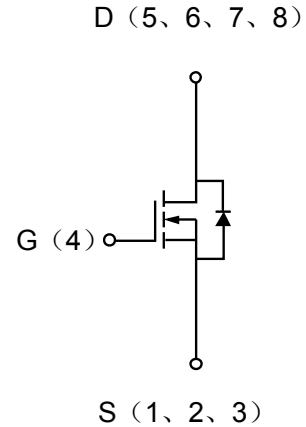


**Description**

The N-channel MOSFET has been designed specifically to improve the overall efficiency of DC/DC converters using either synchronous or conventional switching PWM controllers. It has been optimized for low gate charge, low on-resistance and fast switching speed.

MOSFET Product Summary		
$V_{DS}(V)$	$R_{DS(on)}(m\Omega)$	$I_D(A)$
30	12@ $V_{GS}=10V$	12.0
	17@ $V_{GS}=4.5V$	


**Electrical characteristics per line@25°C ( unless otherwise specified)**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
<b>OFF CHARACTERISTICS</b>						
Drain-Source Breakdown Voltage	$BV_{DSS}$	$I_D=250\mu A, V_{GS}=0V$	30	-	-	V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=24V, V_{GS}=0V$	-	-	1	$\mu A$
Gate-Body Leakage Current	$I_{GSS}$	$V_{DS}=0V, V_{GS}=\pm 20V$	-	-	$\pm 100$	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=10mA$	1.0	1.5	2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=10V, I_D=12A$	-	12	18	m $\Omega$
		$V_{GS}=4.5V, I_D=10A$	-	17	24	m $\Omega$
Drain-Source Diode Forward Voltage	$V_{SD}$	$V_{GS}=0V, I_S=1A$	-	0.65	1	V
<b>DYNAMIC PARAMETERS</b>						
Input Capacitance	$C_{ISS}$	$V_{GS}=0V, V_{DS}=15V,$ $f=1MHz$	-	900	1150	pF
Output Capacitance	$C_{DSS}$		-	135		pF
Reverse Transfer Capacitance	$C_{RSS}$		-	100		pF
<b>SWITCHING PARAMETERS</b>						
Turn-On Delay Time	$t_{d(on)}$	$V_{DS}=15V, V_{GS}=10V,$ $R_L=1.3\Omega, R_G=3\Omega$	-		7.5	ns
Turn-Off Delay Time	$t_{d(off)}$		-		20	ns

Absolute maximum rating@25°C

Rating		Symbol	Value	Units
Drain-Source Voltage		$V_{DS}$	30	V
Gate-Source Voltage		$V_{GS}$	$\pm 20$	V
Drain Current	Continuous	$I_D$	12.0	A
	Pulsed	$I_D$	55	A
Total Power Dissipation	$T_A=25^\circ\text{C}$	$P_D$	3.2	W
	$T_A=125^\circ\text{C}$	$P_D$	2.5	W

