Elektronische Bauelemente

SWJ3139K-C

-0.66A, -20V, $R_{DS(ON)}$ 520mΩ
P-Channel Enhancement Mode Power MOSFET

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

FEATURES

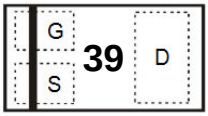
- ESD Protected Gate
- Low $R_{DS(ON)}$
- Surface Mount Package
- Operated at Low Logic Level Gate Drive

DFN1006-3L

APPLICATIONS

- Load/ Power Switching
- Interfacing Switching
- Logic Level Shift
- Battery Management for Ultra Small Portable Electronics

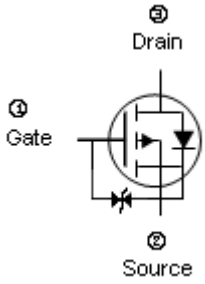
MARKING



(Top View)

PACKAGE INFORMATION

Package	MPQ	Leader Size
DFN1006-3L	10K	7 inch



ORDER INFORMATION

Part Number	Type
SWJ3139K-C	Lead (Pb)-free and Halogen-free

ABSOLUTE MAXIMUM RATINGS (T_A=25℃ unless otherwise specified)

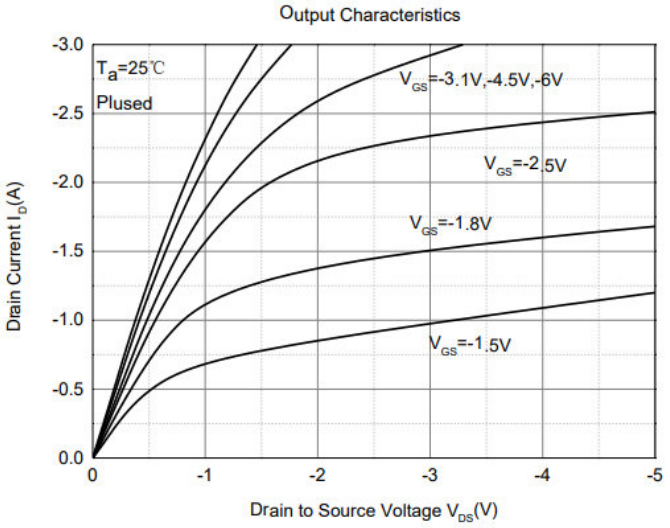
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current [1]	I_D	-0.66	A
Pulsed Drain Current (tp=10μs)	I_{DM}	-1.2	A
Power Dissipation [1]	P_D	275	mW
Lead Temperature for Soldering Purposes (1/8" from case for 10s)	T_L	260	℃
Operating Junction & Storage Temperature Range	T_J, T_{STG}	-55~150	
Thermal Resistance Rating			
Thermal Resistance from Junction-Ambient [1]	$R_{\theta JA}$	455	℃/W

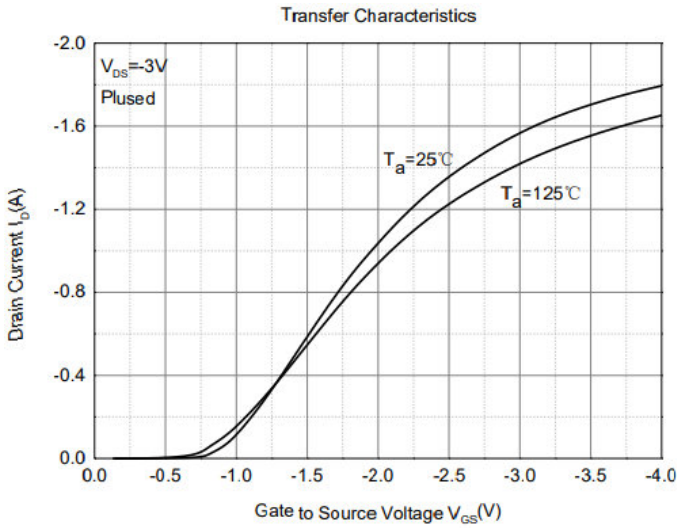
ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise specified)

