



Micro Commercial Components



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20736 Marilla Street Chatsworth
CA 91311

Phone: (818) 701-4933

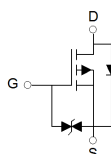
Fax: (818) 701-4939

SI3139KL

Features

- Lead Free Product is Acquired
- Halogen free available upon request by adding suffix "-HF"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Operated at Low Logic Level Gate Drive
- P-Channel Switch with Low RDS(on)
- Surface Mount Package
- Marking :39

Equivalent Circuit



Absolute maximum ratings @ 25°C

Symbol	Parameter	Value	Unit
V_{DS}	Drain-source Voltage	-20	V
V_{GS}	Gate-source Voltage	± 12	V
I_D	Continuous Drain Current ⁽¹⁾	-0.68	A
I_{DM}	Pulsed Drain Current	-1.2	A
P_D	Total Power Dissipation ⁽²⁾	100	mW
T_J	Operating Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C
T_L	Lead Temperature for Soldering Purposes	260	°C
R_{thJA}	Thermal Resistance from Junction to Ambient	1250	°C/W

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
STATIC PARAMETERS					
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage ($V_{GS}=0V_{dc}$, $I_D=-250\mu A_{dc}$)	-20	---	---	Vdc
$V_{GS(th)}$	Gate-Threshold Voltage ($V_{DS}=V_{GS}$, $I_D=-250\mu A_{dc}$)	-0.35	---	-1.1	Vdc
I_{GSS}	Gate-body Leakage ($V_{GS}=\pm 10V$, $V_{DS}=0V$)	---	---	± 20	μA
I_{DSS}	Zero Gate Voltage Drain Current ($V_{DS}=-20V_{dc}$, $V_{GS}=0V_{dc}$)	---	---	-1	μA_{dc}
V_{SD}	Diode Forward Voltage ($I_S=-0.5A$, $V_{GS}=0V$)	---	---	-1.2	Vdc
$r_{DS(on)}$	Drain-Source On-Resistance ($V_{GS}=-4.5V_{dc}$, $I_D=-1.0A_{dc}$) ($V_{GS}=-2.5V_{dc}$, $I_D=-0.8A_{dc}$) ($V_{GS}=-1.8V_{dc}$, $I_D=-0.5A_{dc}$)	---	---	0.52 0.70	Ω
g_{FS}	Forward transconductance ($V_{DS}=-10V_{dc}$, $I_D=-0.5A_{dc}$)	---	1.2	---	S

DYNAMIC PARAMETERS⁽⁴⁾

C_{iss}	Input Capacitance	$V_{DS}=-16V_{dc}$, $V_{GS}=0V_{dc}$ $f=1MHz$	---	113	170	pF
C_{oss}	Output Capacitance		---	15	25	
C_{rss}	Reverse Transfer capacitance		---	9	15	

SWITCHING PARAMETERS⁽⁴⁾

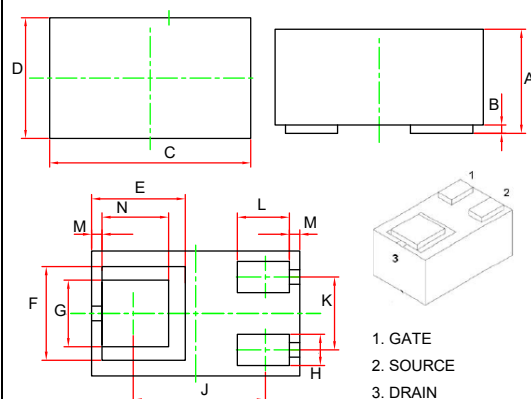
$t_{d(on)}$	Turn-on Time ⁽³⁾	$V_{DD}=-4.5V$, $V_{GS}=-10V$, $I_D=-200mA$, $R_{GEN}=10\Omega$	---	9.0	---	ns
$t_{d(off)}$	Turn-off Time ⁽³⁾		---	32.7	---	
t_r	Rise Time ⁽³⁾		---	5.8	---	
t_f	Fall Time ⁽³⁾		---	20.3	---	

Notes :

- 1.Surface mounted on FR4 board using the minimum recommended pad size.
- 2.Pulse est : Pulse width=300 μs , duty cycles $\leq 2\%$.
3. Switching characteristics are independent of operating junction temperatures.
4. Graranted y design, not subject to producing.

