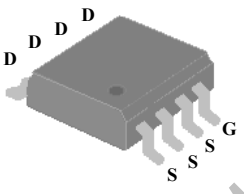
WG60P60

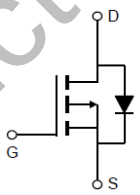
Features:

- ☐ High power and current handing capability
- ☐ Lead free product is acquired
- ☐ Surface mount package
- ☐ Unrivalled Gate Charge :Qg=26nC (Typ.).
- ☐ VDSS=-60 V,I_D=-5 A
- ☐ R_{DS}(on) : 61mΩ (Typ.) @V_G=10V
- ☐ 100% Avalanche Tested

SOP-8

RoHS COMPLIANT





Schematic diagram

ABSOLUTE MAXIMUM RATINGS (T_a=25℃ 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 ①	-5	A
Pulsed Drain Current	I_{DM} ②	-25	A
Maximum Power Dissipation	P_D ⑤	2	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$ ⑤	62.5	℃/W
Operating Junction and Storage Temperature Range	T_J ,T_{stg}	-55~+150	℃

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Electrical Characteristics (Ta=25℃ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =-250μA	-60			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-48V, V_{GS} =0V, T_J =25℃			-1.0	μA
		V_{DS} =-48V, V_{GS} =0V, T_J =125℃			-100	
Gate-body leakage current	I_{GSS}	V_{DS} =0V, V_{GS} =±20V			±100	nA
On characteristics ③						
Gate-threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-1.5	-2.0	-3.5	V
Static drain-source on-sate resistance	$R_{DS(on)}$	V_{GS} =-10V, I_D =-5A		61	80	mΩ
Forward transconductance	g_{FS}	V_{DS} =-15V, I_D =-5A	5			S
Dynamic characteristics ③④						
Input capacitance	C_{iss}	V_{DS} =-30V,V_{GS} =0V, f =1MHz		2563		pF
Output capacitance	C_{oss}			124		
Reverse transfer capacitance	C_{rss}			117		
Gate resistance	R_g	f =1MHz		13		Ω
Switching characteristics ③④						
Total gate charge	Q_g	V_{DS}=-30V,V_{GS}=-10V , I_D=-5A		26	52	nC
Gate-source charge	Q_{gs}			4.5	9	
Gate-drain charge	Q_{gd}			7	14	
Turn-on delay time	$t_{d(on)}$	V_{DS}=-30V,VGS=-10V, R_L=30Ω, R_G=6Ω		8		ns
Turn-on rise time	t_r			9		
Turn-off delay time	$t_{d(off)}$			65		
Turn-off fall time	t_f			30		
Drain-Source Diode Characteristics						
Drain-source diode forward voltage	V_{SD} ③	V_{GS} =0V, I_S=-3A			-1.2	V
Continuous drain-source diode forward current	I_S ①				-5	A
Pulsed drain-source diode forward current	I_{SM} ②				-25	A

Notes:

1.T_C=25℃ Limited only by maximum temperature allowed.

2.P_W≤10μs, Duty cycle≤1%.

3.Pulse Test : Pulse Width≤300μs, duty cycle ≤2%.

4.Guaranteed by design, not subject to production.

5.The value of $R_{\theta JA}$ is measured with the device mounted on 1 in 2 FR-4 board with 2oz. Copper, in a still air environment with T_a=25℃,t≤10sec.

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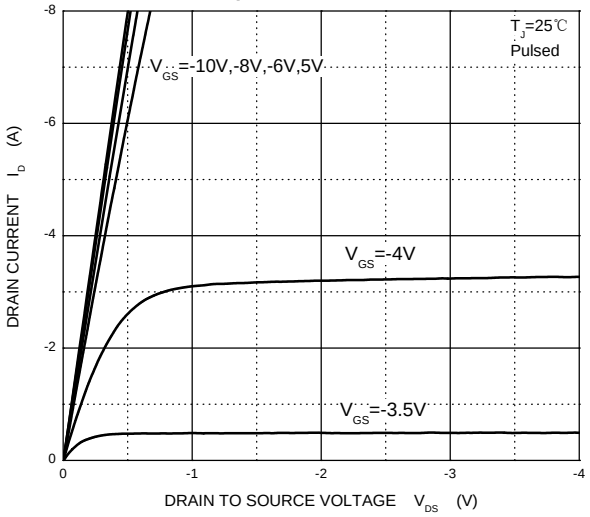
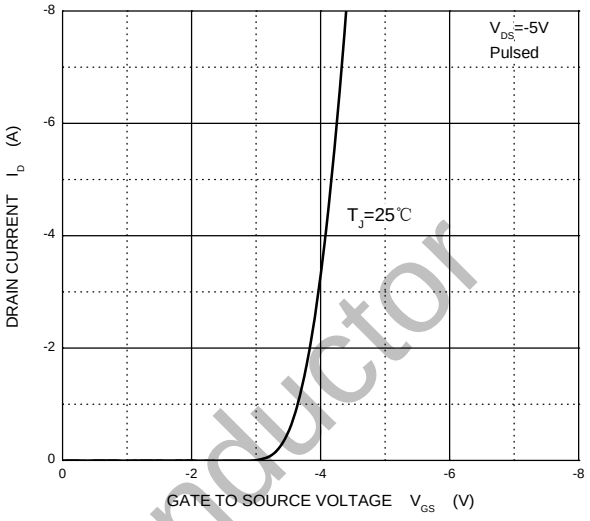
Typical Electrical and Thermal Characteristics

