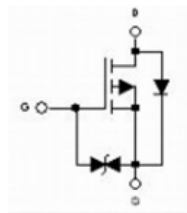




SI3139K

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 : KD



Absolute maximum ratings @ 25 °C

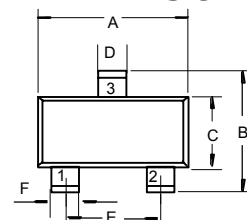
Symbol	Parameter	Value	Unit
V_{DS}	Drain-source Voltage	-20	V
V_{GS}	Gate-source Voltage	± 6	V
I_D	Continuous Drain Current	-0.66	A
I_{DM}	Pulsed Drain Current	-1.2	A
P_D	Total Power Dissipation	150	mW
T_J	Operating Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C
T_L	Lead Temperature for Soldering Purposes	260	°C
R_{thJA}	Thermal Resistance from Junction to Ambient	833	°C/W

Electrical Characteristics @ 25°C Unless Otherwise Specified

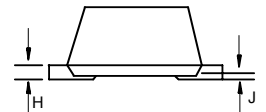
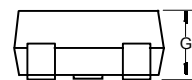
Symbol	Parameter	Min	Typ	Max	Units
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage ($V_{GS}=0V_{dc}$, $I_D=-250\mu A_{dc}$)	-20	---	---	Vdc
$V_{GS(th)}$	Gate-Threshold Voltage ($V_{DS}=V_{GS}$, $I_D=-250\mu A_{dc}$)	-0.35	---	-0.8	Vdc
I_{GSS}	Gate-body Leakage ($V_{DS}=0V_{dc}$, $V_{GS}=\pm 12V_{dc}$)	---	---	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 ($V_{DS}=-10V_{dc}$, $I_D=0.5A_{dc}$)	---	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	

P-Channel MOSFET

SOT-723



1. GATE
2. SOURCE
3. DRAIN



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.045	.049	1.15	1.25	
B	.045	.049	1.15	1.25	
C	.030	.033	0.75	0.85	
D	.011	.015	0.27	0.37	
E	0.031TYP.		0.80TYP.		
F	.007	.011	0.17	0.27	
G	.017	.020	0.43	0.50	
H	.003	.006	0.08	0.15	
J	.000	.002	0.00	0.05	

Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 8Kpcs/Reel

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

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