P-Channel MOSFET

SOT-883

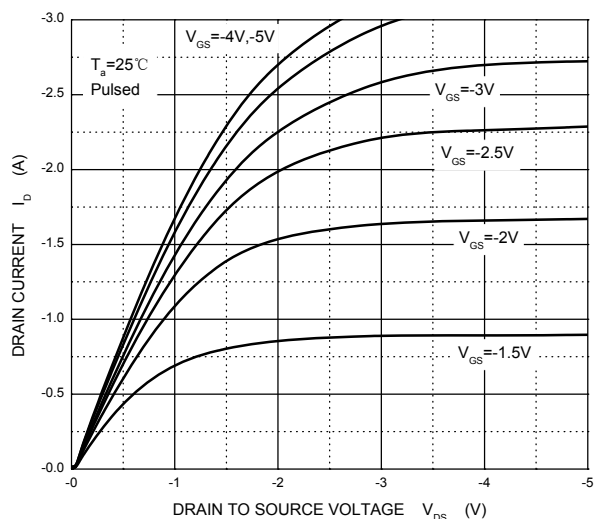


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.018	0.022	0.450	0.550	
B	0.000	0.004	0.010	0.100	
C	0.037	0.041	0.950	1.050	
D	0.022	0.026	0.550	0.650	
E	0.018REF.		0.450REF.		
F	0.018REF.		0.450REF.		
G	0.011	0.015	0.270	0.370	
H	0.004	0.008	0.100	0.200	
J	0.025REF.		0.635REF.		
K	0.012	0.016	0.300	0.400	
L	0.008	0.012	0.200	0.300	
M	0.002REF.		0.050REF.		
N	0.011	0.015	0.270	0.370	

