Elektronische Bauelemente

SCG3134K

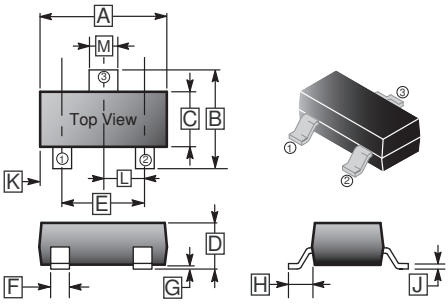
0.75A, 20V, $R_{DS(ON)}$ 380mΩ
N-Channel Plastic-Enhancement MOSFET

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

FEATURES

- High-Side Switching
- Low On-Resistance
- Low Threshold
- Fast Switching Speed

SOT-523



APPLICATION

- Drivers:Relays, Solenoids, Lamps, Hammers, Displays, Memories
- Battery Operated Systems
- Power Supply Converter Circuits
- Load/Power Switching Cell Phones, Pagers

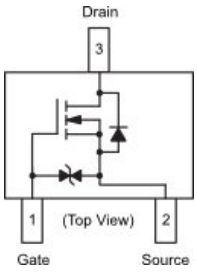
REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.5	1.7	G	-	0.1
B	1.45	1.75	H	0.55 REF.	
C	0.7	0.9	J	0.1	0.2
D	0.7	0.9	K	-	
E	0.9	1.1	L	0.5 TYP.	
F	0.15	0.35	M	0.25	0.35

MARKING

34K

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-523	3K	7 inch



ORDER INFORMATION

Part Number	Type
SCG3134K	Lead (Pb)-free
SCG3134K-C	Lead (Pb)-free and Halogen-free

MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameters	Symbol	Ratings	Unit
Drain-Source Voltage	V_{DSS}	20	V
Typical Gate-Source Voltage	V_{GS}	±12	V
Drain Current-Continuous	I_D	0.75	A
Drain Current-Pulsed [1]	I_{DM}	3	A
Power Dissipation [2]	P_D	150	mW
Thermal Resistance from Junction-Ambient	$R_{\theta JA}$	833	°C/W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	150, -55~150	°C

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	20	-	-	V	V_{GS}=0, I_D=250μA
Gate-Threshold Voltage [3]	$V_{GS(th)}$	0.35	-	1.1	V	V_{DS}=V_{GS}, I_D=250μA
Gate-Body Leakage Current	I_{GSS}	-	-	±20	μA	V_{DS}=0, V_{GS}= ±10V
Zero Gate Voltage Drain Current	I_{DSS}	-	-	1	μA	V_{DS}=20V, V_{GS}=0
Drain-Source On-State Resistance [3]	$R_{DS(ON)}$	-	-	380	mΩ	V_{GS}=4.5V, I_D=650mA
		-	-	450		V_{GS}=2.5V, I_D=550mA
		-	-	800		V_{GS}=1.8V, I_D=450mA
Forward Transconductance	g_{fs}	1	-	-	S	V_{DS}=10V, I_D=800mA
Turn-on Delay Time	$T_{d(on)}$	-	6.7	-	nS	V_{DD}=10V I_D=500mA V_{GS}=4.5V R_G=10Ω
Rise Time	T_r	-	4.8	-		
Turn-off Delay Time	$T_{d(off)}$	-	17.3	-		
Fall Time	T_f	-	7.4	-		
Input Capacitance	C_{iss}	-	120	-	pF	V_{DS}=16V V_{GS}=0 f=1MHz
Output Capacitance	C_{oss}	-	20	-		
Reverse Transfer Capacitance	C_{rss}	-	15	-		
Drain-Source Diode Characteristics						
Drain-Source Diode Forward Voltage [3]	V_{SD}	-	-	1.2	V	I_S=0.15A, V_{GS}=0

Notes:
1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. This test is performed with no heat sink at T_A=25°C.
3. Pulse Test: Pulse Width≦300μs, Duty Cycle≦0.5%.