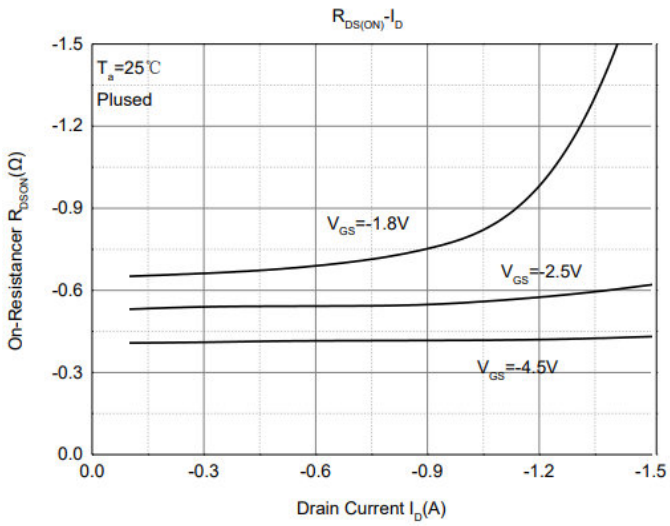
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	-20	-	-	V	V_{GS}=0, I_D= -250μA
Zero Gate Voltage Drain Current	I_{DSS}	-	-	-1	μA	V_{DS}= -20V, V_{GS}=0
Gate-Source Leakage Current	I_{GSS}	-	-	±20	μA	V_{DS}=0, V_{GS}=±10V
Gate Threshold Voltage [2]	$V_{GS(th)}$	-0.35	-	-1.1	V	V_{DS}=V_{GS}, I_D= -250μA
Forward Transfer conductance	g_{fs}	-	1.2	-	S	V_{DS}= -10V, I_D= -0.54A
Drain-Source On-Resistance [2]	$R_{DS(ON)}$	-	450	520	mΩ	V_{GS}= -4.5V, I_D= -1A
		-	650	780		V_{GS}= -2.5V, I_D= -0.8A
		-	950	-		V_{GS}= -1.8V, I_D= -0.5A
Turn-On Delay Time [3]	$T_{d(on)}$	-	9	-	nS	V_{DD}= -4.5V V_{GS}= -10V I_D= -200mA R_G=10Ω
Rise Time [3]	T_r	-	5.7	-		
Turn-Off Delay Time [3]	$T_{d(off)}$	-	32.6	-		
Fall Time [3]	T_f	-	20.3	-		
Input Capacitance	C_{iss}	-	113	-	pF	V_{DS}= -16V V_{GS}=0 f=1MHz
Output Capacitance	C_{oss}	-	15	-		
Reverse Transfer Capacitance	C_{rss}	-	9	-		
Source-Drain Diode						
Forward Diode Voltage [3]	V_{SD}	-	-	-1.2	V	V_{GS}=0, I_S= -0.5A

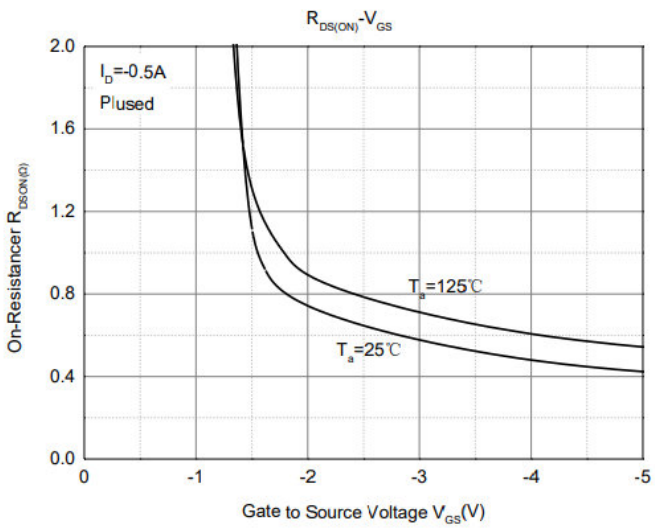
Notes:
1. Surface mounted on FR4 board using 1 square inch pad size, 1oz copper.
2. Pulse Test: Pulse Width=300μs, duty cycle=2%.
3. Switching characteristics are independent of operating junction temperature.

