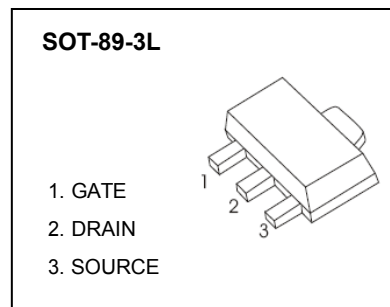


N-Channel MOSFET

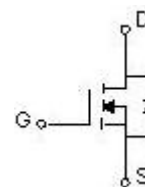
$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
60 V	46mΩ@10V	5.2A
	52mΩ@4.5V	



FEATURE

- TrenchFET Power MOSFET
- Low $R_{DS(ON)}$
- Surface Mount Package

Equivalent Circuit



MARKING: 6362

ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	5.2	A
Maximum Power Dissipation	P_D	2	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	62.5	$^{\circ}\text{C/W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~+150	$^{\circ}\text{C}$
Lead Temperature for Soldering Purposes(1/8" from case for 10 s)	T_L	260	$^{\circ}\text{C}$

*Repetitive rating: Pluse width limited by junction temperature.

MOSFET ELECTRICAL CHARACTERISTICS

$T_a=25\text{ }^{\circ}\text{C}$ unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	60			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 60V, V_{GS} = 0V$			1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 100	nA
Gate threshold voltage(note 1)	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.0		2.5	V
Drain-source on-resistance (note 1)	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 3A$			46	m Ω
		$V_{GS} = 4.5V, I_D = 2A$			52	m Ω
Diode forward voltage (note 1)	V_{SD}	$I_S = 1A, V_{GS} = 0V$			1.2	V
DYNAMIC PARAMETERS (note2)						
Input Capacitance	C_{iss}	$V_{DS} = 15V, V_{GS} = 0V, f = 1MHz$		963		pF
Output Capacitance	C_{oss}			64		pF
Reverse Transfer Capacitance	C_{rss}			47		pF
Gate Resistance	R_g	$F = 1MHz$		1.4		Ω
SWITCHING PARAMETERS (note 2)						
Turn-on delay time	$t_{d(on)}$	$V_{DD} = 30V, V_{GEN} = 10V$ $R_G = 6\Omega, I_D = 1A$		11		ns
Turn-on rise time	t_r			14		ns
Turn-off delay time	$t_{d(off)}$			51		ns
Turn-off fall time	t_f			10		ns
Total Gate Charge	Q_g	$V_{DS} = 30V, V_{GS} = 4.5V, I_D = 2A$		12		nC
Gate-Source Charge	Q_{gs}			2.4		nC
Gate-Drain Charge	Q_{gd}			5.0		nC

Notes : 1. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 0.5\%$.

2. Guaranteed by design, not subject to production testing.

Typical Characteristics

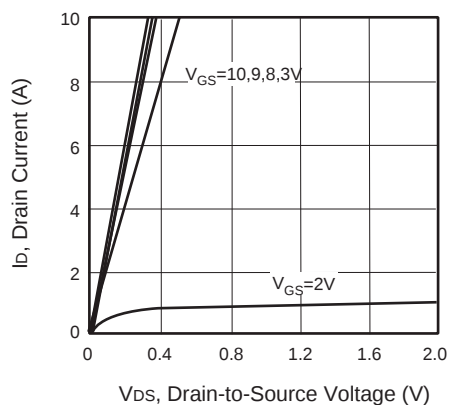


Figure 1. Output Characteristics

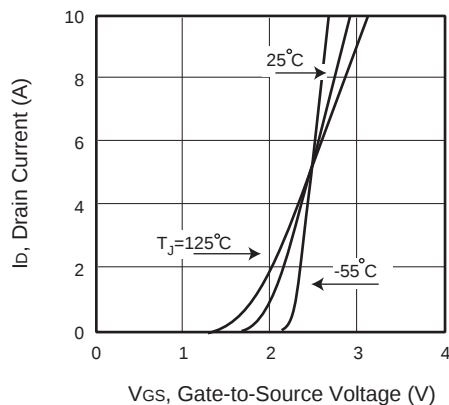


Figure 2. Transfer Characteristics

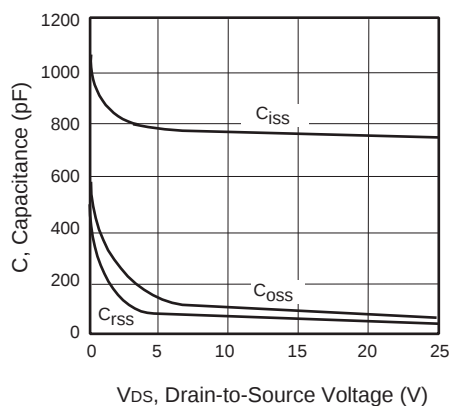


Figure 3. Capacitance

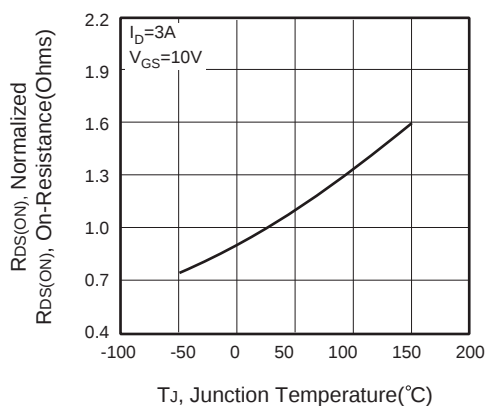


Figure 4. On-Resistance Variation with Temperature

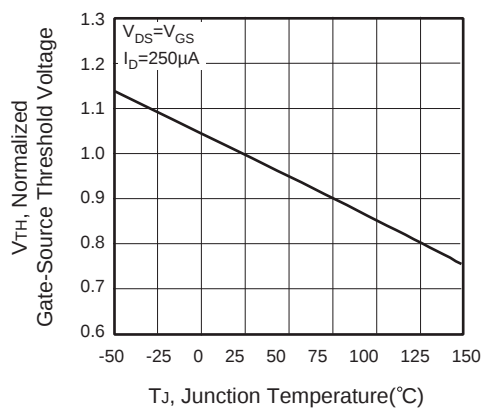


Figure 5. Gate Threshold Variation with Temperature

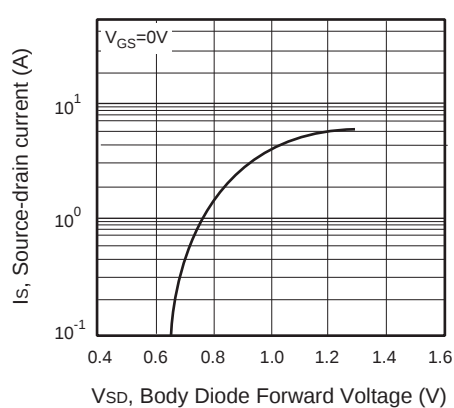


Figure 6. Body Diode Forward Voltage Variation with Source Current