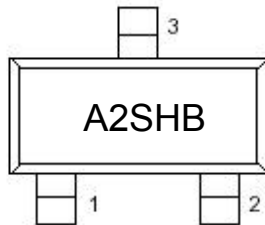


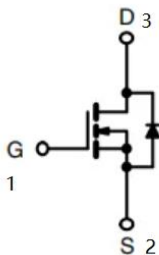
CDL2302D-ME

MOSFET

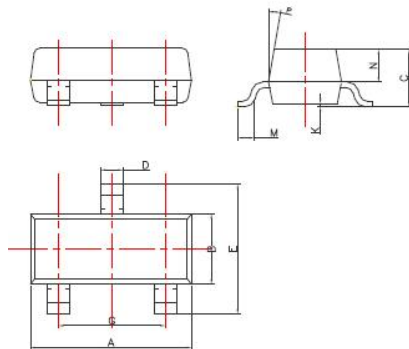
Marking: A2SHB



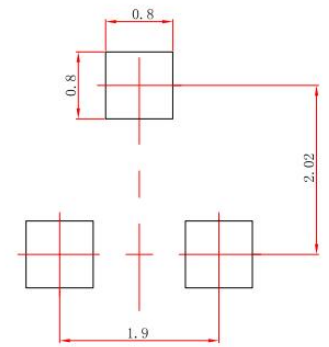
Top view



SOT-23 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°

SOT-23
Suggested Layout

(±0.05mm)

MAXIMUM RATINGS (Ta=25°C)

Characteristic	Symbol	Rating	Unit
Drain-Source Voltage	V _{DSS}	20	Vdc
Gate-Source Voltage	V _{GS}	±12	Vdc
Drain Current—Continuous	I _D	2.0	Adc
Peak Drain Current	I _{DM}	10	Adc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board(1) TA=25°C	P _D	225	mW
Total Device Dissipation Alumina Substrate,(2) TA=25°C	P _D	300	mW
Junction and Storage Temperature	T _J , T _{stg}	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)

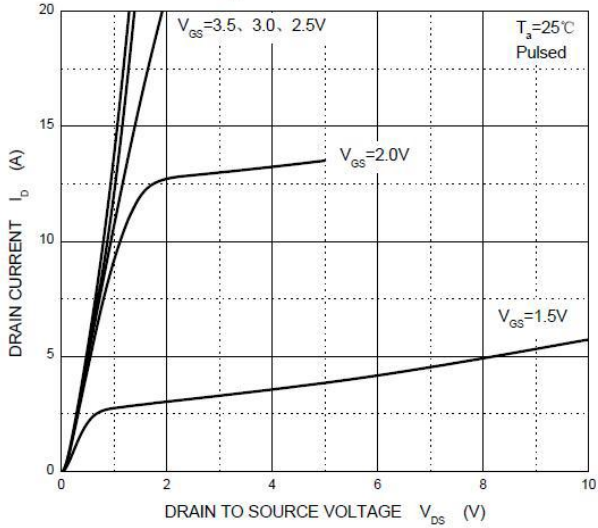
Characteristic	Symbol	Test Condition	Min	Type	Max	Unit
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =250μA	20	—	—	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =19V, V _{GS} =0V	—	—	1.0	μA
Gate-Body Leakage Current, Forward	I _{GSS}	V _{GS} =±12V	—	—	±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.40	0.65	1.0	V
Static Drain-Source On-State Resistance	R _{DS(on)}	V _{GS} =4.5V, I _D =2.0A V _{GS} =2.5V, I _D =2.0A	—	43 55	56 85	mΩ
Forward Transconductance	g _{fs}	V _{DS} =5V, I _D =2.0A	4	—	—	S
Diode Forward On-Voltage	V _{SD}	V _{GS} =0V, I _S =2.0A	—	—	1.2	V
Turn-On Delay Time	t _{d(on)}	V _{DD} = 10V, I _D = 2.0A, R _L = 2.8Ω, V _{GS} = 4.5V, R _{GEN} = 6Ω	—	2	—	ns
Turn-On Time	t _r		-	10	-	
Turn-Off Delay Time	t _{d(off)}		-	8	-	
Turn-On Fall Time	t _f		-	3	-	
Input Capacitance	C _{iss}	V _{DS} = 10V, V _{GS} = 0V, f = 1.0 MHz	-	270	-	pF
Output Capacitance	C _{oss}		-	35	-	
Reverse Transfer Capacitance	C _{rss}		-	25	-	
Total Gate Charge	Q _G	V _{DS} = 10V, I _D = 2.0A, V _{GS} = 4.5V	-	3.4	-	nC
Gate to source charge	Q _{GS}		-	0.6	-	
Gate to drain charge	Q _{GD}		-	1.6	-	