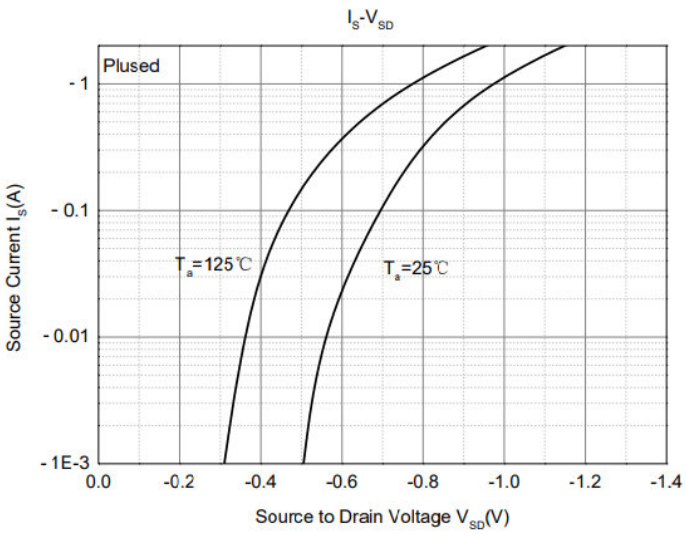
CHARACTERISTIC CURVES

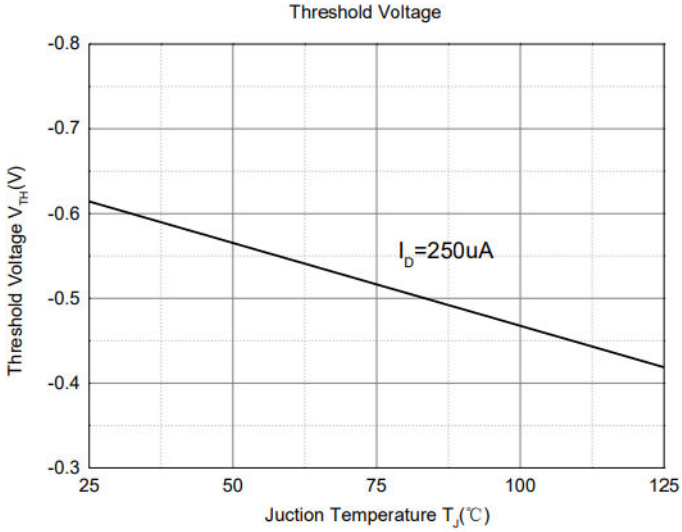












PACKAGE OUTLINE DIMENSIONS

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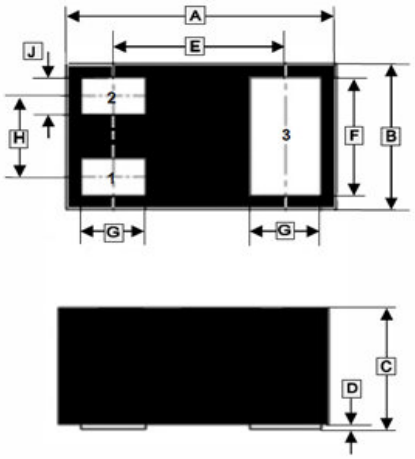

REF.	Millimeter	
	Min.	Max.
A	0.95	1.075
B	0.55	0.675
C	0.40	0.55
D	0	0.05
E	0.65 TYP.	
F	0.45	0.55
G	0.20	0.30
H	0.35 TYP.	
J	0.15 TYP.	

MOUNTING PAD LAYOUT

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