Micro Commercial Components

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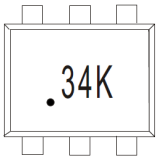
SI3134KDW

Dual N-Channel MOSFET

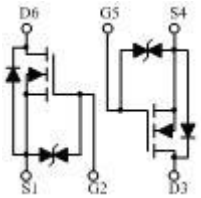
Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- N-Channel switch with Low $R_{DS(ON)}$
- Epoxy meets UL 94 V-0 flammability rating
- Moisure Sensitivity Level 1

Marking:



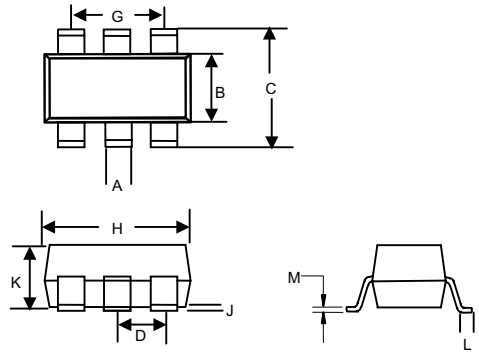
Equivalent Circuit



Maximum Ratings @ 250C Unless Otherwise Specified

Symbol	Rating	Rating	Unit
V_{DS}	Drain-Source Voltage	20	V
V_{GS}	Gate-Source Voltage	±12	V
I_D	Continuous Drain Current	0.75	A
P_D	Power Dissipation (note1)	0.15	W
R_{thJA}	Thermal Resistance from Junction to Ambient	833	$^oC/W$
T_J	Junction Temperature	150	^oC
T_{STG}	Storage Temperature	-55~150	^oC

SOT-363



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.006	.014	0.15	0.35	
B	.045	.053	1.15	1.35	
C	.085	.096	2.15	2.45	
D	.026		0.65Nominal		
G	.047	.055	1.20	1.40	
H	.071	.087	1.80	2.20	
J	---	.004	---	0.10	
K	.031	.043	0.80	1.10	
L	.010	.018	0.26	0.46	
M	.003	.006	0.08	0.15	

ELECTRICAL CHARACTERISTICS(T_a=25℃ unless otherwise noted)

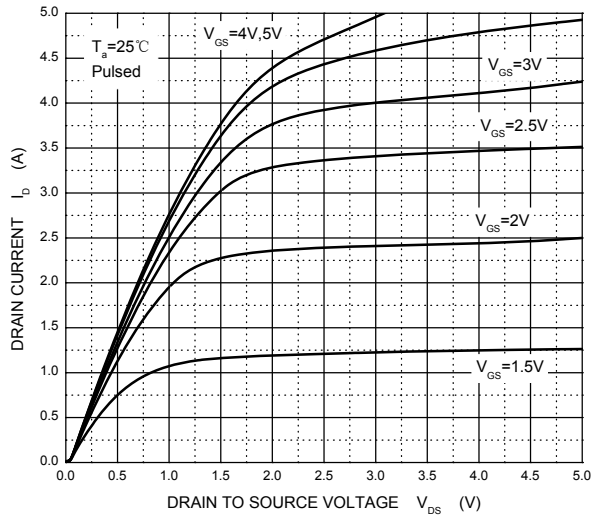
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =250μA	20			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =20V,V_{GS} = 0V			1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±10V, V_{DS} = 0V			±20	μA
Gate threshold voltage (note 2)	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	0.35	0.54	1.1	V
Drain-source on-resistance (note 2)	$R_{DS(on)}$	V_{GS} =4.5V, I_D =0.65A		270	380	mΩ
		V_{GS} =2.5V, I_D =0.55A		320	450	mΩ
		V_{GS} =1.8V, I_D =0.45A		390	800	mΩ
Forward tranconductance (note 2)	g_{FS}	V_{DS} =10V, I_D =0.8A		1.6		S
Diode forward voltage(note 2)	V_{SD}	I_S=0.15A, V_{GS} = 0V			1.2	V
DYNAMIC PARAMETERS (note 3)						
Input Capacitance	C_{iss}	V_{DS} =16V,V_{GS} =0V,f =1MHz		79	120	pF
Output Capacitance	C_{oss}			13	20	pF
Reverse Transfer Capacitance	C_{rss}			9	15	pF
SWITCHING PARAMETERS(note 3)						
Turn-on delay time	$t_{d(on)}$	V_{GS}=4.5V,V_{DS}=10V, I_D=0.5A,R_{GEN}=10Ω		6.7		ns
Turn-on rise time	t_r			4.8		ns
Turn-off delay time	$t_{d(off)}$			17.3		ns
Turn-off fall time	t_f			7.4		ns
Total Gate Charge	Q_g	V_{DS} =10V,V_{GS} =4.5V,I_D =7A		20		nC
Gate-Source Charge	Q_{gs}			1		nC
Gate-Drain Charge	Q_{gd}			4		nC

Notes :

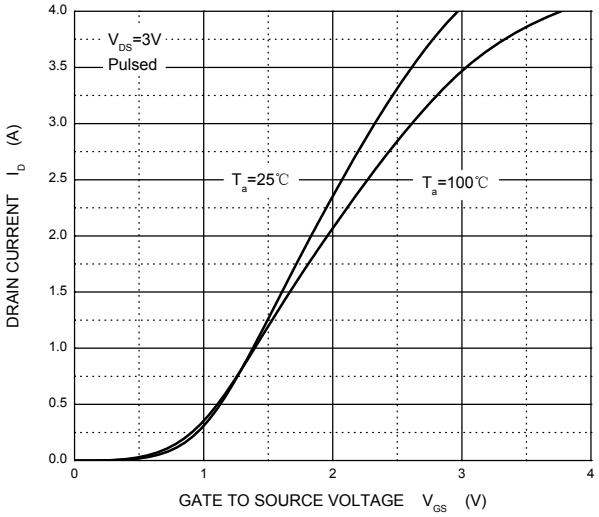
1. Repetitive rating : Pulse width limited by junction temperature.
2. Pulse Test : Pulse width≤300μs, duty cycle≤0.5%.
3. Guaranteed by design, not subject to production testing.