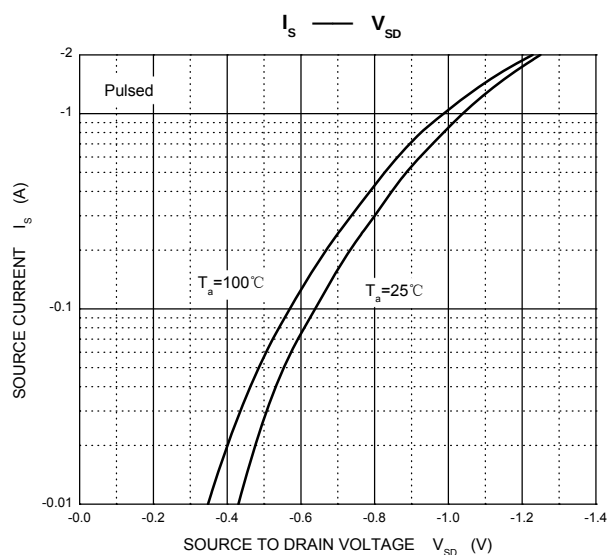
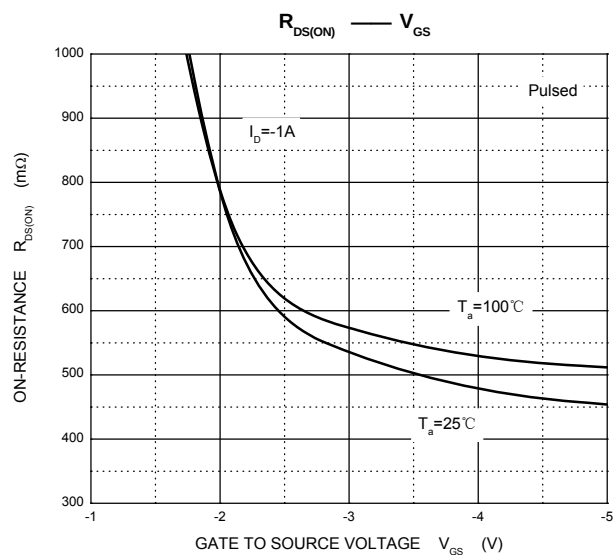
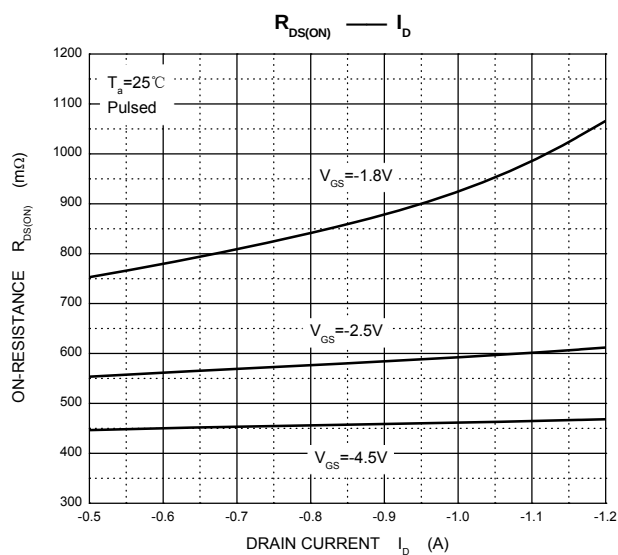
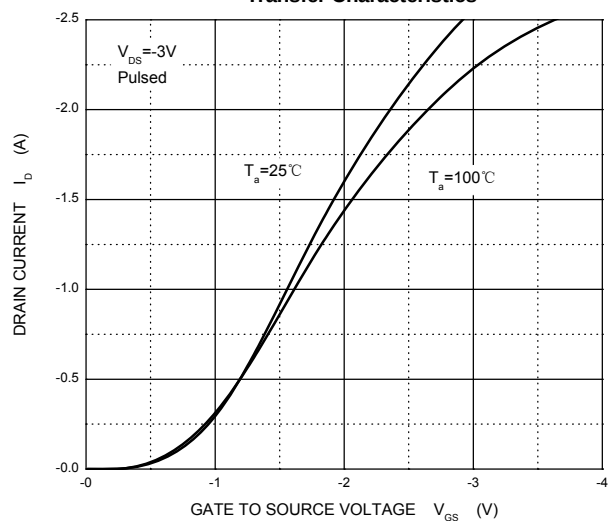
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Typical Characteristics

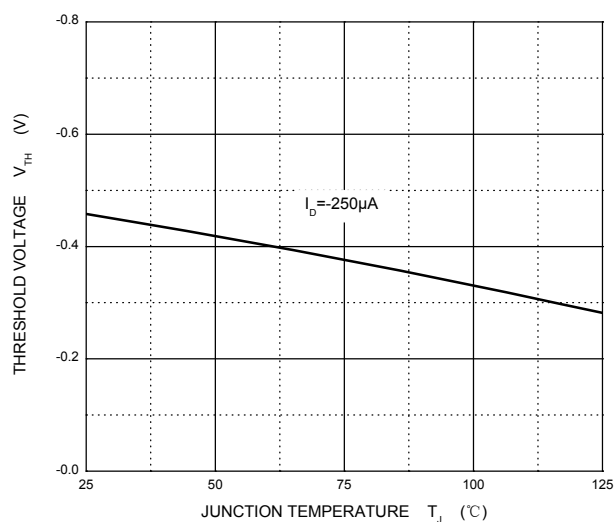
Output Characteristics



Transfer Characteristics



Threshold Voltage



Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 10Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9