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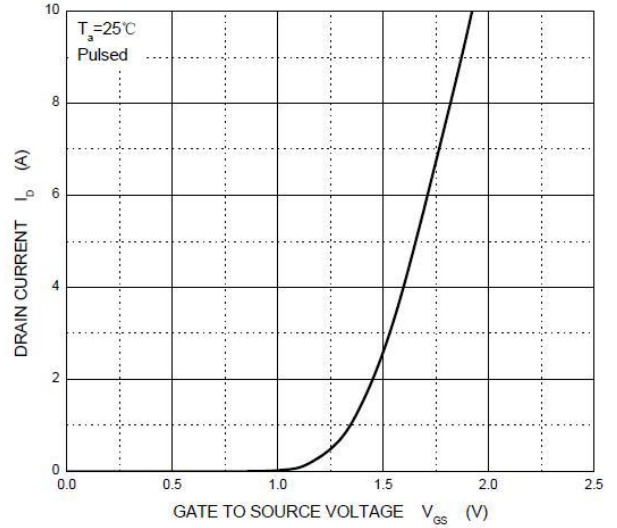
MOSFET

Typical Characteristics

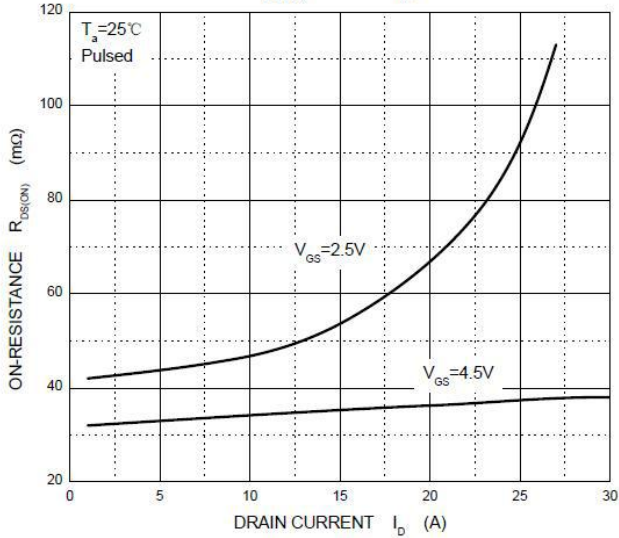
Output Characteristics



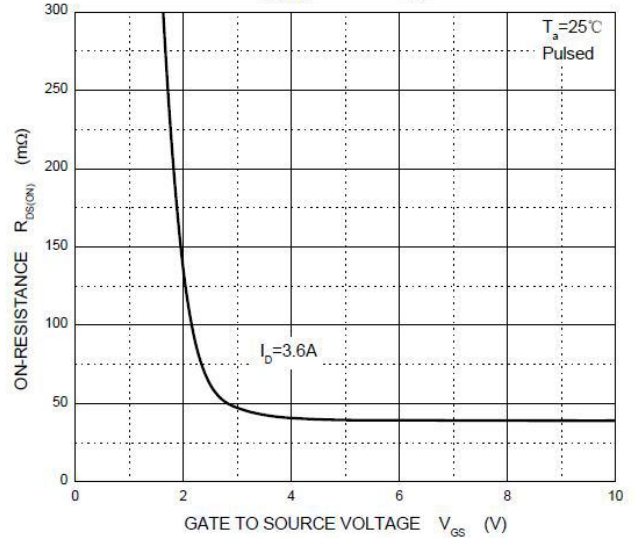
Transfer Characteristics



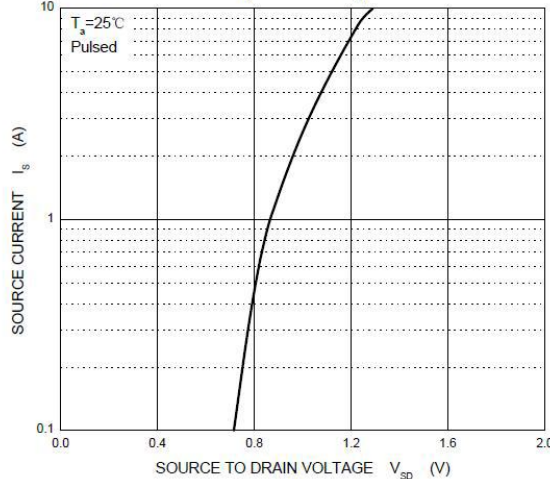
$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}



Note: Specifications are subject to change without notice. For more detail and update, please visit our website.