

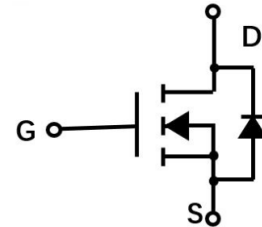
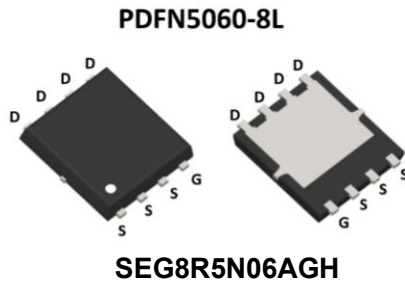
Features

- 60V, 60A
- $R_{DS(ON)} = 8.5m\Omega$ (Max.) @ $V_{GS} = 10V, I_D = 20A$
- Low $R_{DS(on)}$ & FOM
- Extremely low switching loss
- Excellent stability and uniformity
- Fast switching and soft recovery
- 100% UIS tested , 100% ΔV_{DS} Tested

Application

- Consumer electronic power supply
- Motor control
- Synchronous-rectification
- Isolated DC/DC convertor
- Invertors

Package



Absolute Maximum Ratings $T_C=25^\circ C$ unless otherwise specified

Symbol	Parameter	Rating.	Units
V_{DSS}	Drain-Source Voltage	60	V
V_{GSS}	Gate-Source Voltage	± 20	V
I_D	Continuous Drain Current	$T_C = 25^\circ C$	60
I_D	Continuous Drain Current	$T_C = 100^\circ C$	36.5
