

## N-Channel Enhancement Mode MOSFET

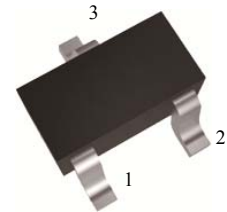
### Feature

- 30V/5.8A,  $R_{DS(ON)} = 35m\Omega(MAX) @V_{GS} = 10V$ .  
 $R_{DS(ON)} = 40m\Omega(MAX) @V_{GS} = 4.5V$ .  
 $R_{DS(ON)} = 55m\Omega(MAX) @V_{GS} = 2.5V$ .
- 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.

SC-59



1 : Gate 2 : Source 3 : Drain

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

Parameter	Symbol	Limit	Units
Drain-Source Voltage	$V_{DS}$	30	V
Gate-Source Voltage	$V_{GS}$	$\pm 12$	V
Drain Current-Continuous	$I_D$	5.8	A

### Electrical Characteristics TA=25°C Unless Otherwise noted

Parameter	Symbol	Test Conditions	Min	Typ.	Max	Units
<b>Off Characteristics</b>						
Drain to Source Breakdown Voltage	BVDSS	$V_{GS}=0V, I_D=250\mu A$	30	-	-	V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=30V, V_{GS}=0V$	-	-	1	$\mu A$
Gate Body Leakage Current, Forward	$I_{GSSF}$	$V_{GS}=12V, V_{DS}=0V$	-	-	100	nA
Gate Body Leakage Current, Reverse	$I_{GSSR}$	$V_{GS}=-12V, V_{DS}=0V$	-	-	-100	nA
<b>On Characteristics</b>						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{GS}=V_{DS}, I_D=250\mu A$	0.6	-	1.5	V
Static Drain-source On-Resistance	$R_{DS(ON)}$	$V_{GS}=10V, I_D=5.8A$	-	30	35	$m\Omega$
		$V_{GS}=4.5V, I_D=5A$	-	33	40	$m\Omega$
		$V_{GS}=2.5V, I_D=4A$	-	45	55	$m\Omega$
<b>Drain-Source Diode Characteristics and Maximum Ratings</b>						
Drain-Source Diode Forward Voltage	VSD	$V_{GS}=0V, I_S=1.25A$			1.2	V

### Dynamic

Symbol	Parameter	Test Conditions	Min	Typ.	Max	Units
$Q_g$	Total Gate Charge	$V_{DS}=15V, V_{GS}=10V, I_D=2A$		8.5	12	nC
$Q_{gs}$	Gate-Source Charge			1.1		
$Q_{gd}$	Gate-Drain Charge			1.8		
$t_{on}$	Turn-on Time	$V_{DD}=15V, I_D=2A, V_{GS}=10V, R_G=6\Omega$			40	ns
$t_{d(ON)}$	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	

