Elektronische Bauelemente

SSG60P05J-C

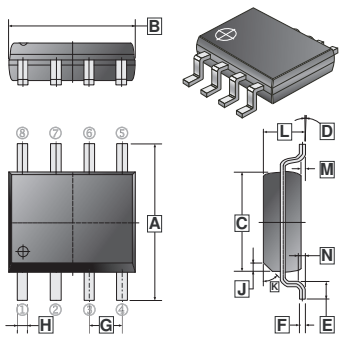
-5A, -60V, $R_{DS(ON)}$ 80mΩ
P-Ch Enhancement Mode Power MOSFET

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

DESCRIPTION

SSG60P05J-C uses advanced trench technology and design to provide excellent $R_{DS(ON)}$ with low gate charge. It can be used in a wide variety of applications.

SOP-8



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	5.79	6.20	H	0.33	0.51
B	4.70	5.11	J	0.375 REF.	
C	3.80	4.00	K	45°REF.	
D	0°	8°	L	1.3	1.752
E	0.40	1.27	M	0	0.25
F	0.10	0.25	N	0.25 REF.	
G	1.27 TYP.				

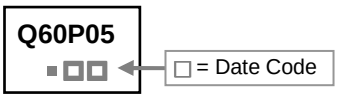
FEATURES

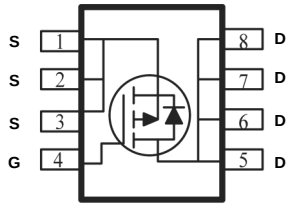
- High Density Cell Design for Ultra Low $R_{DS(ON)}$
- Fully Characterized Avalanche Voltage and Current
- Excellent Package for Good Heat Dissipation

APPLICATIONS

- Power Switching Application
- Hard Switched and High Frequency Circuits
- DC-DC Converter

MARKING





PACKAGE INFORMATION

Package	MPQ	Leader Size
SOP-8	4K	13 inch

ORDER INFORMATION

Part Number	Type
SSG60P05J-C	Lead (Pb)-free and Halogen-free

MAXIMUM RATINGS (T_A=25℃ unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	V_{DS}	-60	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	-5	A
Pulsed Drain Current [1]	I_{DM}	-25	A
Thermal Resistance from Junction-Ambient [2]	$R_{\theta JA}$	100	℃/W
Lead Temperature for Soldering Purposes @1/8" from case for 10s	T_L	260	℃
Operating Junction and Storage Temperature Range	T_J, T_{STG}	150, -55~150	℃

ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test conditions
Drain-Source Breakdown Voltage	BV_{DSS}	-60	-	-	V	V_{GS}=0, I_D= -250μA
Drain-Source Leakage Current	I_{DSS}	-	-	-1	μA	V_{DS}= -60V,V_{GS}=0
Gate-Body Leakage Current	I_{GSS}	-	-	±100	nA	V_{DS}=0, V_{GS}= ±20V
Gate-Threshold Voltage [3]	$V_{GS(th)}$	-1.5	-	-3.5	V	V_{DS}=V_{GS}, I_D= -250μA
Drain-Source On-Resistance [3]	$R_{DS(ON)}$	-	-	80	mΩ	V_{GS}= -10V, I_D= -5A
Forward Transfer Conductance [3]	g_{fs}	5	-	-	S	V_{DS}= -15V, I_D= -5A
Total Gate Charge	Q_g	-	26	-	nC	V_{GS}= -10V V_{DS}= -30V I_D= -5A
Gate-Source Charge	Q_{gs}	-	4.5	-		
Gate-Drain (“Miller”) Charge	Q_{gd}	-	7	-		
Turn-on Delay Time	$T_{d(on)}$	-	8	-	nS	V_{GS}= -10V V_{DD}= -30V R_{GEN}= 6Ω R_L= 30Ω
Rise Time	T_r	-	9	-		
Turn-off Delay Time	$T_{d(off)}$	-	65	-		
Fall Time	T_f	-	30	-		
Input Capacitance	C_{iss}	-	1450	-	pF	V_{GS}=0 V_{DS}= -20V f=1MHz
Output Capacitance	C_{oss}	-	145	-		
Reverse Transfer Capacitance	C_{rss}	-	110	-		
Source-Drain Diode Characteristics						
Forward On Voltage [3]	V_{DS}	-	-	-1.2	V	I_S= -3A, V_{GS}=0
Continuous Source Current [2]	I_S	-	-	-5	A	

Notes:

1. Repetitive Rating: Pulse width is limited by the maximum junction temperature.
2. Surface mounted on FR4 board, t≦10sec.
3. Pulse Test: Pulse width≦300μs, duty cycle≦2%.

