



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

SI2324A

N-Channel Enhancement Mode Field Effect Transistor

Features

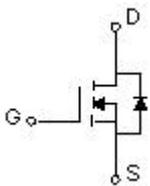
- Halogen free available upon request by adding suffix "-HF"
- TrenchFET Power Mosfet
- Low $R_{DS(ON)}$
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

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	$^{\circ}C/W$
T_J	Operating Junction Temperature	-55 to +150	$^{\circ}C$
T_{STG}	Storage Temperature	-55 to +150	$^{\circ}C$

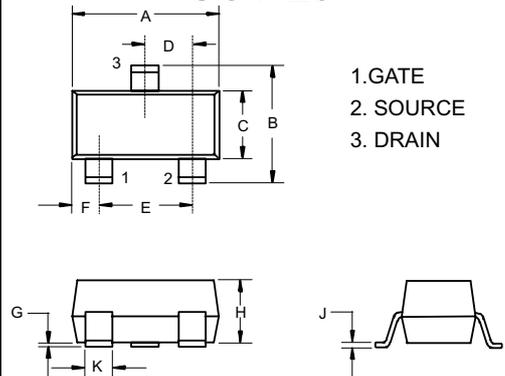
NOTE 1. Repetitive rating: Pulse width limited by junction temperature.

Internal Block Diagram



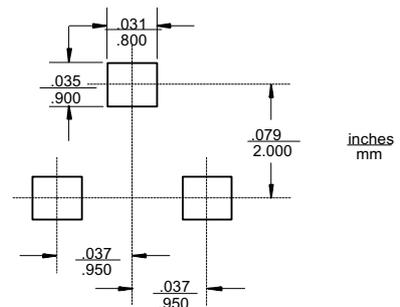
Marking:1002

SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
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



SI2324A

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

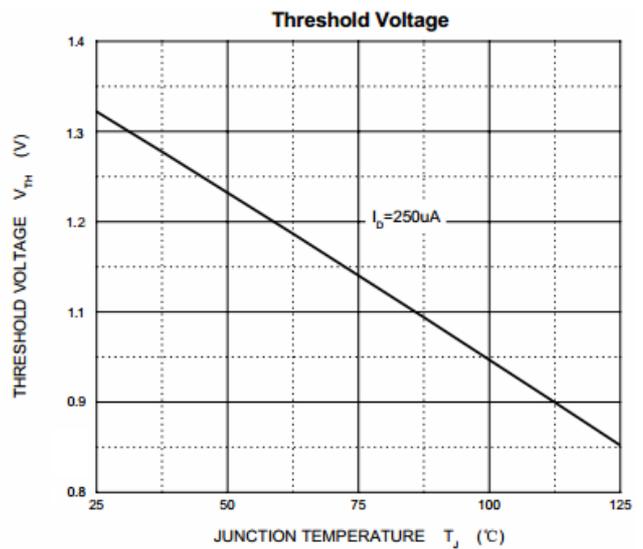
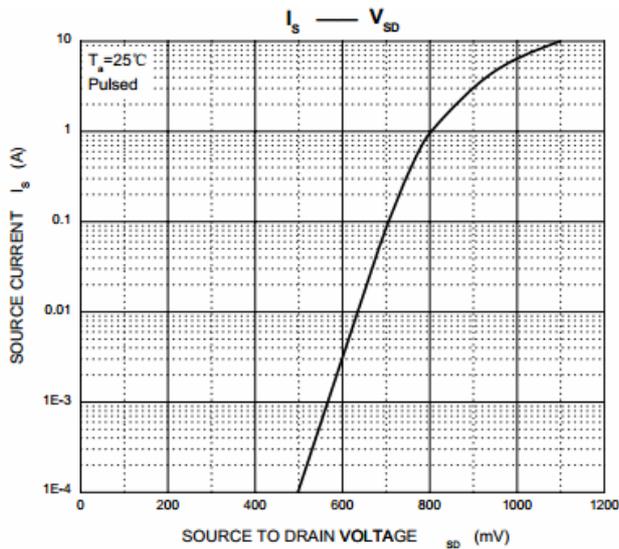
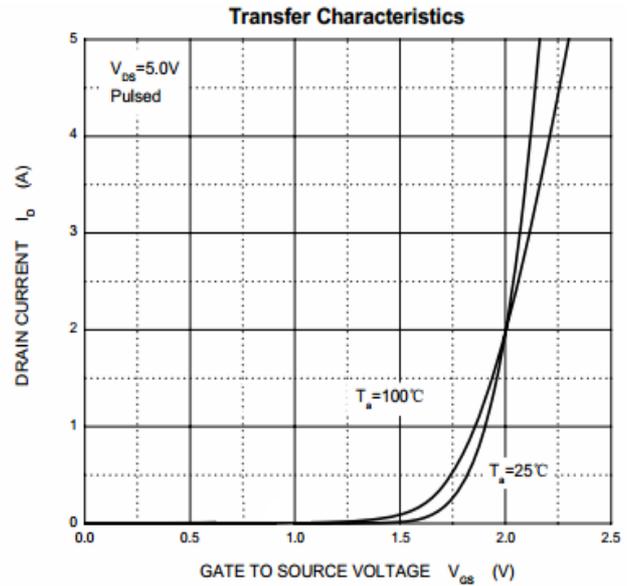
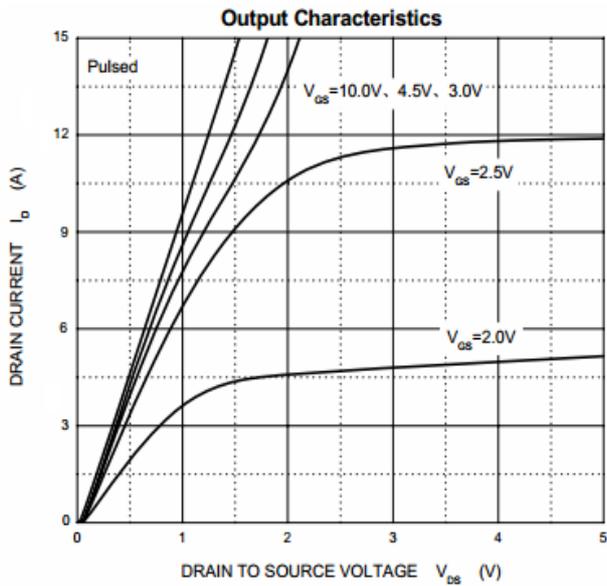
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	100			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =100V, V _{GS} =0V			1	μA
Gate-body leakage current	I _{GSS}	V _{GS} = ±20V, V _{DS} =0V			±100	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}	V _{DS} =15V, V _{GS} =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, R _L =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 Cycles≤2%.

**These parameters have no way to verify.

Typical Characteristics





Micro Commercial Components

Ordering Information :

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

*****IMPORTANT NOTICE*****

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp .** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp .** and all the companies whose products are represented on our website, harmless against all damages.

*****LIFE SUPPORT*****

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

*****CUSTOMER AWARENESS*****

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9