SHIKE MAKE CONSCIOUS PRODUCT  
CONSCIOUS PRODUCTS BEGIN WITH CONSCIOUS PEOPLE



www.shike.tw

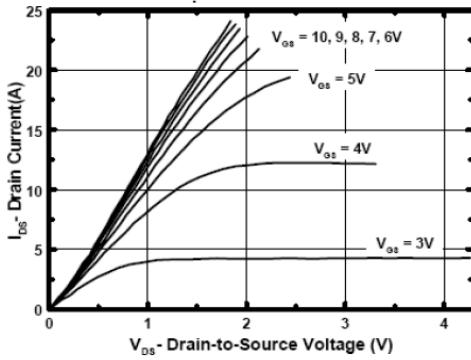


Figure 1. Output Characteristics

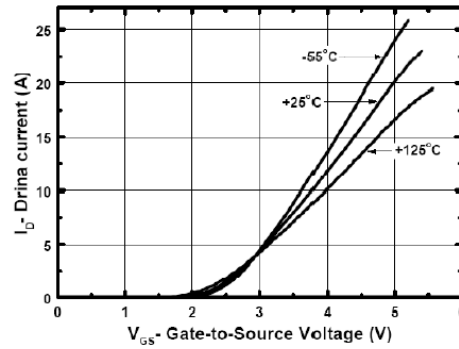


Figure 2. Transfer Characteristics

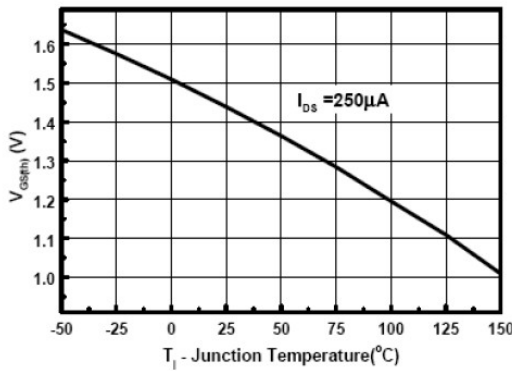


Figure 3. Gate Threshold Variation with Temperature

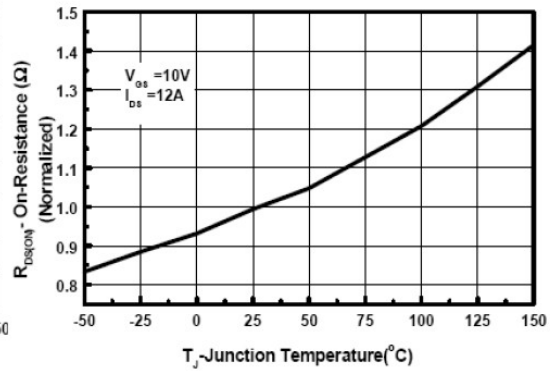


Figure 4. On-Resistance Variation with Temperature

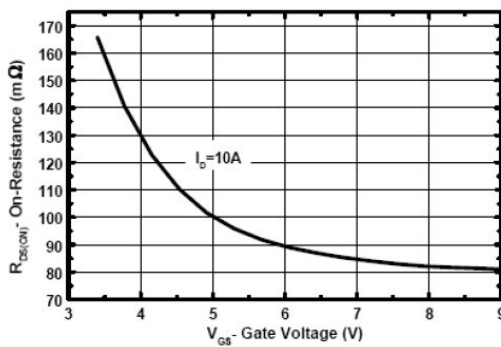


Figure 5. On-Resistance vs. Gate-to-Source Voltage

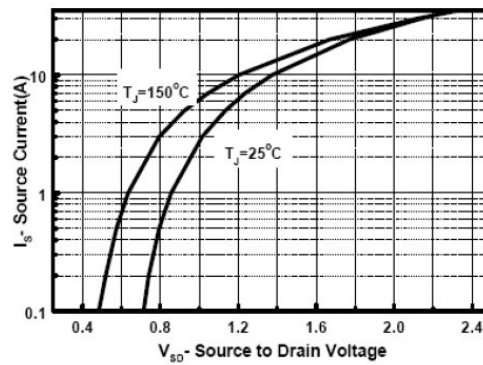
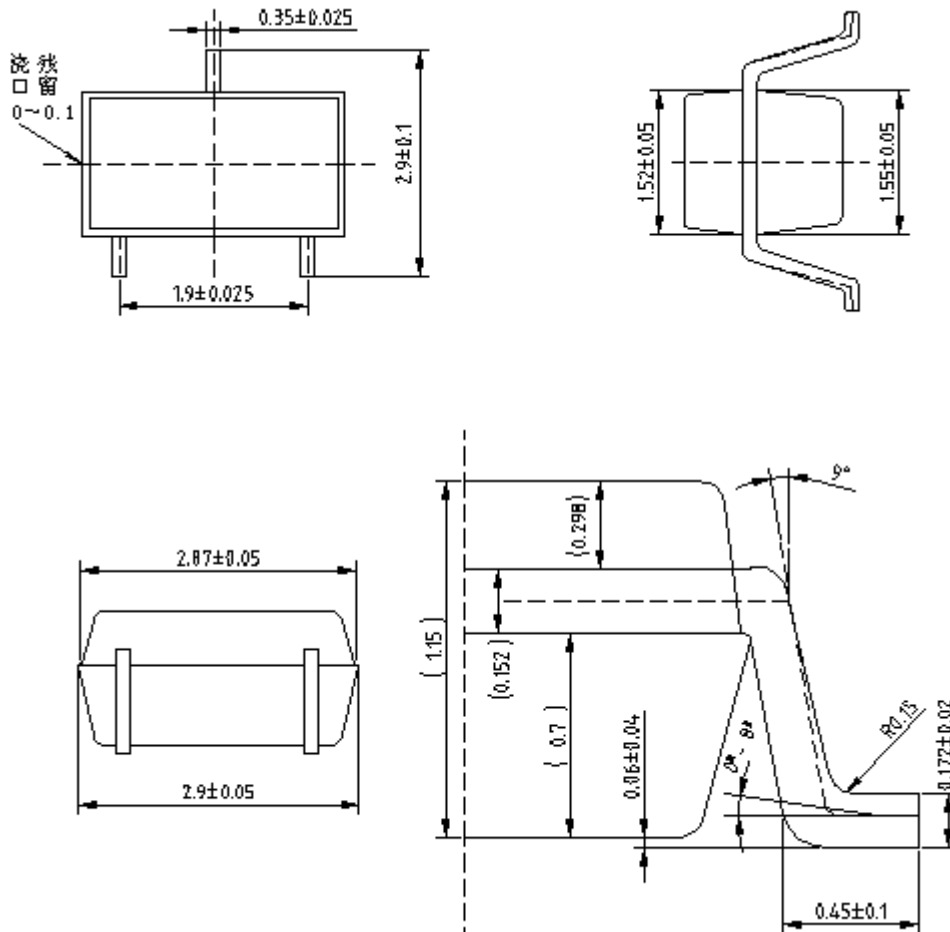


Figure 6. Source-Drain Diode Forward Voltage



## Package Outline Dimensions (UNIT: mm)

SC-59



SHIKE MAKE CONSCIOUS PRODUCT  
CONSCIOUS PRODUCTS BEGIN WITH CONSCIOUS PEOPLE

REV.07



www.shike.tw

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [MOSFET](#) category:*

*Click to view products by [Shikues](#) manufacturer:*

