Micro Commercial Components

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130 W Cochran St, Unit B
Simi Valley, CA 93065
Tel:818-701-4933

SI2324A

N-Channel Enhancement Mode Field Effect Transistor

Features

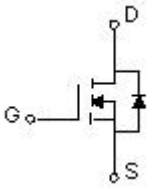
- Halogen free available upon request by adding suffix "-HF"
- TrenchFET Power Mosfet
- Low $R_{DS(ON)}$
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Maximum Ratings @ 25 C Unless Otherwise Specified

Symbol	Parameter	Rating	Unit
V_{DS}	Drain-source Voltage	100	V
I_D	Continuous Drain Current	2	A
P_D	Total Power Dissipation	1.2	W
V_{GS}	Gate-source Voltage	±20	V
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	105	℃/W
T_J	Operating Junction Temperature	-55 to +150	℃
T_{STG}	Storage Temperature	-55 to +150	℃

NOTE 1. Repetitive rating: Pluse width limited by junction temperature.

Internal Block Diagram



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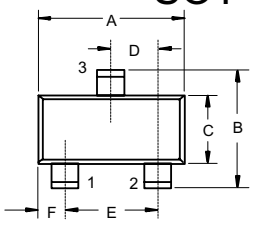
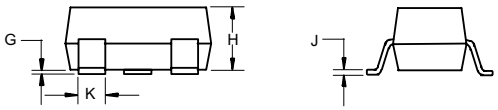
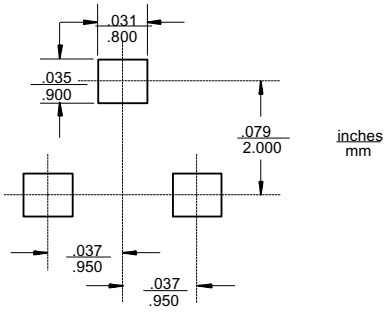


1.GATE
2. SOURCE
3. DRAIN



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout



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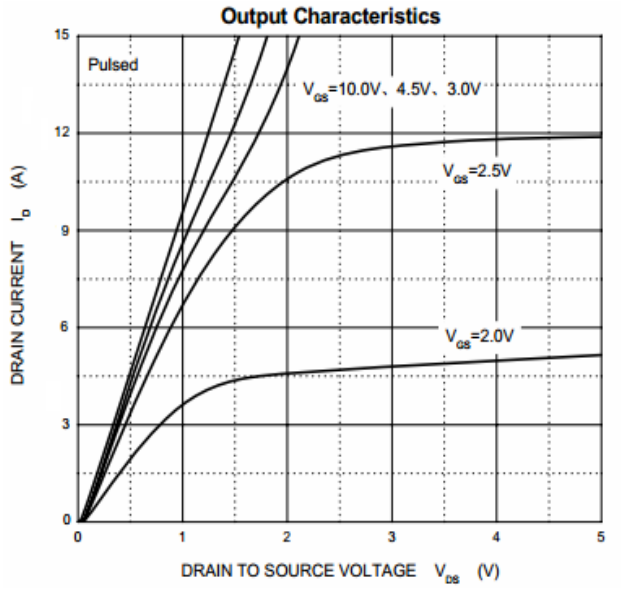
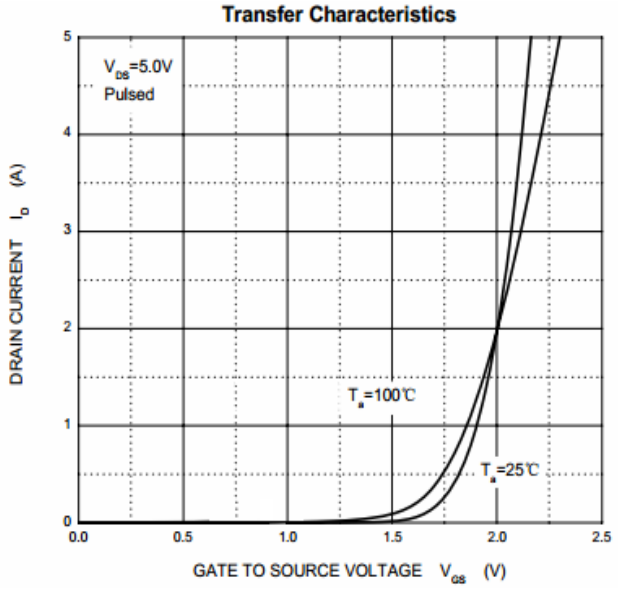
Electrical characteristics (T_a=25°C unless otherwise noted)