I_{DM}	Pulsed Drain Current ^{note1}		24
EAS	Single Pulse Avalanche Energy ^{note2}		72
IAS	Single Pulse Avalanche Current ^{note2}		38
P_D	Power Dissipation	$T_C = 25^\circ C$	69
$R_{\theta JC}$	Thermal Resistance, Junction to Case		1.82
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient		62
T_J, T_{STG}	Operating and Storage Temperature Range		-55 to +150

*Drain current limited by maximum junction temperature

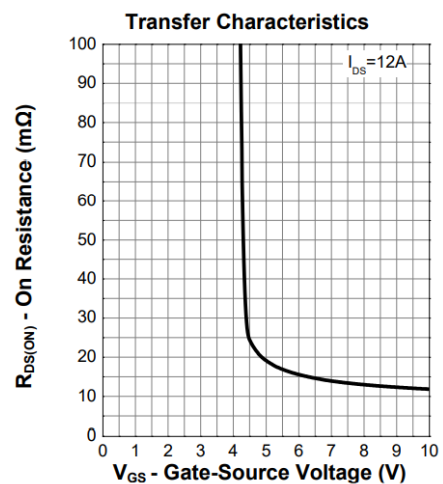
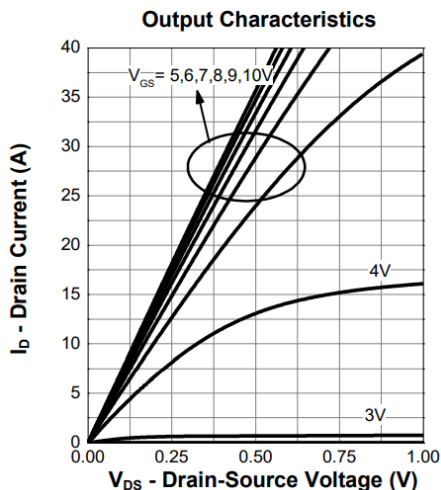
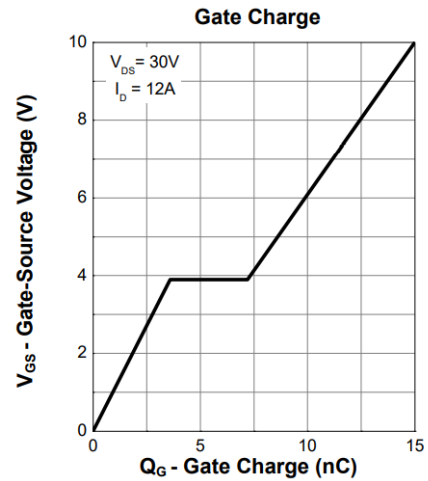
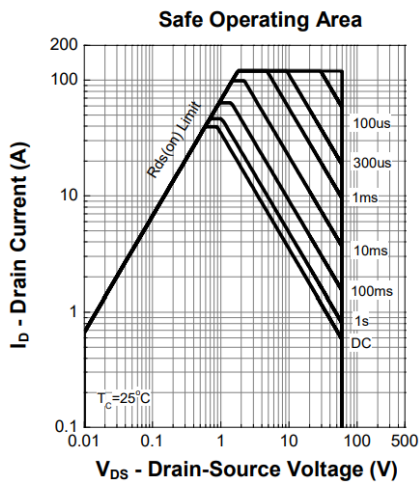
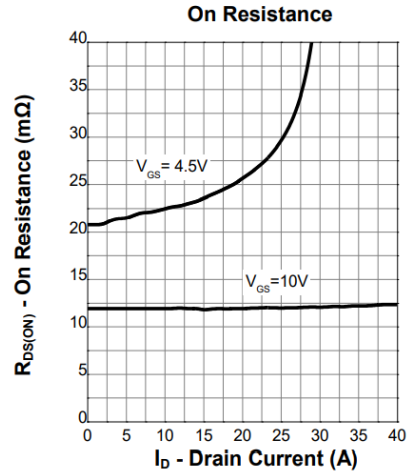
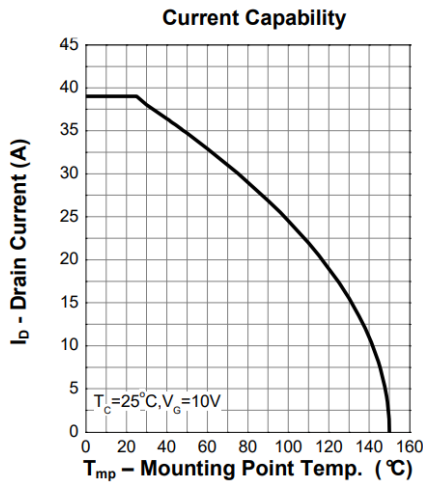
Electrical Characteristics $T_C=25^{\circ}\text{C}$ unless otherwise specified