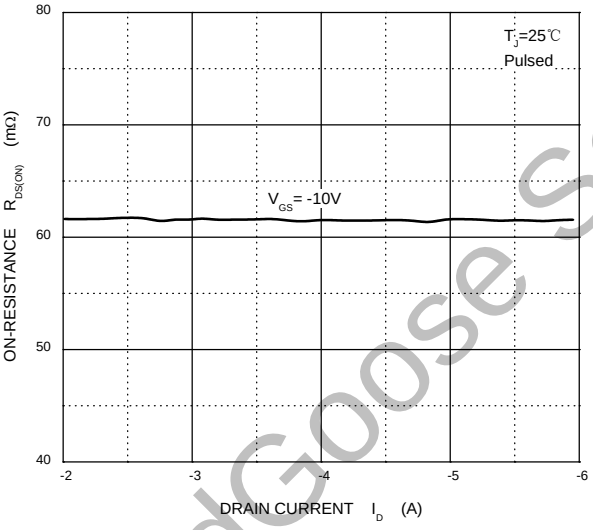
Output Characteristics



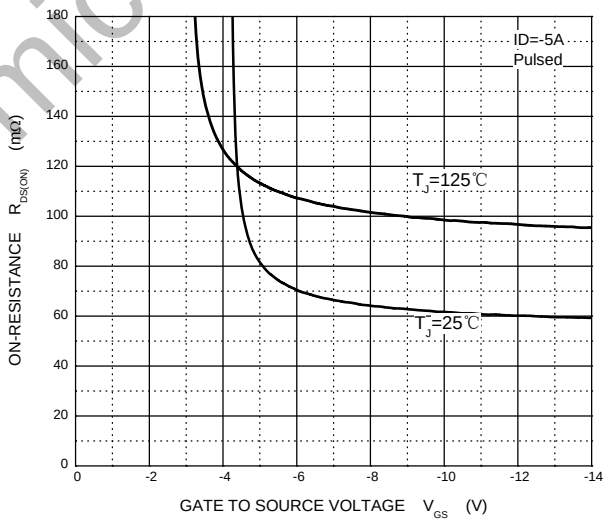
Transfer Characteristics



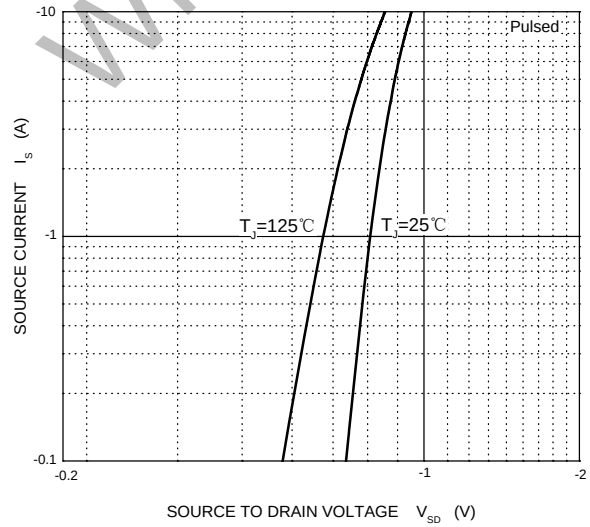
$R_{DS(ON)}$ —— I_D



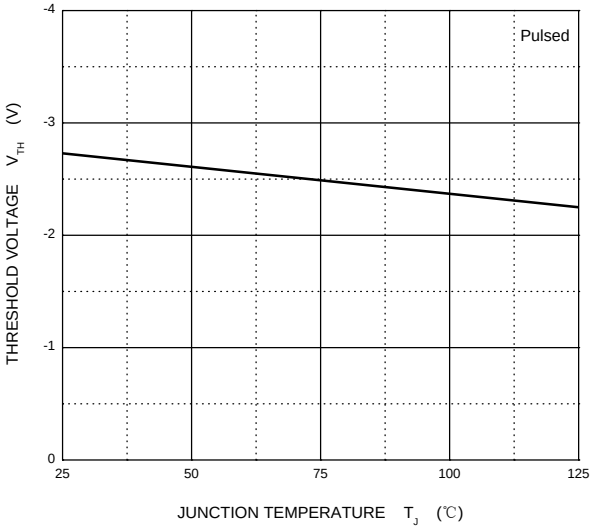