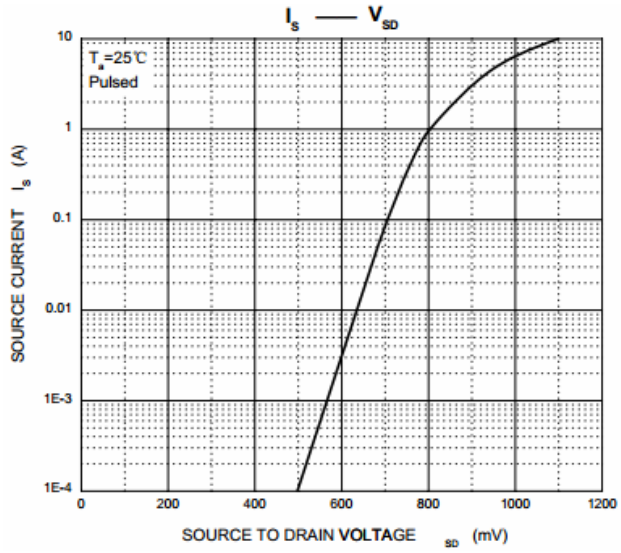
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS}= 0V, I_D=250μA	100			V
Zero gate voltage drain current	I_{DSS}	V_{DS}=100V,V_{GS}=0V			1	μA
Gate-body leakage current	I_{GSS}	V_{GS}= ±20V, V_{DS}=0V			±100	nA
Gate threshold voltage*	$V_{GS(th)}$	V_{DS}= V_{GS}, I_D=250μA	1.0	1.5	2.0	V
Drain-source on-resistance*	$R_{DS(ON)}$	V_{GS}= 10V, I_D=2.0A		250	280	mΩ
		V_{GS}= 4.5V, I_D=2.0A		260	300	
Forward Transconductance	g_{FS}	V_{DS}= 5V, I_D=2.0A	2			s
Dynamic Characteristics **						
Input Capacitance	C_{iss}	VDS=15V,VGS=0V,f=1MHZ		520		pF
Output Capacitance	C_{oss}			130		
Reverse Transfer Capacitance	C_{rss}			36		
Switching Characteristics**						
Turn-on delay time	$t_{d(on)}$	V_{DD}=10V,V_{GS}=4.5V,RL=2.8Ω,I_D=1A,R_{GEN}=6Ω		12		ns
Turn-on rise time	t_r			52		
Turn-off delay time	$t_{d(off)}$			17		
Turn-off Fall time	t_f			10		
Total Gate Charge	Q_g	V_{DS}=10V,I_D=2.0A,V_{GS}=4.5V		4.8		nC
Gate-Source Charge	Q_{gs}			1.2		
Gate-Drain Charge	Q_{gd}			1.7		
Source-Drain Diode characteristics						
Drain-Source Diode Forward Current	I_S				2.0	A
Diode Forward voltage	V_{SD}	V_{GS}=0V,I_S=2.0A		0.9	1.2	V

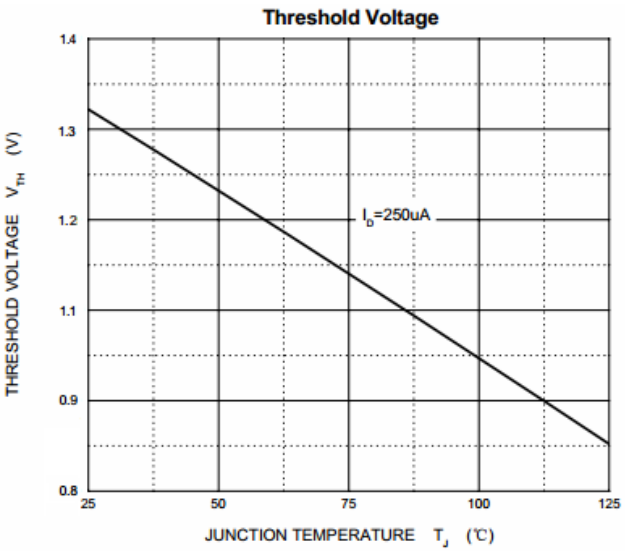
Notes:
*Pulse Test: Pulse Width≤300μA, Duty Cycle≤2%.
**These parameters have no way to verify.

Typical Characteristics









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Ordering Information :

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

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