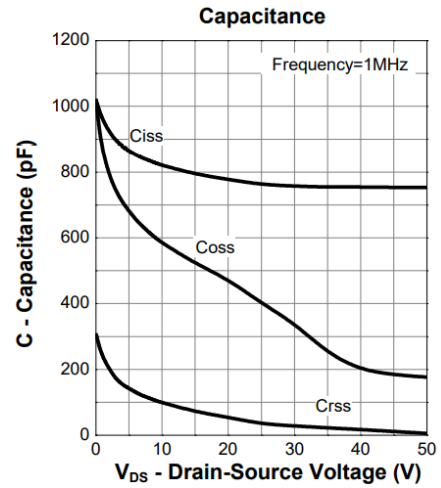
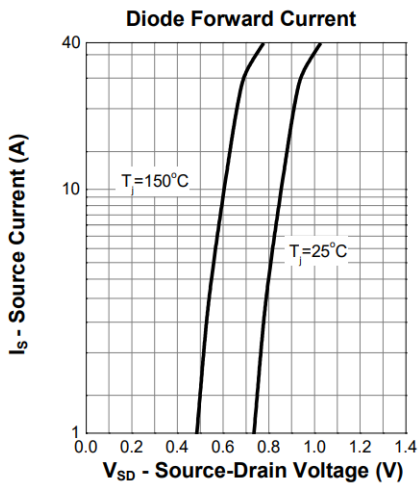
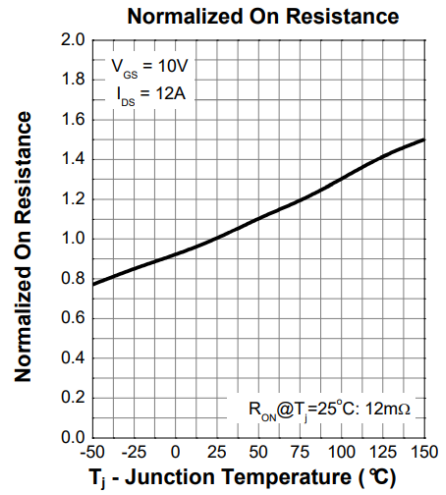
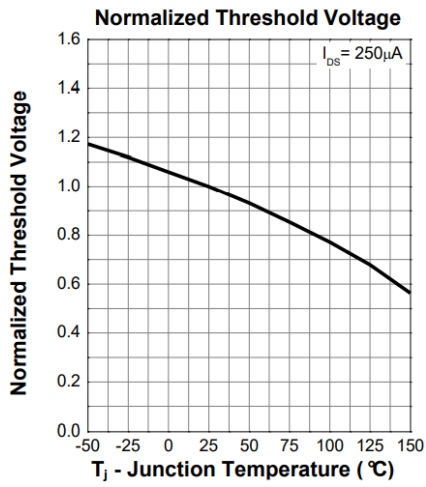
Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
Off Characteristic						
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS} = 0V, I_D = 250\mu A$	60	-	-	V
I_{DSS}	Drain-Source Leakage Current	$V_{DS} = 60V, V_{GS} = 0V$	-	-	1	μA
I_{GSS}	Gate to Body Leakage Current	$V_{DS} = 0V, V_{GS} = \pm 25V$	-	-	± 100	nA
On Characteristics						
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}, I_D = 250\mu A$	2	3	4	V
$R_{DS(on)}$	Static Drain-Source On-Resistance	$V_{GS} = 10V, I_D = 20A$	-	7.5	8.5	m Ω
Dynamic Characteristics						
C_{iss}	Input Capacitance	$V_{DS} = 30V, V_{GS} = 0V,$ $f = 1.0MHz$	-	860	-	pF
C_{oss}	Output Capacitance		-	340	-	pF
C_{rss}	Reverse Transfer Capacitance		-	28	-	pF
Switching Characteristics <small>note3,4</small>						
Q_g	Total Gate Charge	$V_{DS} = 30V, I_D = 12A,$ $V_{GS} = 10V$	-	15	-	nC
Q_{gs}	Gate-Source Charge		-	3.6	-	
Q_{gd}	Gate-Drain("Miller") Charge		-	3.6	-	
$t_{d(on)}$	Turn-On Delay Time	$V_{DS} = 30V, I_D = 12A,$ $R_G = 4.5\Omega, V_{GEN} = 10V$ $R_L = 2.5\Omega$	-	6.2	-	ns
t_r	Turn-On Rise Time		-	23	-	
$t_{d(off)}$	Turn-Off Delay Time		-	13	-	
t_f	Turn-Off Fall Time		-	17	-	
Diode Characteristics						
I_S	Continuous Source Current		-	-	60	A
I_{SM}	Pulsed Source Current		-	-	240	A
V_{DS}	Diode Forward Voltage <small>note2</small>	$I_S = 12A, V_{GS} = 0V$	-	-	1	V
t_{rr}	Reverse Recovery Time	$V_{GS} = 0V, I_S = 12A,$	-	31	-	ns
Q_{rr}	Reverse Recovery Charge	$di/dt = 100A/\mu s$	-	11	-	μC

