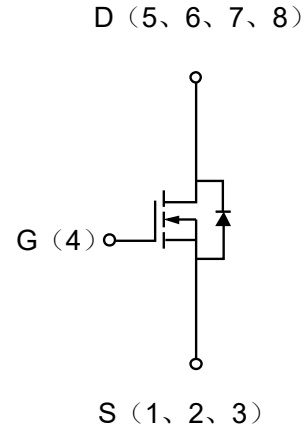


Description

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)} (mΩ)	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
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV _{DSS}	I _D =250μA, V _{GS} =0V	30	-	-	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =24V, V _{GS} =0V	-	-	1	μA
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V	-	-	±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	mΩ
		V _{GS} =4.5V, I _D =10A	-	17	24	mΩ
Drain-Source Diode Forward Voltage	V _{SD}	V _{GS} =0V, I _S =1A	-	0.65	1	V
DYNAMIC PARAMETERS						
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
SWITCHING PARAMETERS						
Turn-On Delay Time	t _{d(on)}	V _{DS} =15V, V _{GS} =10V, R _L =1.3Ω, R _G =3Ω	-		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}	± 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

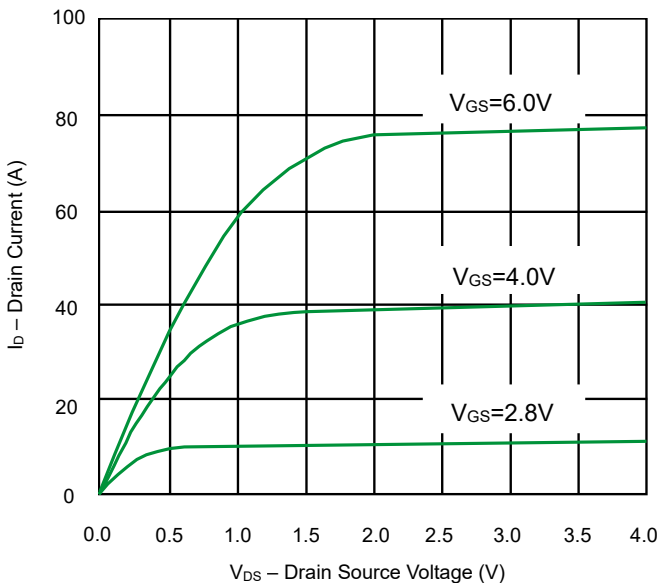


Fig 1. Output Characteristics

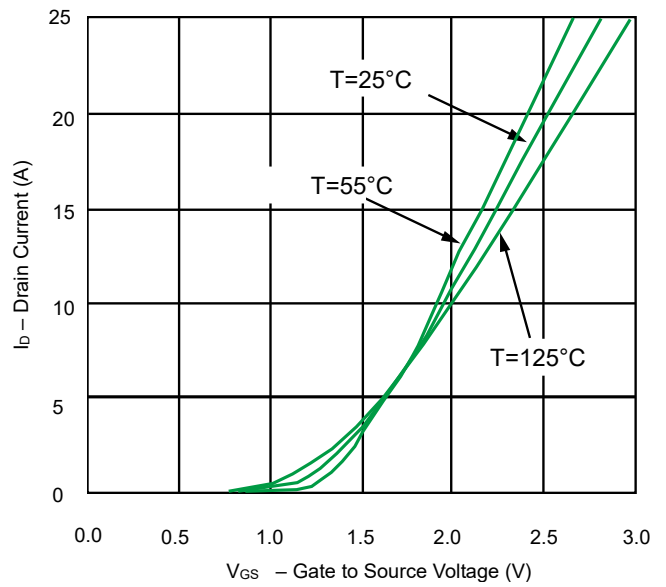


Fig 2. Transfer Characteristics

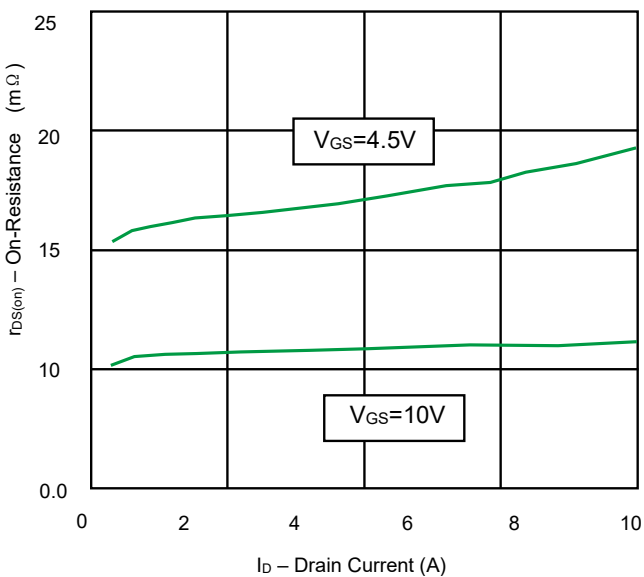


Fig 3. On-Resistance vs. Drain Current

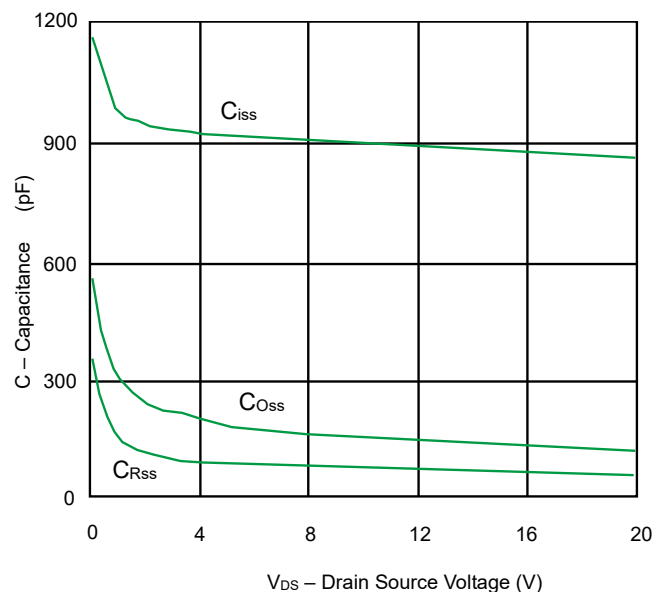
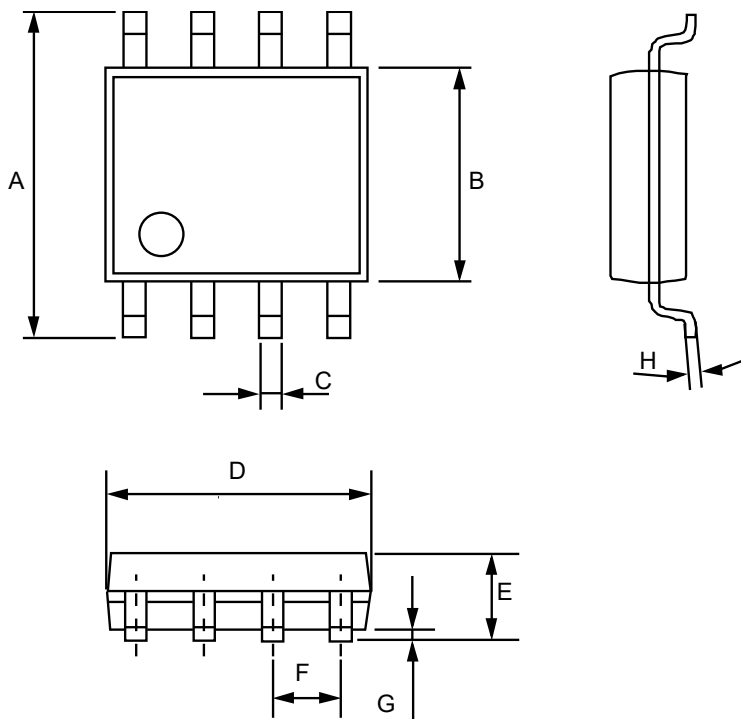


Fig 4. Capacitance

Product dimension (SOP-8)

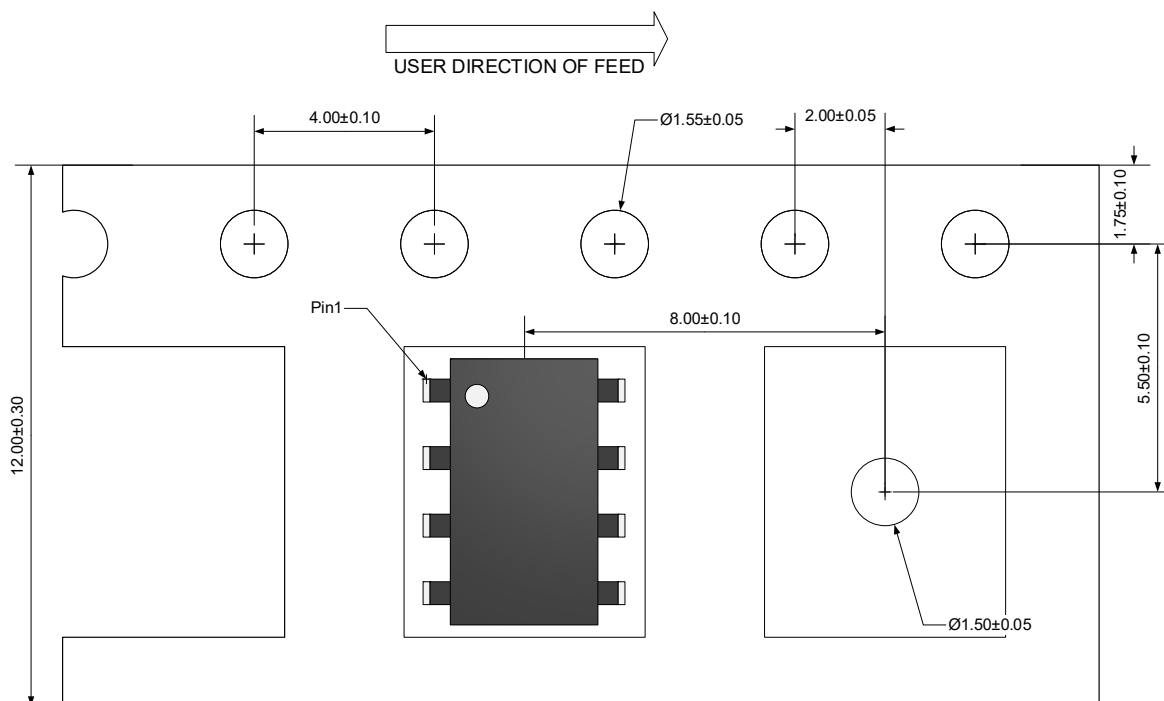


Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	5.800	6.200	0.228	0.244
B	3.800	4.000	0.150	0.157
C	0.330	0.510	0.013	0.020
D	4.700	5.100	0.185	0.200
E	1.350	1.750	0.053	0.069
F	1.270 (BSC)		0.050 (BSC)	
G	0.100	0.250	0.004	0.010
H	0.170	0.250	0.006	0.010

Ordering information


Device	Package	Reel	Shipping
PNM8P30V12	SOP-8	13"	4000 / Tape & Reel

Load with information



Unit:mm


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