Typical Characteristics

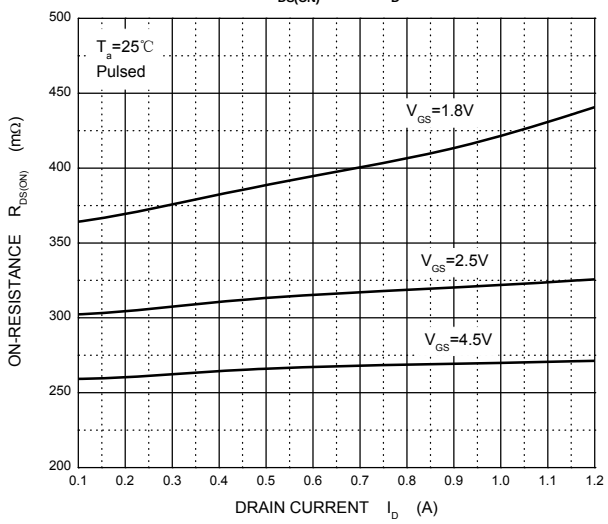
Output Characteristics



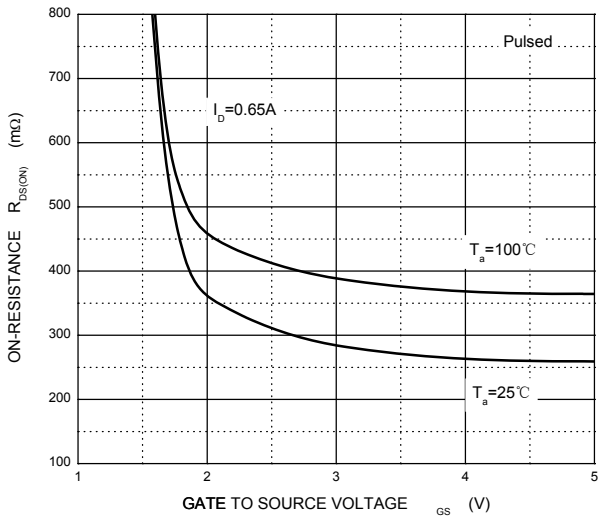
Transfer Characteristics



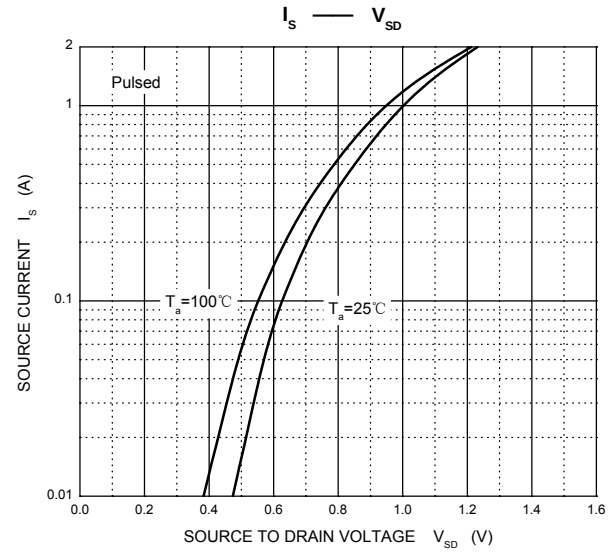
$R_{DS(ON)}$ —— I_D



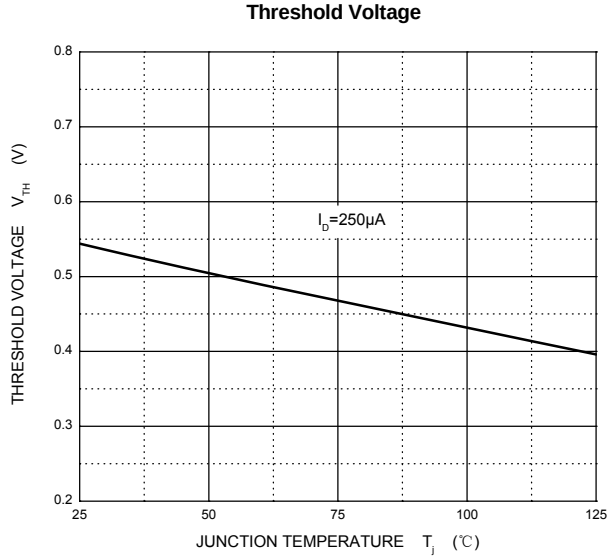
$R_{DS(ON)}$ —— V_{GS}



I_S —— V_{SD}



Threshold Voltage



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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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