$R_{DS(ON)}$—— V_{GS}



I_S —— V_{SD}



Threshold Voltage



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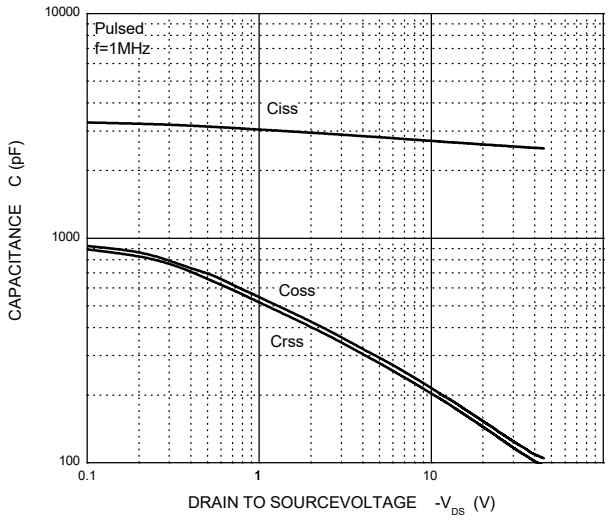
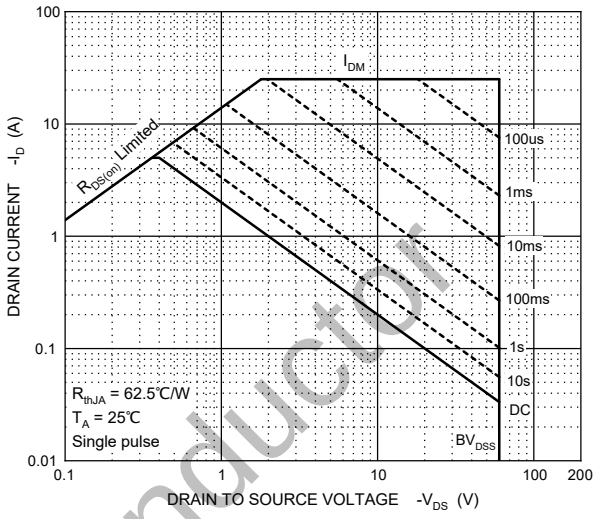
Typical Electrical and Thermal Characteristics

