

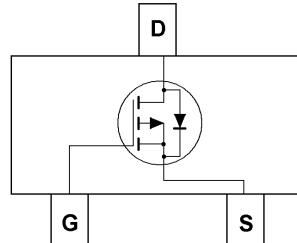
30V P-Channel MOSFET

Feature

- 30V P-Channel MOSFET High Dense Design.
- Ultra low On-Resistance.
- $R_{DS(ON)} = 100\text{m}\Omega(\text{typ.})$ @ $V_{GS} = -10\text{V}$
- $R_{DS(ON)} = 140\text{m}\Omega(\text{typ.})$ @ $V_{GS} = -4.5\text{V}$
- Reliable and Rugged.



SC-59



Applications

- Power Management in Portable Equipment and Battery Powered Systems and other General Application.

1. Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ Unless Otherwise Noted)

Symbol	Parameter	Rating	Unit
V_{DSS}	Drain-Source Voltage	-30	V
V_{GSS}	Gate-Source Voltage	± 20	
I_D	Continue Drain Current	-2.6	A
I_{DM}	Pulsed Drain Current	-10	
I_S	Diode Continuous Forward Current	-2.6	A
T_J	Maximum Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature Range	-55 to 150	
$R_{\theta JA}$	Thermal Resistance-Junction to Ambient	150	$^\circ\text{C}/\text{W}$

2. Static Electrical Characteristics ($T_A = 25^\circ\text{C}$ Unless Otherwise Noted)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
Static						
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0\text{V}, I_{DS}=-250\mu\text{A}$	-30			V
$I_{DS(0)}$	Zero Gate Voltage Drain Current	$V_{DS}=-24\text{V}, V_{GS}=0\text{V}$ $T_J=85^\circ\text{C}$			-1	μA
					-30	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_{DS}=250\mu\text{A}$	-1.0	-1.6	-2.5	V
I_{GSS}	Gate Body Leakage Current	$V_{GS}=\pm 20\text{V}, V_{DS}=0\text{V}$			± 100	nA
$R_{DS(ON)}$	Drain-Source On-state Resistance	$V_{GS}=-10\text{V}, I_{DS}=-0.5\text{A}$		100	120	$\text{m}\Omega$
		$V_{GS}=-4.5\text{V}, I_{DS}=-0.5\text{A}$		140	170	
V_{SD}	Diode Forward Voltage	$I_{SD}=-0.5\text{A}, V_{GS}=0\text{V}$		-0.7	-1.3	V