Typical Characteristics

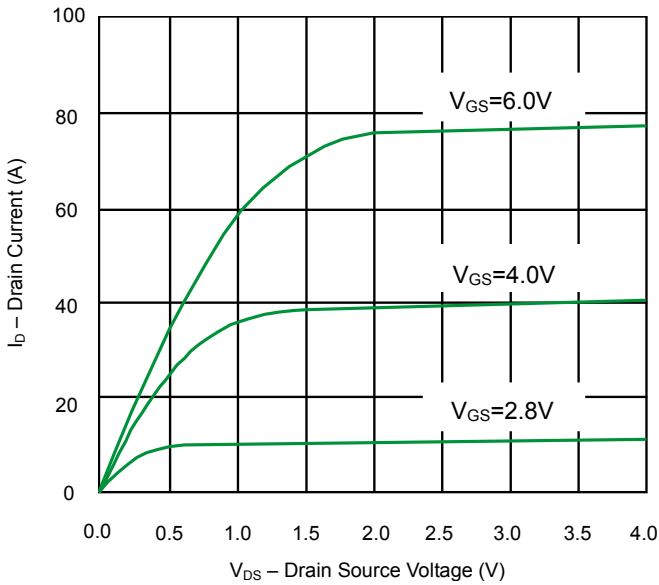


Fig 1. Output Characteristics

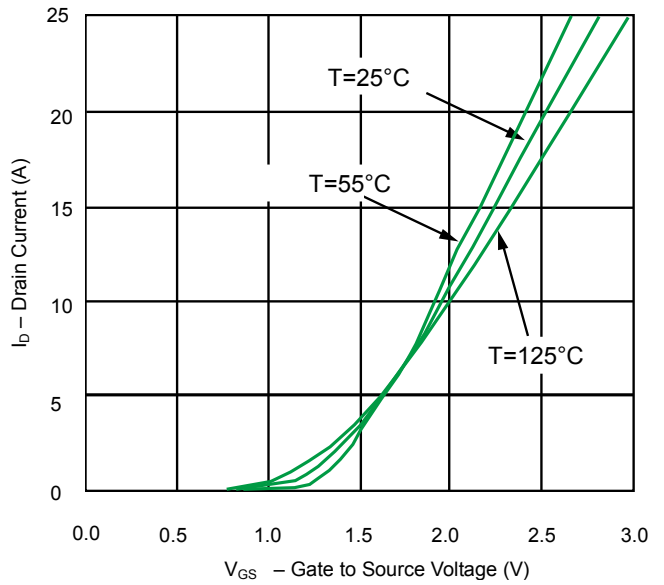


Fig 2. Transfer Characteristics

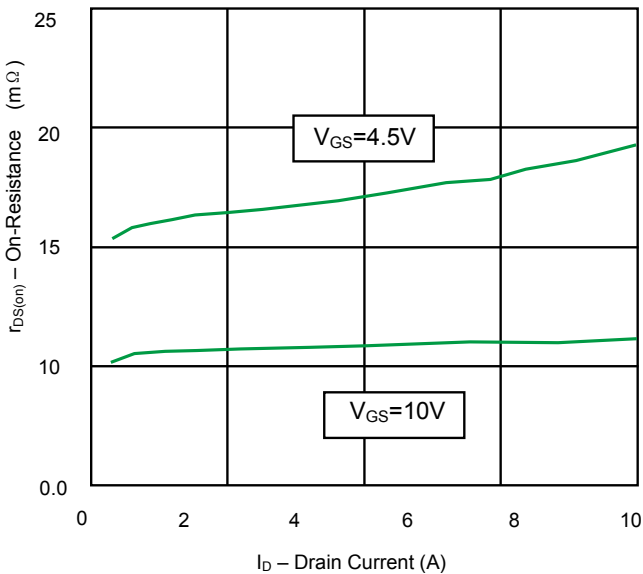


Fig 3. On-Resistance vs. Drain Current

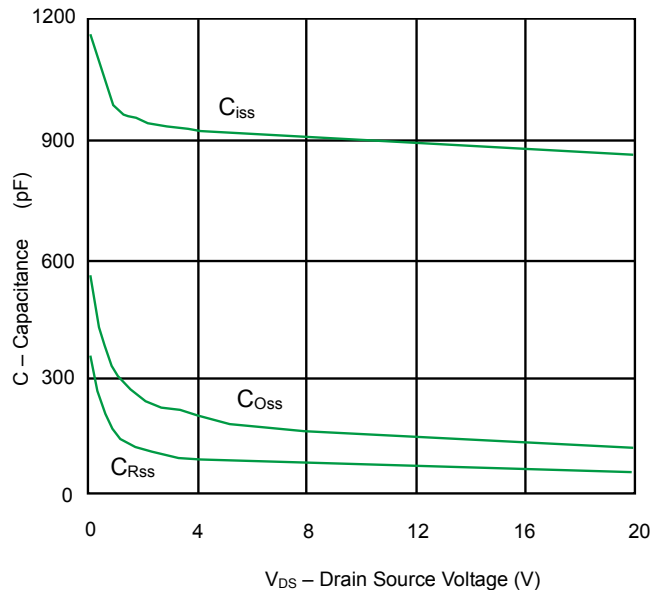
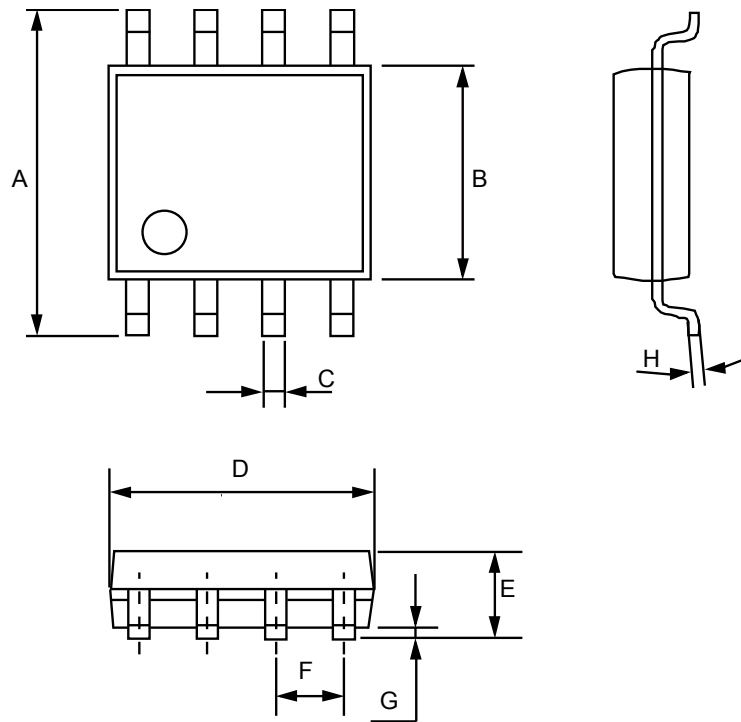



Fig 4. Capacitance

Product dimension (SOP-8)



Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	5.800	6.200	0.228	0.244
B	3.800	4.000	0.150	0.157
C	0.330	0.510	0.013	0.020
D	4.700	5.100	0.185	0.200
E	1.350	1.750	0.053	0.069
F	1.270 (BSC)		0.050 (BSC)	
G	0.100	0.250	0.004	0.010
H	0.170	0.250	0.006	0.010


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