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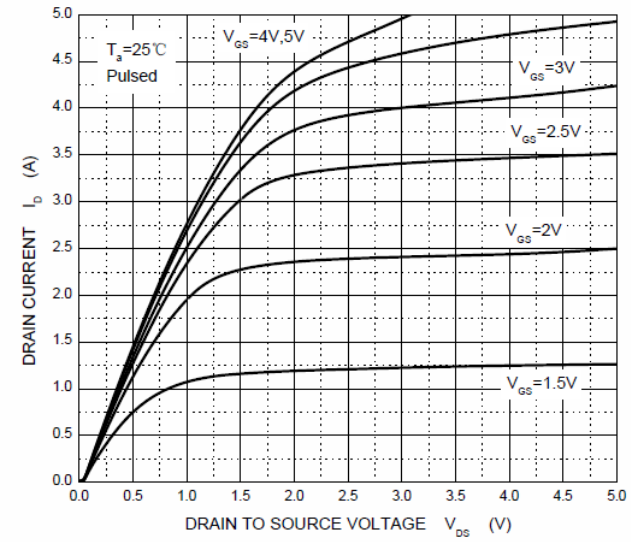
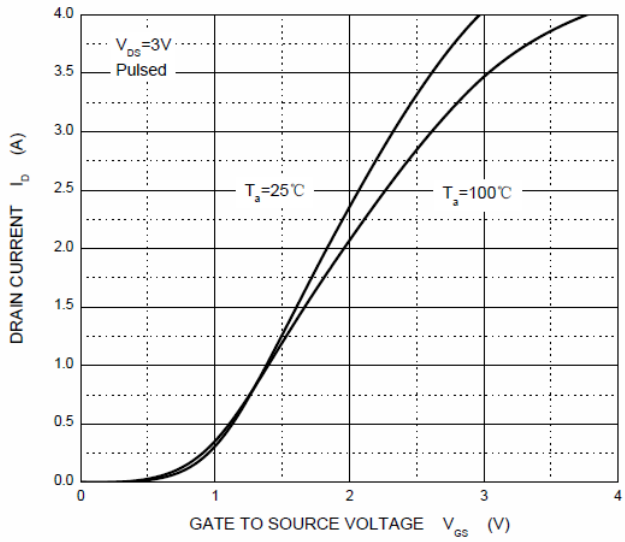
CHARACTERISTIC CURVE

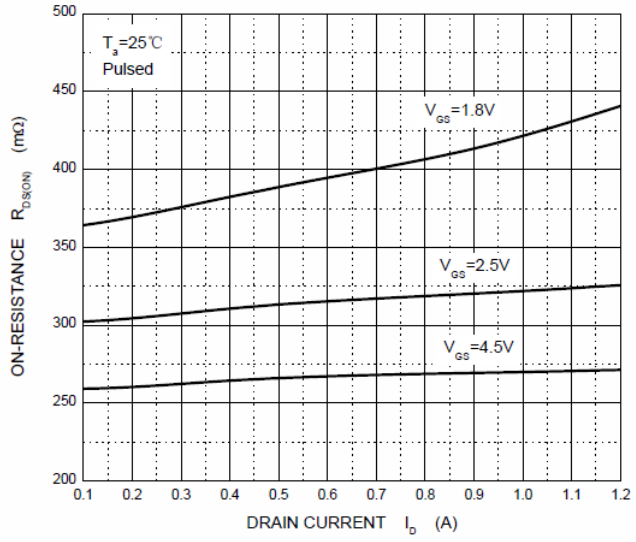
Output Characteristics



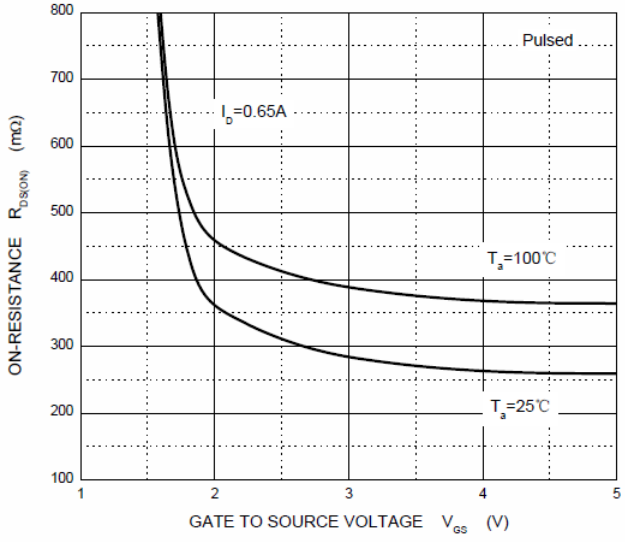
Transfer Characteristics



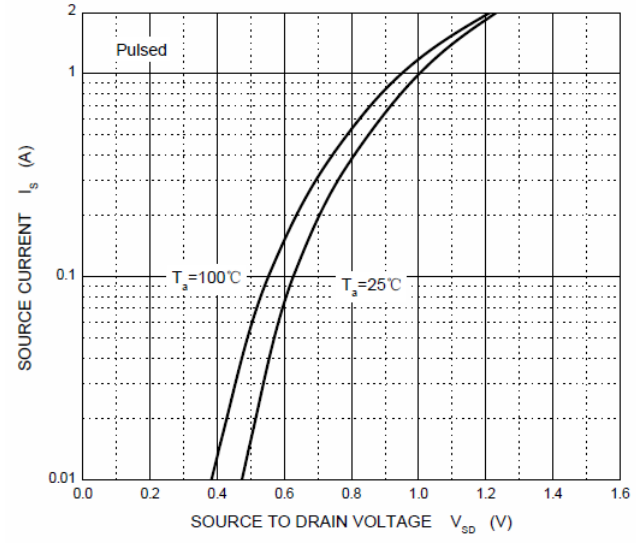
$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}



Threshold Voltage