



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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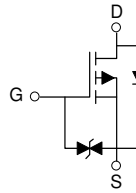
Micro Commercial Components
 20736 Marilla Street Chatsworth
 CA 91311
 Phone: (818) 701-4933
 Fax: (818) 701-4939

SI3139KE

P-Channel MOSFET

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 $R_{DS(on)}$
- Surface Mount Package
- Marking : 39K

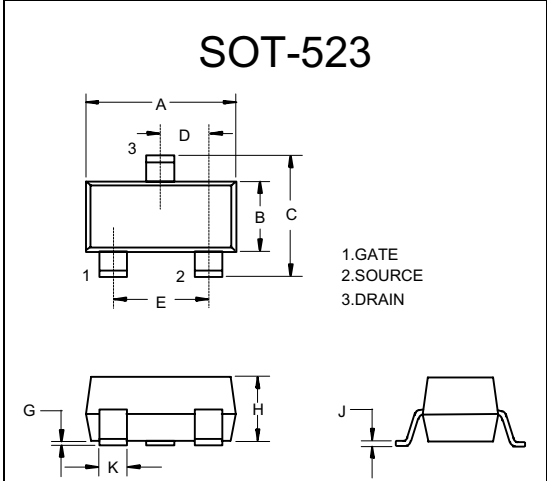


Absolute maximum ratings @ 25 °C

Symbol	Parameter	Value	Unit
V_{DS}	Drain-source Voltage	-20	V
V_{GS}	Gate-source Voltage	± 12	V
I_D	Continuous Drain Current	-0.66	A
I_{DM}	Pulsed Drain Current	-1.2	A
P_D	Total Power Dissipation	150	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	833	°C/W

Electrical Characteristics @ 25°C Unless Otherwise Specified

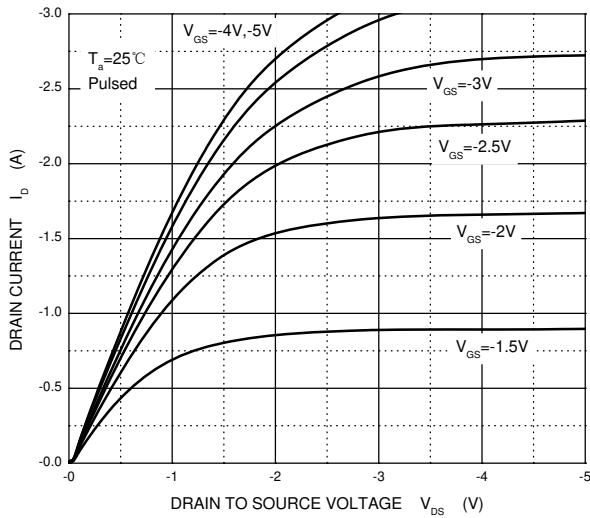
Symbol	Parameter	Min	Typ	Max	Units
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage ($V_{GS}=0V_{dc}, I_D=-250\mu A_{dc}$)	-20	---	---	Vdc
$V_{GS(th)}$	Gate-Threshold Voltage ($V_{DS}=V_{GS}, I_D=-250\mu A_{dc}$)	-0.35	---	-1.1	Vdc
I_{GSS}	Gate-body Leakage ($V_{DS}=0V_{dc}, V_{GS}=\pm 10V_{dc}$)	---	---	± 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 ($V_{GS}=-4.5V_{dc}, I_D=-1A_{dc}$) ($V_{GS}=-2.5V_{dc}, I_D=-0.80A_{dc}$) ($V_{GS}=-1.8V_{dc}, I_D=0.5A_{dc}$)	---	---	0.52 0.70 0.95	Ω
g_{FS}	Forward transconductance ($V_{DS}=-10V_{dc}, I_D=0.54A_{dc}$)	---	1.2	---	S
C_{iss}	Input Capacitance	---	113	170	pF
C_{OSS}	Output Capacitance	---	15	25	
C_{rSS}	Reverse Transfer capacitance	---	9	15	
$t_{d(on)}$	Turn-on Time	$V_{GS}=-4.5V, V_{DS}=-10V,$ $I_D=-200mA$ $R_{GEN}=10\Omega$	---	9.0	ns
$t_{d(off)}$	Turn-off Time		---	32.7	
t_r	Rise Time		---	5.8	
t_f	Fall Time		---	20.3	



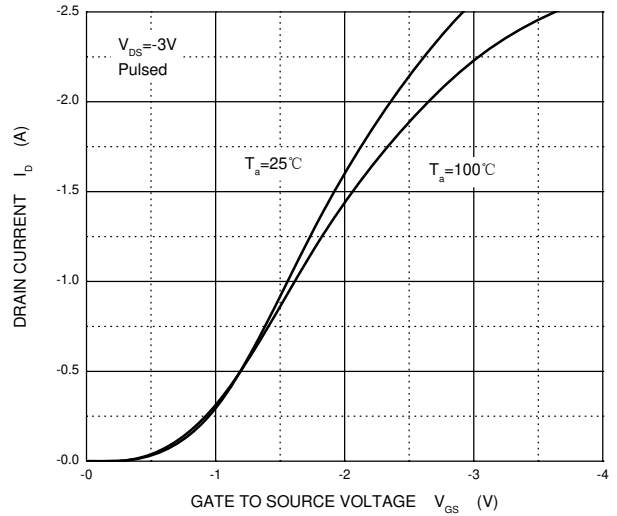
DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.059	.067	1.50	1.70	
B	.030	.033	0.75	0.85	
C	.057	.069	1.45	1.75	
D	.020 Nominal		0.50Nominal		
E	.035	.043	0.90	1.10	
G	.000	.004	.000	.100	
H	.028	.031	.70	0.80	
J	.004	.008	.100	.200	
K	.010	.014	.25	.35	

