Micro Commercial Components

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SI3134KE

N-Channel MOSFET

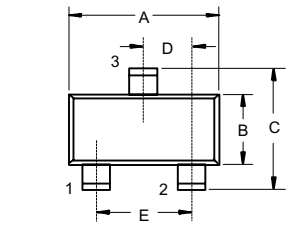
Features

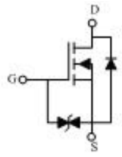
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"
- Low On-Resistance
- High-Side Switching
- Low Threshold
- Fast Switching Speed

Absolute maximum ratings @ 25℃

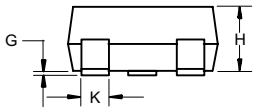
Symbol	Parameter	Value	Unit
V_{DS}	Drain-source Voltage	20	V
V_{GS}	Gate-source Voltage	±12	V
I_D	Continuous Drain Current	0.75	A
I_{DM}	Pulsed Drain Current (1)	3	A
P_D	Total Power Dissipation(2)	150	mW
T_J	Operating Junction Temperature	-55 to +150	℃
T_{STG}	Storage Temperature	-55 to +150	℃
RthJA	Thermal Resistance fromJunction to Ambient	833	℃/W

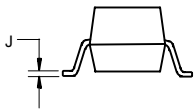
SOT-523





1.GATE
2.SOURCE
3.DRAIN





DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
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	

ELECTRICAL CHARACTERISTICS(T_a=25℃ unless otherwise noted)

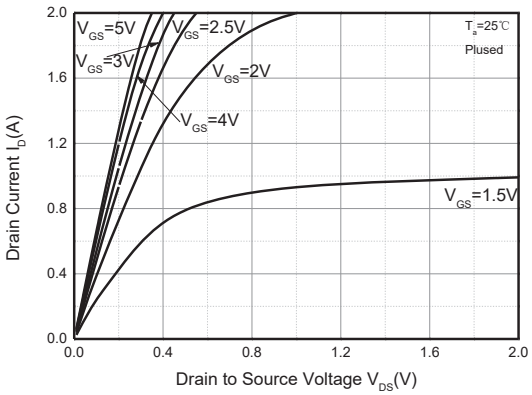
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =250μA	20			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =20V,V_{GS} = 0V			1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±10V, V_{DS} = 0V			±20	μA
Gate threshold voltage(3)	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	0.35	0.75	1.1	V
Drain-source on-resistance(3)	$R_{DS(on)}$	V_{GS} =4.5V, I_D =650mA		190	380	mΩ
		V_{GS} =2.5V, I_D =550mA		260	450	
		V_{GS} =1.8V, I_D =450mA		390	800	
Forward tranconductance	g_{FS}	V_{DS} =10V, I_D =800mA	1			S
Dynamic characteristics(4)						
Input Capacitance	C_{iss}	V_{DS} =16V,V_{GS} =0V,f =1MHz			120	pF
Output Capacitance	C_{oss}				20	
Reverse Transfer Capacitance	C_{rss}				15	
Switching Characteristics(4)						
Turn-on delay time	$t_{d(on)}$	V_{DD}=10V,I_D=500mA, V_{GS}=4.5V,R_G=10Ω		6.7		ns
Turn-on rise time	t_r			4.8		
Turn-off delay time	$t_{d(off)}$			17.3		
Turn-off fall time	t_f			7.4		
Source-Drain Diode characteristics						
Diode Forward voltage(3)	V_{DS}	I_S=0.15A, V_{GS} = 0V			1.2	V

Notes:

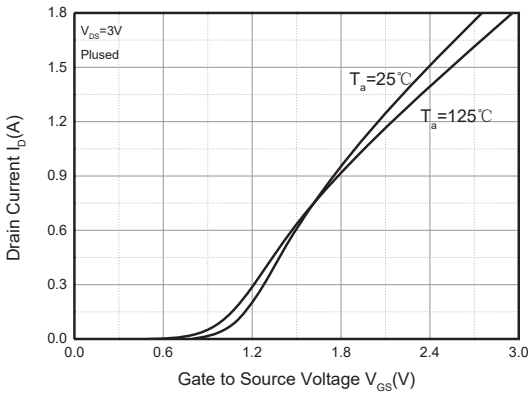
1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. This test is performed with no heat sink at Ta=25℃.
3. Pulse Test : Pulse Width≤300μs, Duty Cycle≤0.5%.
4. These parameters have no way to verify.

Typical Characteristics

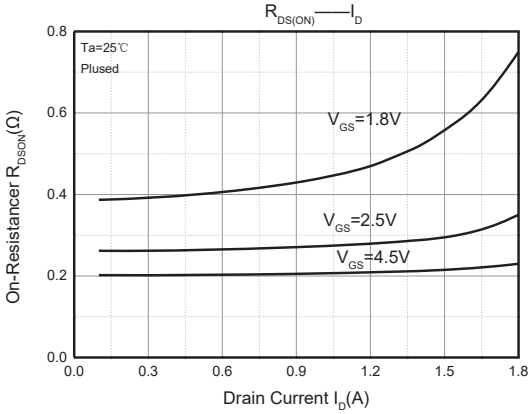
Output Characteristics



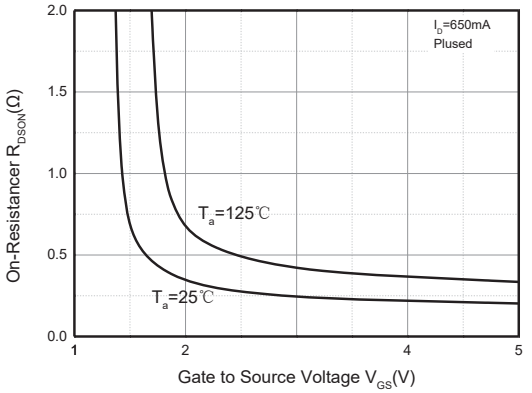
Transfer Characteristics



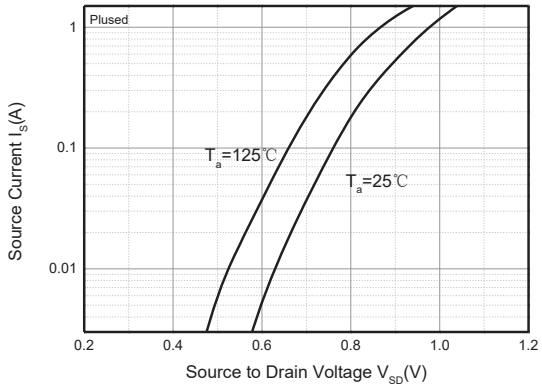
$R_{DS(ON)}$——I_D



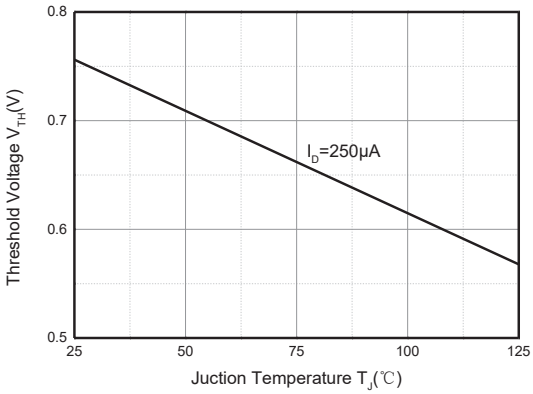
$R_{DS(ON)}$——V_{GS}



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