Other Similar products are found below :

[614233C](#) [648584F](#) [FDPF9N50NZ](#) [IRFD120](#) [IRFF430](#) [JANTX2N5237](#) [2N7000](#) [FCA20N60\\_F109](#) [FDZ595PZ](#) [2SK2267\(Q\)](#) [2SK2545\(Q,T\)](#)  
[405094E](#) [423220D](#) [MIC4420CM-TR](#) [VN1206L](#) [614234A](#) [715780A](#) [SSM6J414TU,LF\(T](#) [751625C](#) [PSMN4R2-30MLD](#)  
[TK31J60W5,S1VQ\(O](#) [2SK2614\(TE16L1,Q\)](#) [DMN1017UCP3-7](#) [EFC2J004NUZTDG](#) [FCAB21350L1](#) [P85W28HP2F-7071](#) [DMN1053UCP4-7](#)  
[NTE2384](#) [NTE2969](#) [NTE6400A](#) [DMN61D9UWQ-13](#) [US6M2GTR](#) [DMN31D5UDJ-7](#) [SSM6P54TU,LF](#) [DMP22D4UFO-7B](#)  
[IPS60R3K4CEAKMA1](#) [DMN1006UCA6-7](#) [DMN16M9UCA6-7](#) [STF5N65M6](#) [STU5N65M6](#) [C3M0021120D](#) [DMN13M9UCA6-7](#)  
[BSS340NWH6327XTSA1](#) [MCM3400A-TP](#) [DMTH10H4M6SPS-13](#) [IPS60R1K0PFD7SAKMA1](#) [IPS60R360PFD7SAKMA1](#)  
[IPS60R600PFD7SAKMA1](#) [IPS60R210PFD7SAKMA1](#) [DMN2990UFB-7B](#)