



SI2324A

Features

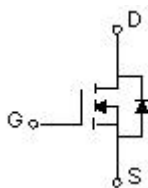
- Halogen free available upon request by adding suffix "-HF"
- TrenchFET Power Mosfet
- Low $R_{DS(ON)}$
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

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.

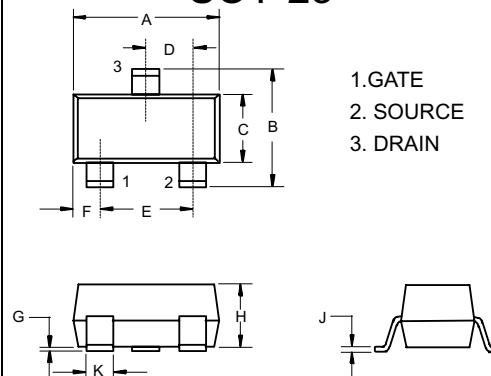
Internal Block Diagram



Marking:1002

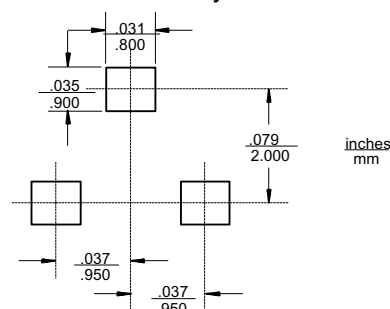
N-Channel Enhancement Mode Field Effect Transistor

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



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

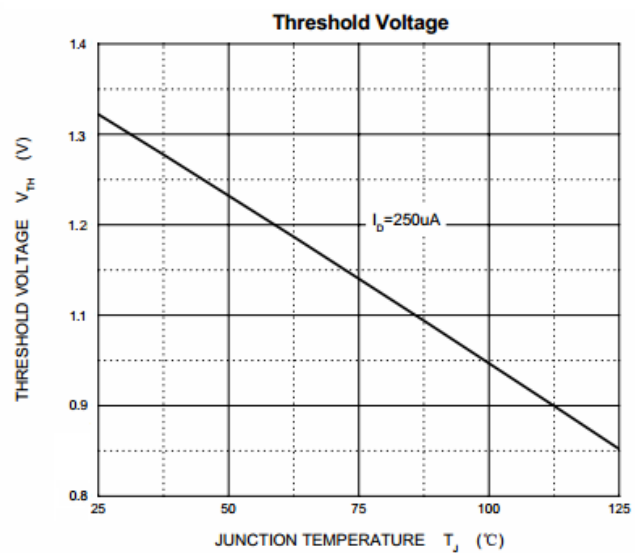
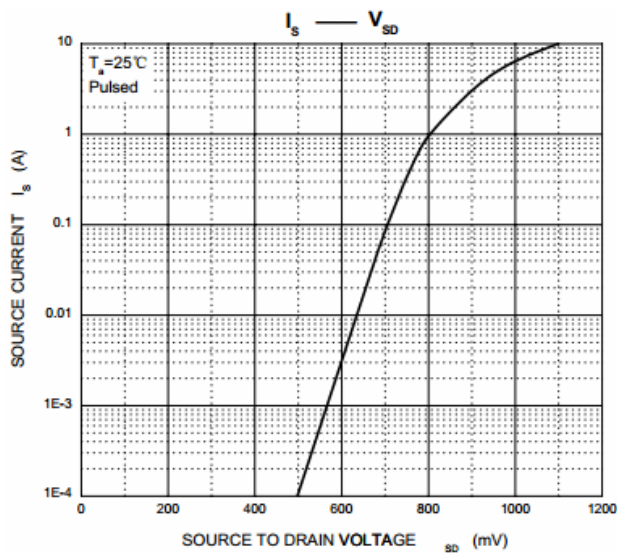
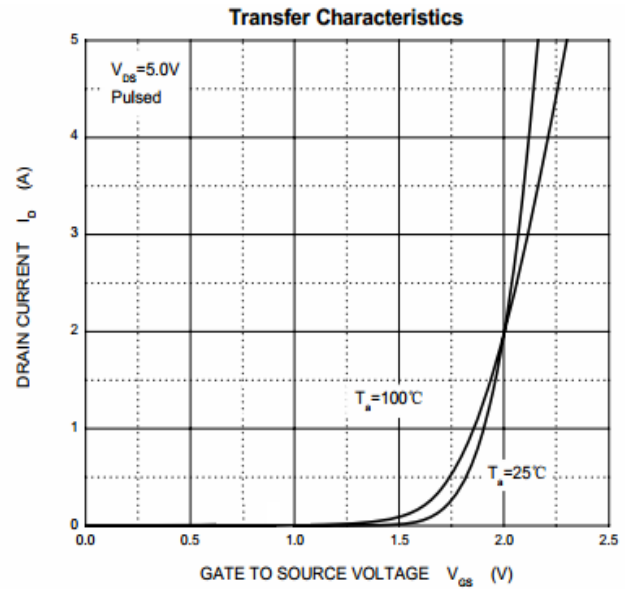
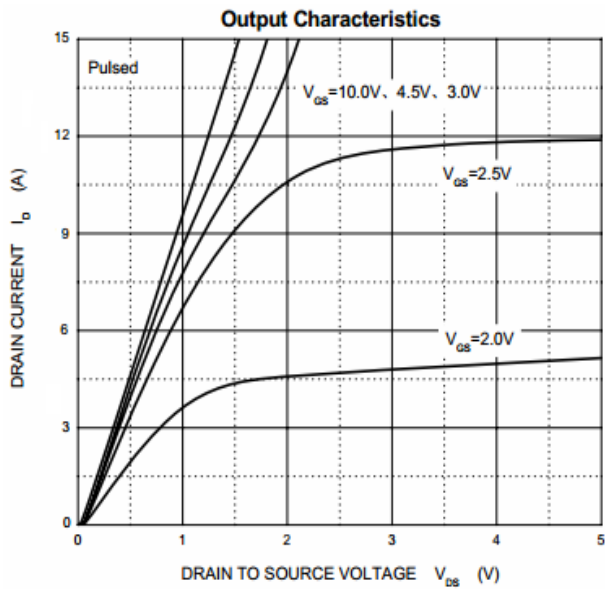
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	100			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =100V, V _{GS} =0V			1	μA
Gate-body leakage current	I _{GSS}	V _{GS} = ±20V, V _{DS} =0V			±100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

**These parameters have no way to verify.

Typical Characteristics





Ordering Information :

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

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