Typical Characteristics

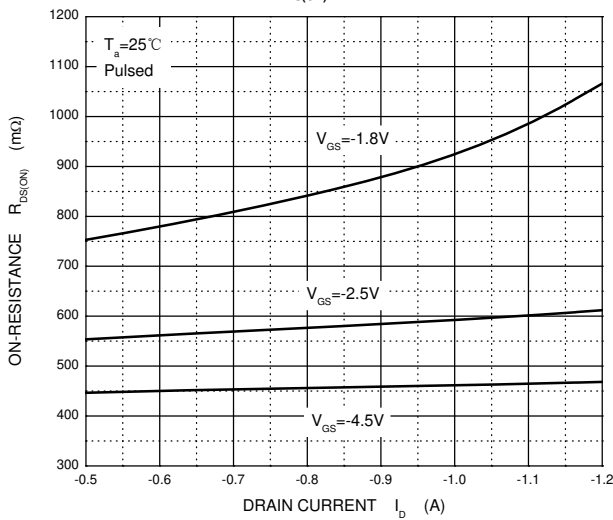
Output Characteristics



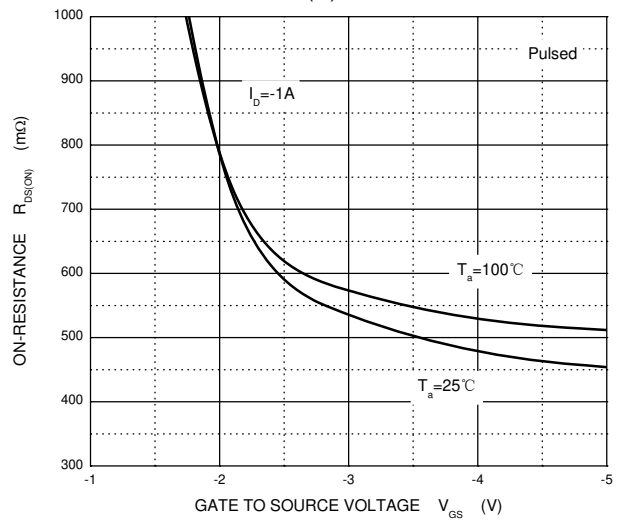
Transfer Characteristics



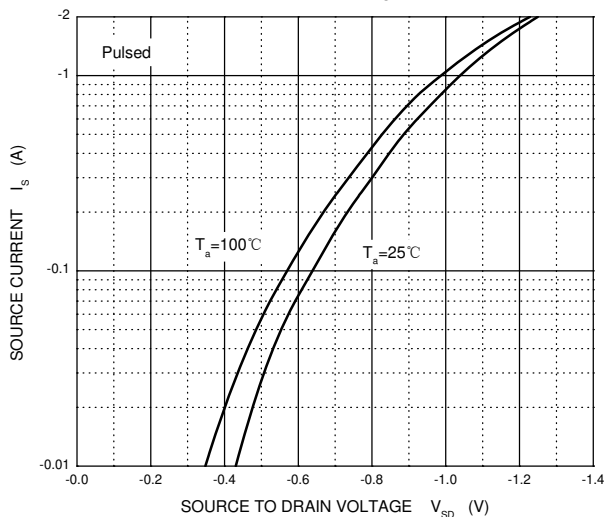
$R_{DS(ON)}$ — I_D



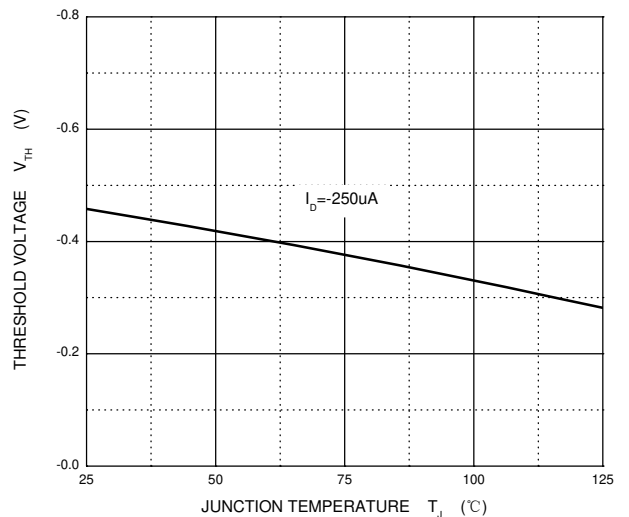
$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}



Threshold Voltage





Micro Commercial Components

Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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

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