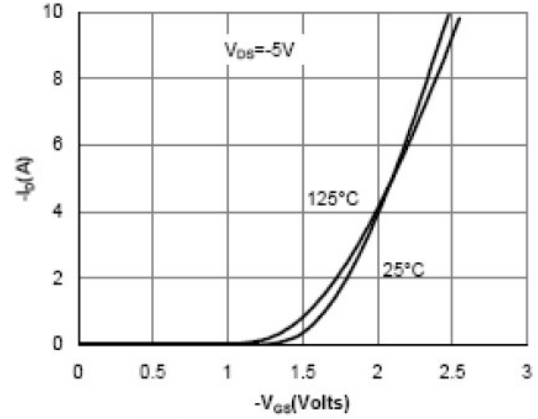


Figure 2: Transfer Characteristics

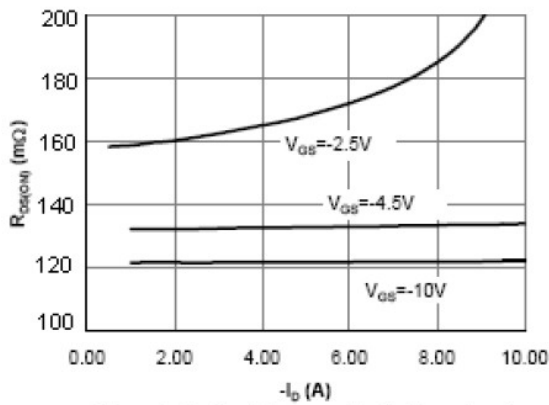


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

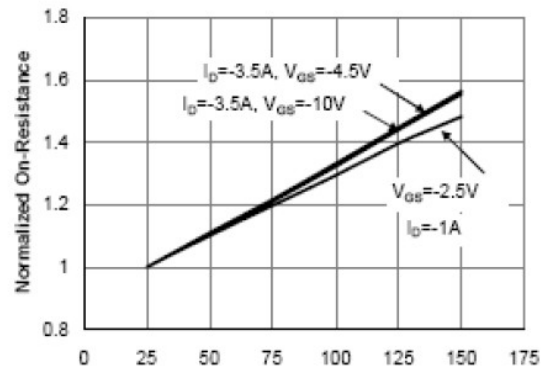


Figure 4: On-Resistance vs. Junction Temperature

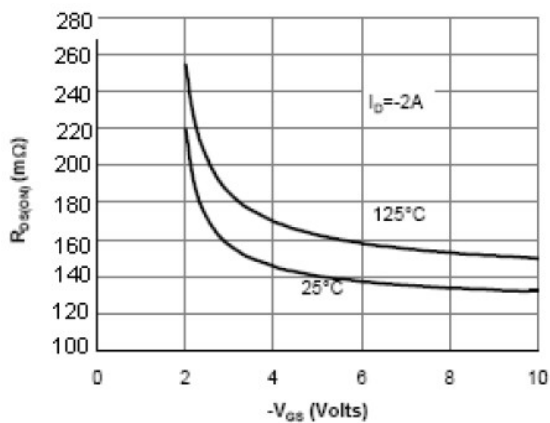


Figure 5: On-Resistance vs. Gate-Source Voltage

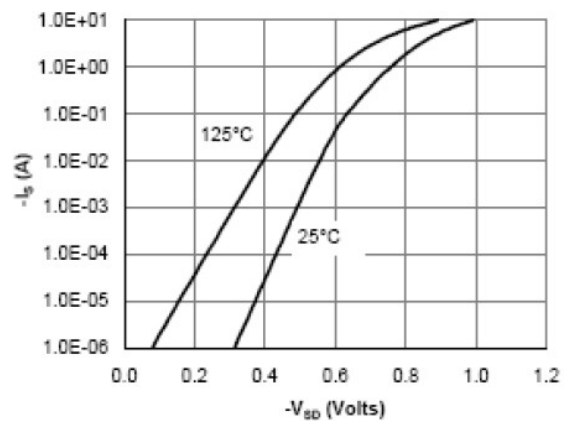


Figure 6: Body-Diode Characteristics

Package Outline Dimensions (UNIT: mm)

SC-59