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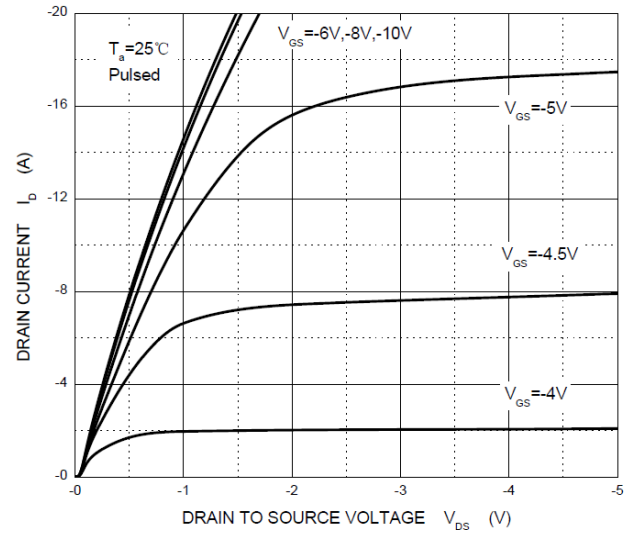
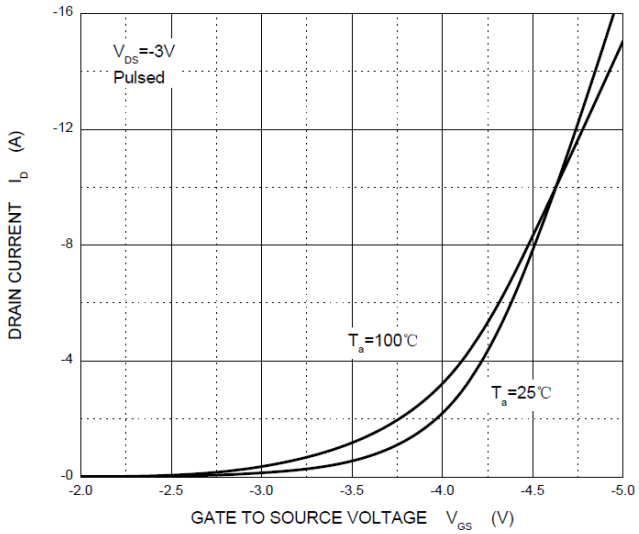
CHARACTERISTIC CURVES

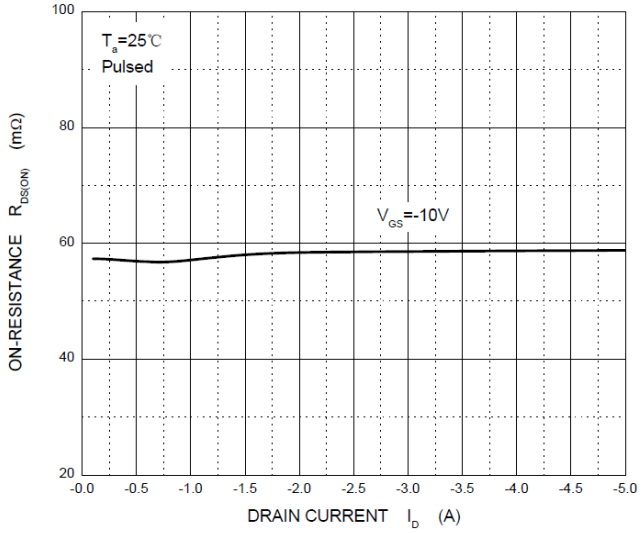
Output Characteristics



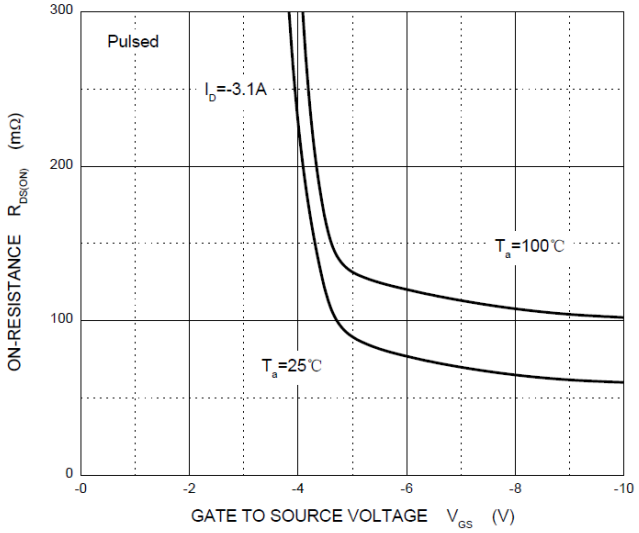
Transfer Characteristics



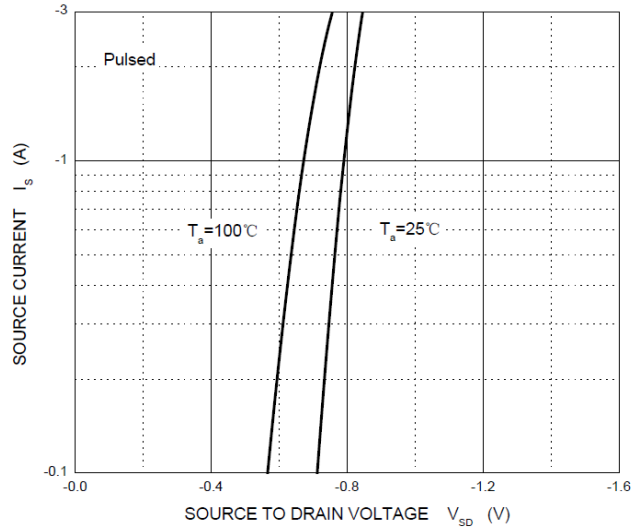
$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}



Threshold Voltage