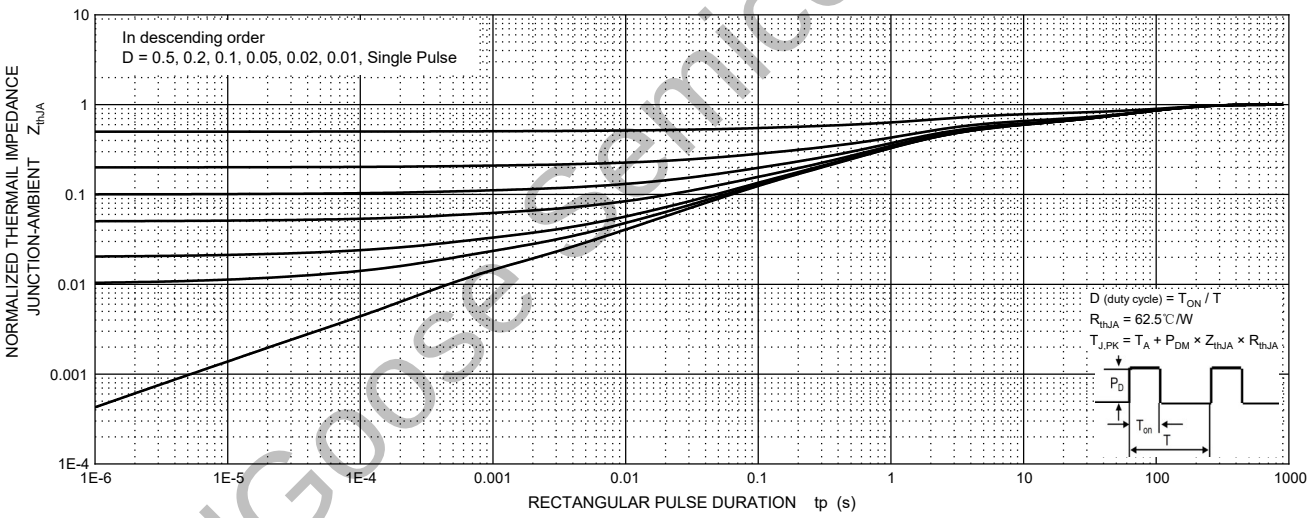
Capacitances



Maximum Safe Operating Area



Transient Thermal Impedance, Junction-Ambient



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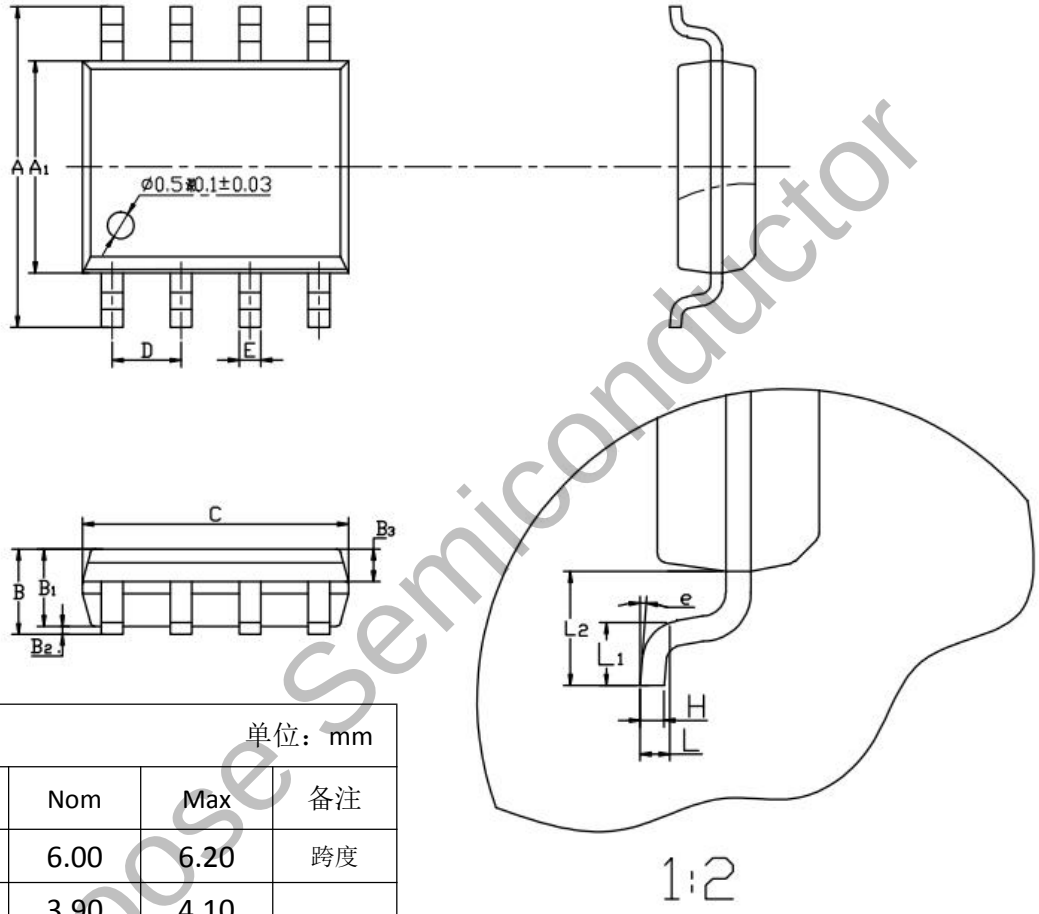
Package Dimension

SOP-8

Unit: mm



尺寸数据：			单位：mm	
标注	Min	Nom	Max	备注
A	5.80	6.00	6.20	跨度
A1	3.70	3.90	4.10	
B	1.50	1.60	1.75	
B1	1.30	1.40	1.50	
B2	0.05	0.125	0.2	站高
B3	0.60	0.70	0.75	
C	4.75	4.85	5.05	
D	1.27BSC			
E	0.39	0.44	0.49	
H	0.10	0.20	0.25	
L	0.25BSC			
L1	0.40	0.6	0.8	
L2	0.95	1.05	1.20	脚长
e	0	4°	8°	

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