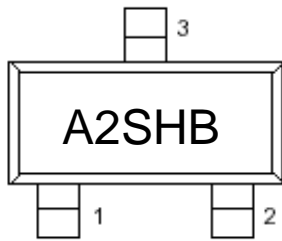


MOSFET

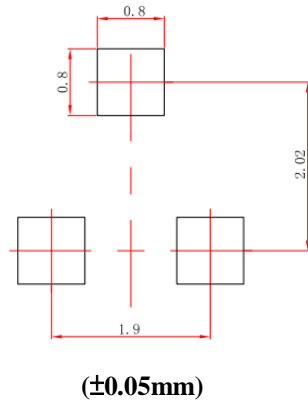
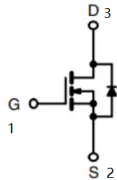
Marking: A2SHB

Suggested Layout

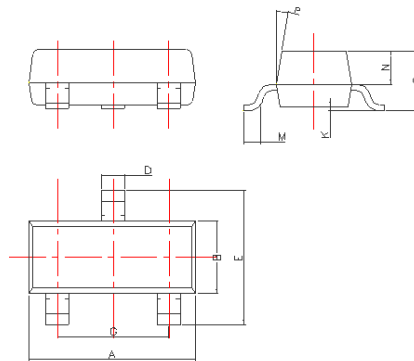
SOT-23



Top view



Dimension



DIM	Millimeters
A	2.85~3.04
B	1.30±0.10
C	1.00±0.10
D	0.45±0.05
E	2.25~2.55
G	1.90±0.1
K	0.00-0.10
M	0.20 min
N	0.60±0.10
P	7±2°

MAXIMUM RATINGS (Ta=25°C)

Characteristic	Symbol	Rating	Unit
Drain-Source Voltage	VDSS	20	Vdc
Gate-Source Voltage	VGSS	±12	Vdc
Drain Current—Continuous	ID	2.0	Adc
Peak Drain Current	IDM	10	Adc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board(1) TA=25°C	PD	225	mW
Total Device Dissipation Alumina Substrate,(2) TA=25°C	PD	300	mW
Junction and Storage Temperature	TJ, Tstg	150 , -55 to +150	°C

- FR-5=1.0×0.75×0.062in, printed-circuit board.
- Alumina=0.4×0.3×0.024in, 99.5%alumina

ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

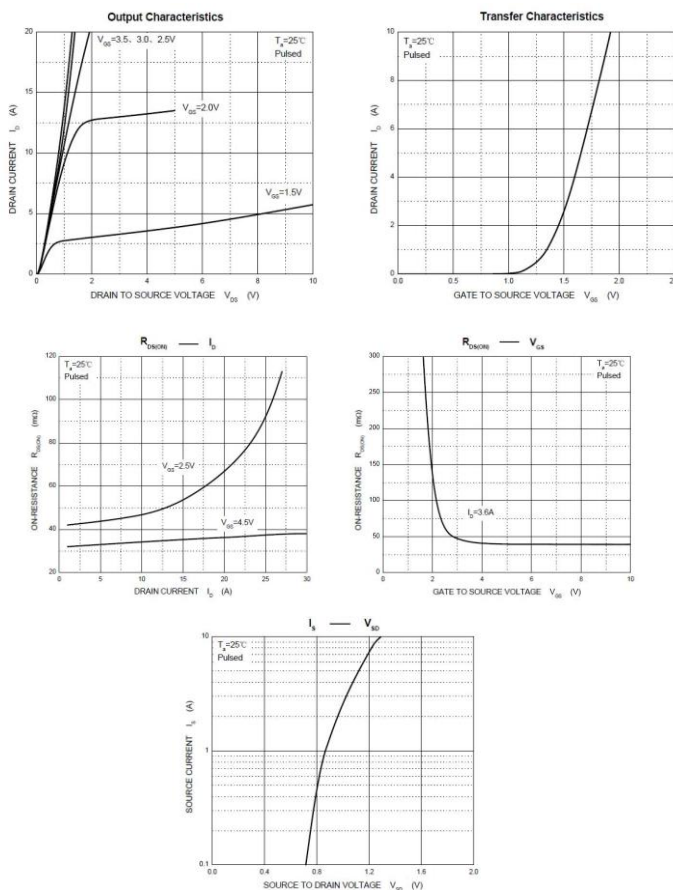
Characteristic	Symbol	Test Condition	Min	Type	Max	Unit
Drain-Source Breakdown Voltage	V(BR)DSS	VGS=0V, ID=250µA	20	—	—	V
Zero Gate Voltage Drain Current	IDSS	VDS=19V, VGS=0V	—	—	1.0	µA
Gate-Body Leakage Current,Forward	IGSS	VGS=±12V	—	—	±100	nA
Gate Threshold Voltage	VGS(th)	VDS= VGS, ID=250µA	0.40	0.65	1.0	V
Static Drain-Source On-State Resistance	RDS(on)	VGS=4.5V, ID=2.0A	—	43	56	mΩ
		VGS=2.5V, ID=2.0A	—	55	85	
Forward Transconductance	gfs	VDS=5V, ID=2.0A	4	—	—	S
Diode Forward On-Voltage	VSD	VGS=0V, IS=2.0A	—	—	1.2	V

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CDL2302D-ME

Turn-On Delay Time	$t_{d(on)}$	VDD = 10V, ID = 2.0A, RL = 2.8Ω, VGS = 4.5V, RGEN = 6Ω	—	2	—	ns
Turn-On Time	tr		-	10	-	
Turn-Off Delay Time	$t_{d(off)}$		-	8	-	
Turn-On Fall Time	t_f		-	3	-	
Input Capacitance	Ciss	VDS = 10V, VGS = 0V, f = 1.0 MHz	-	270	-	pF
Output Capacitance	Coss		-	35	-	
Reverse Transfer Capacitance	Crss		-	25	-	
Total Gate Charge	QG	VDS = 10V, ID = 2.0A, VGS = 4.5V	-	3.4	-	nC
Gate.to source charge	QGS		-	0.6	-	
Gate.to drain charge	QGD		-	1.6	-	

Typical Performance Characteristics



Note: Specifications are subject to change without notice.

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