Notes:

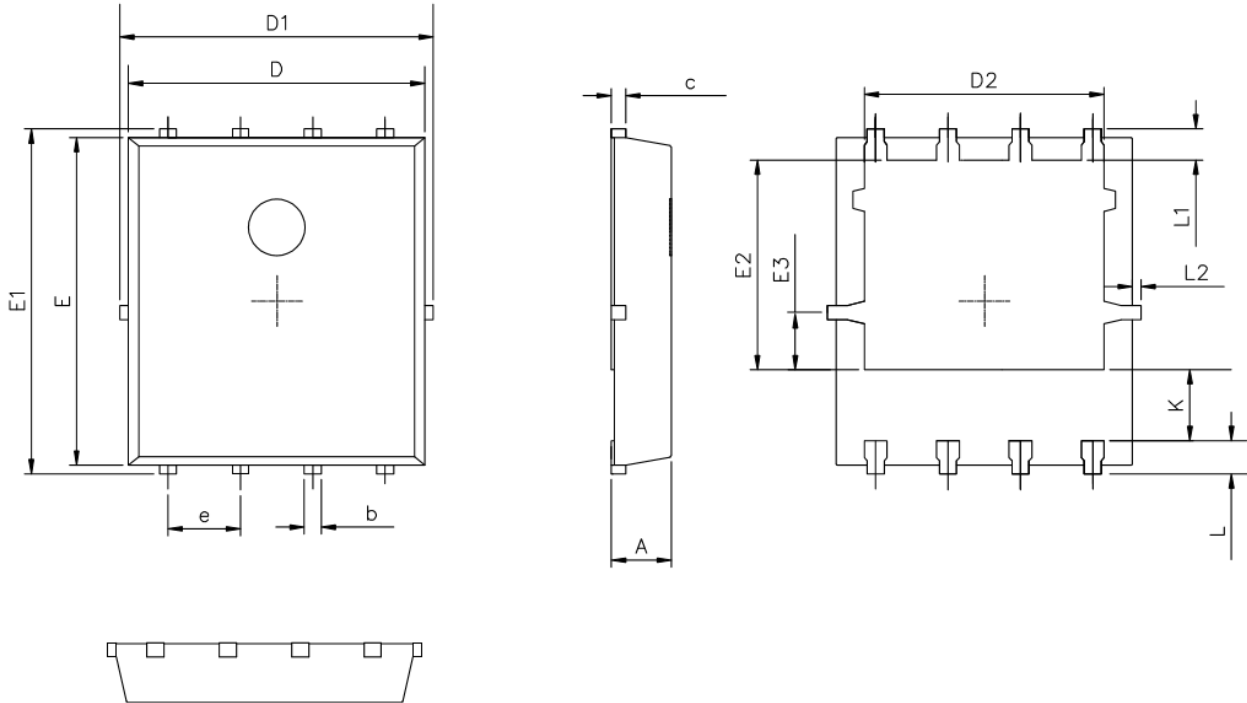
1. Repetitive Rating : Pulsed width limited by maximum junction temperature.
2. $V_{DD}=25V, V_{GS}=10V, L=0.1mH, I_{AS}=38A, R_G=25\Omega, \text{Starting } T_J=25^{\circ}\text{C}$.
3. The data tested by pulsed , pulse width $\cong 300\mu s$, duty cycle $\cong 2\%$.
4. Essentially independent of operating temperature.

Typical Performance Characteristics

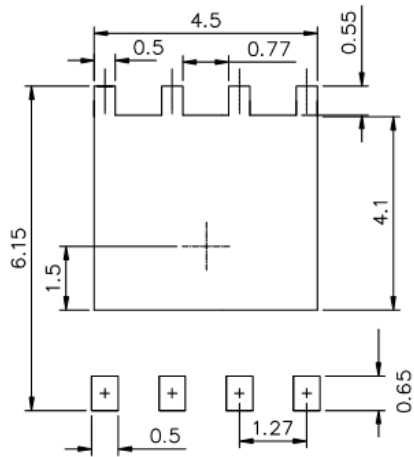




PDFN5060-8L Package Mechanical Data



RECOMMENDED LAND PATTERN



UNIT:mm

	MIN	NOM	MAX
A	0.90	1.00	1.10
b	0.25	0.35	0.50
c	0.10	0.20	0.30
D	4.80	5.00	5.30
D1	4.90	5.10	5.50
D2	3.92	4.02	4.20
E	5.65	5.75	5.85
E1	5.90	6.05	6.20
E2	3.325	3.525	3.775
E3	0.80	0.90	1.00
e		1.27	
L	0.40	0.55	0.70
L1		0.65	
L2	0.00		0.15
K	1.00	1.30	1.50

SEG8R5N06AGH Product Description

Silicon N-Channel MOSFET



NOTE:

1. We strongly recommend customers check carefully on the trademark when buying our product, if there is any question, please don't be hesitate to contact us.
2. Please do not exceed the absolute maximum ratings of the device when circuit designing.
3. Winsemi Microelectronics Co., Ltd reserved the right to make changes in this specification sheet and is subject to change without prior notice.

CONTACT:

Winsemi Microelectronics Co., Ltd.

ADD: Room 1002, East, Phase 2, HighTech Plaza, Tian-An Cyber Park, Che gong miao, FuTian, Shenzhen, P.R. China.

Post Code : 518040

Tel : +86-755-8250 6288

FAX : +86-755-8250 6299

Web Site : www.winsemi.com