

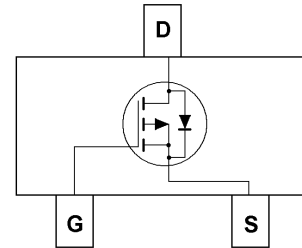
## 30V P-Channel MOSFET

### Feature

- 30V P-Channel MOSFET High Dense Design.
- Ultra low On-Resistance.
- $R_{DS(ON)} = 100m\Omega(\text{typ.}) @ V_{GS} = -10V$
- $R_{DS(ON)} = 140m\Omega(\text{typ.}) @ V_{GS} = -4.5V$
- 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	$\pm 20$	
$I_D$	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	$^\circ\text{C/W}$

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

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

## Typical Characteristics

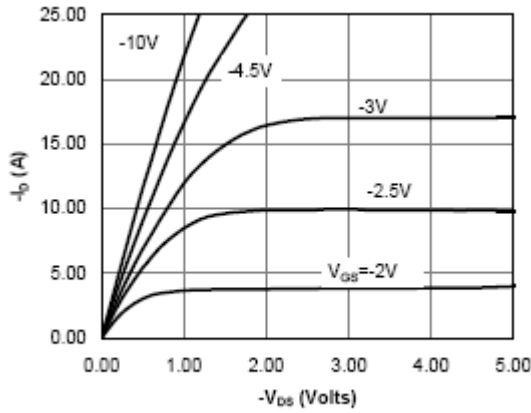


Fig 1: On-Region Characteristics

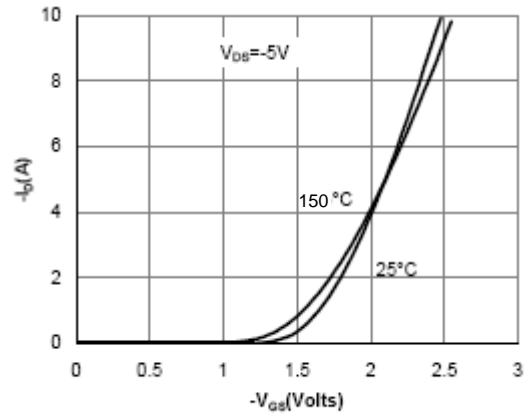


Figure 2: Transfer Characteristics

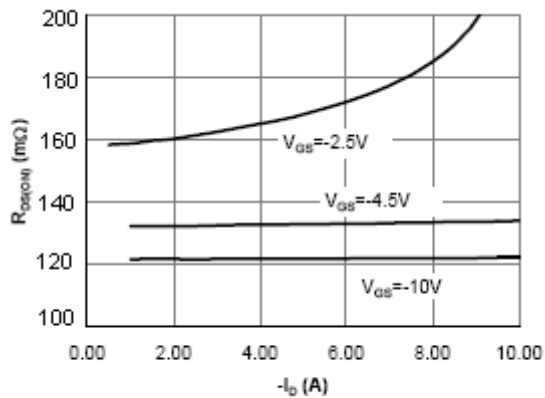


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

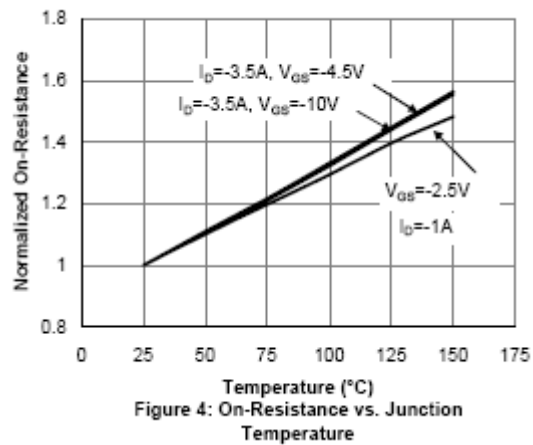
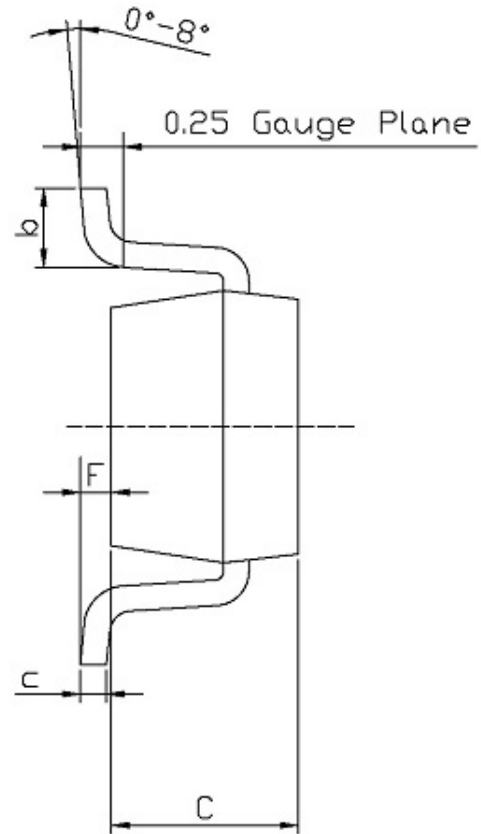
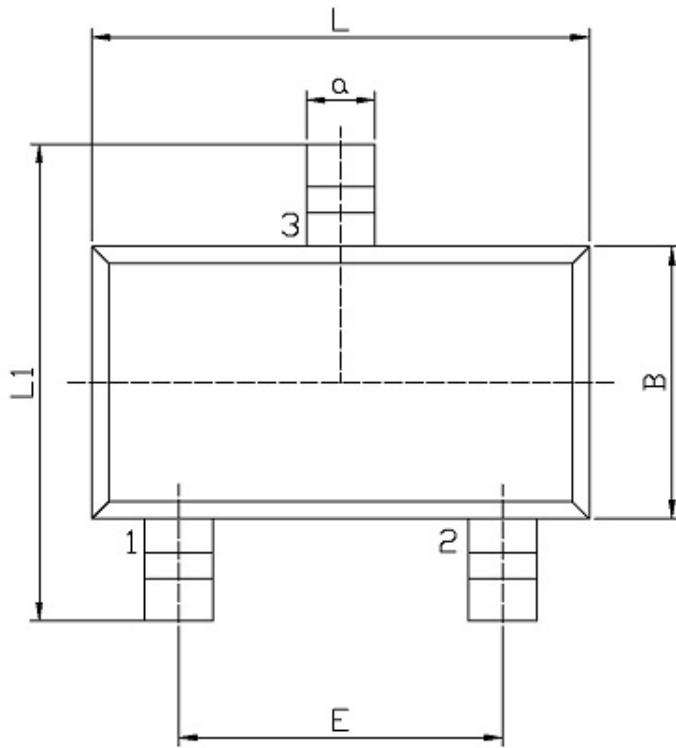


Figure 4: On-Resistance vs. Junction Temperature



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			