Typical Characteristics

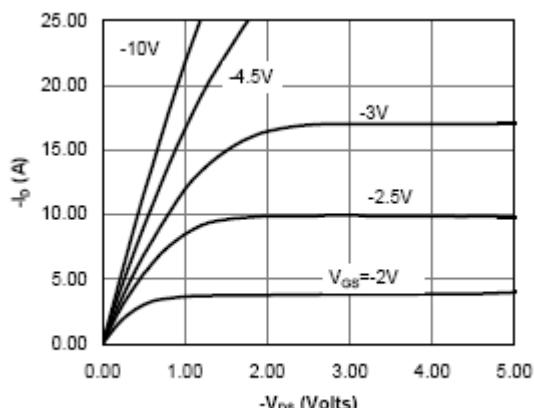


Fig 1: On-Region Characteristics

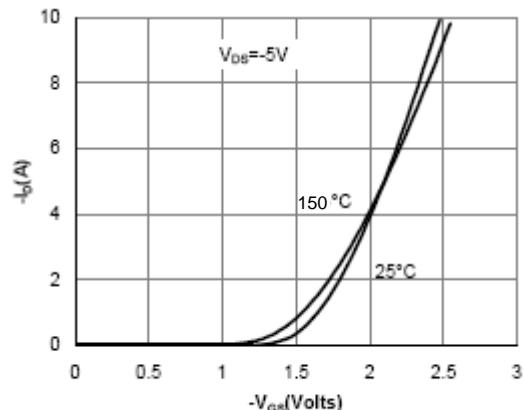


Figure 2: Transfer Characteristics

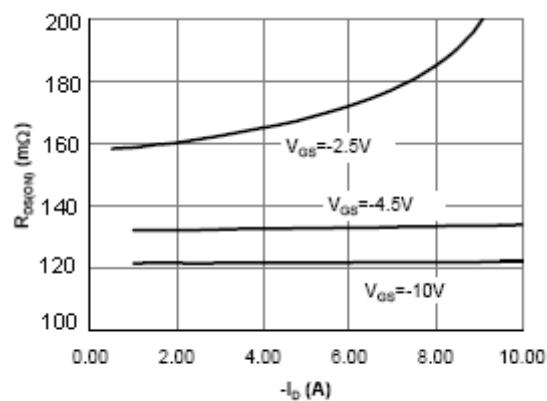


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

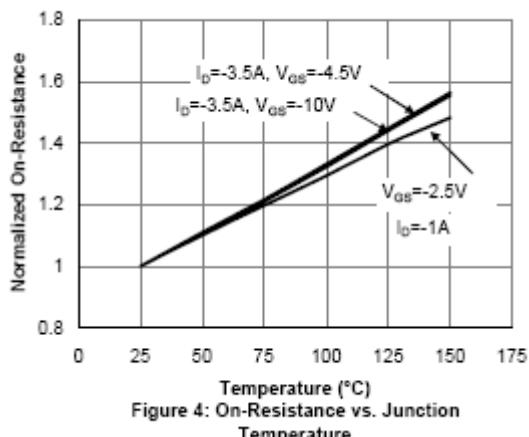
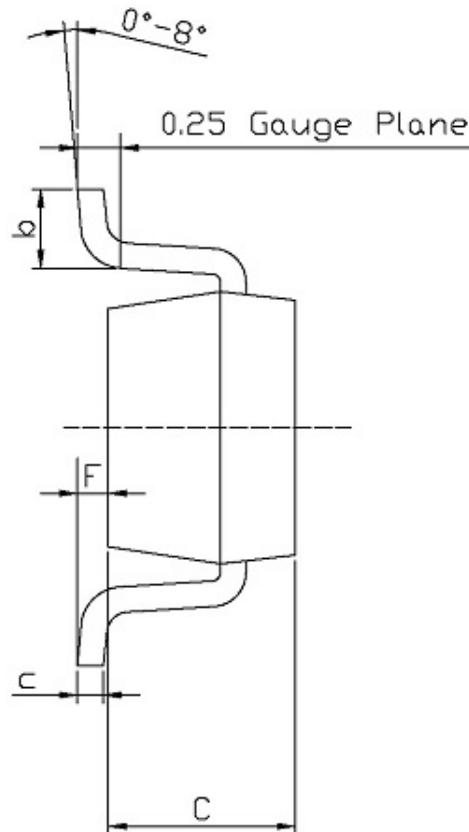
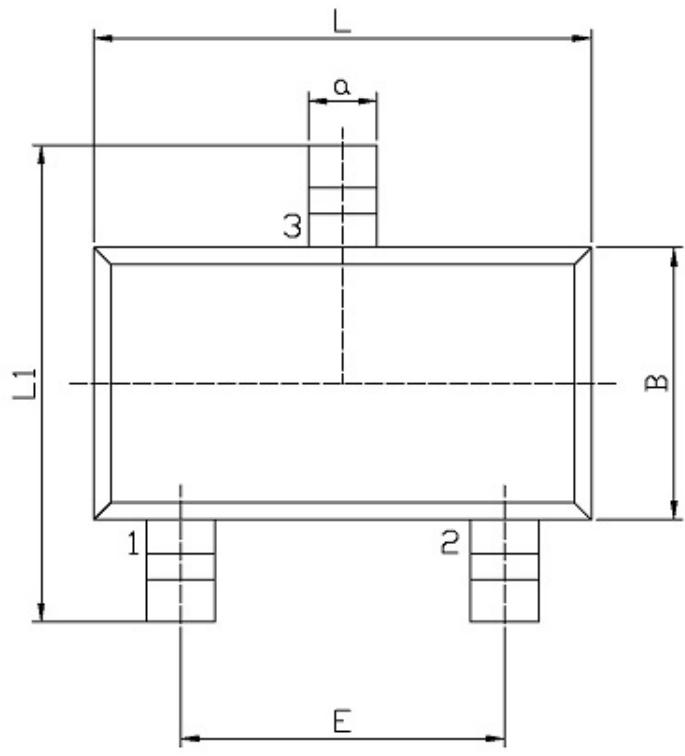


Figure 4: On-Resistance vs. Junction Temperature

Package Outline Dimensions (UNIT: mm)
SC-59

Unit: mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.82	3.02	a	0.35	0.50
B	1.50	1.70	c	0.10	0.20
C	0.90	1.30	b	0.35	0.55
L1	2.60	3.00	F	0	0.15
E	1.80	2.00			

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