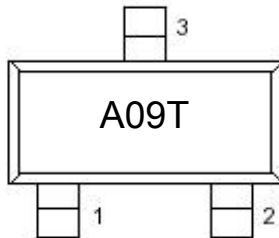


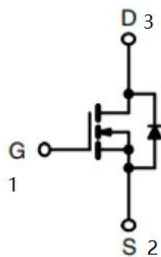
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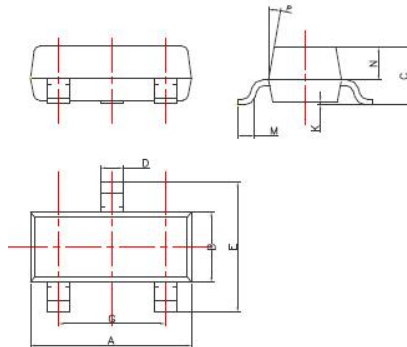
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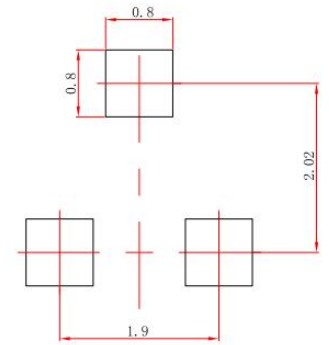
Top view



## 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	VDSS	30	Vdc
Gate-Source Voltage	VGSS	±12	Vdc
Drain Current—Continuous	ID	5.8	Adc
Peak Drain Current	IDM <sup>1</sup>	20	Adc

## THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation TA=25°C	PD	400	mW
Thermal Resistance from Junction to Ambient	RθJA	313	°C/W
Junction and Storage Temperature	TJ, Tstg	150 , -55 to +150	°C

1. Repetitive Rating : Pulse width limited by maximum junction temperature

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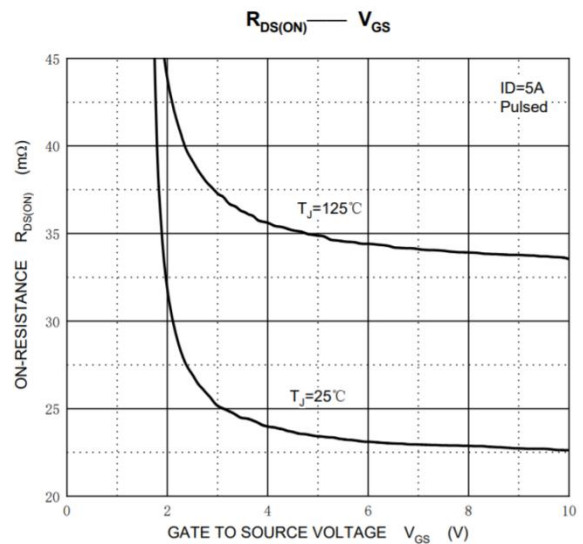
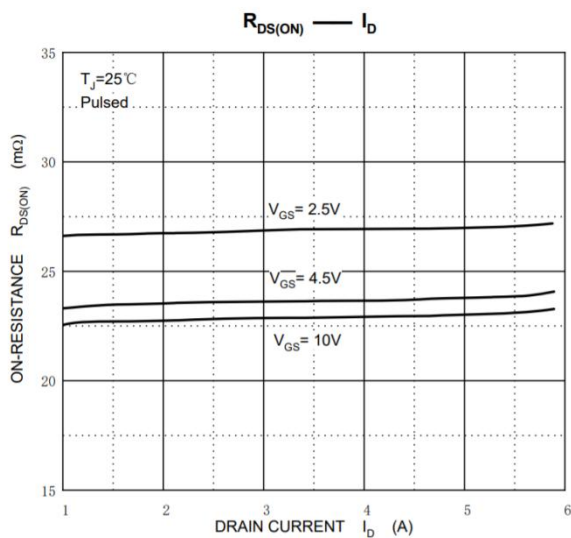
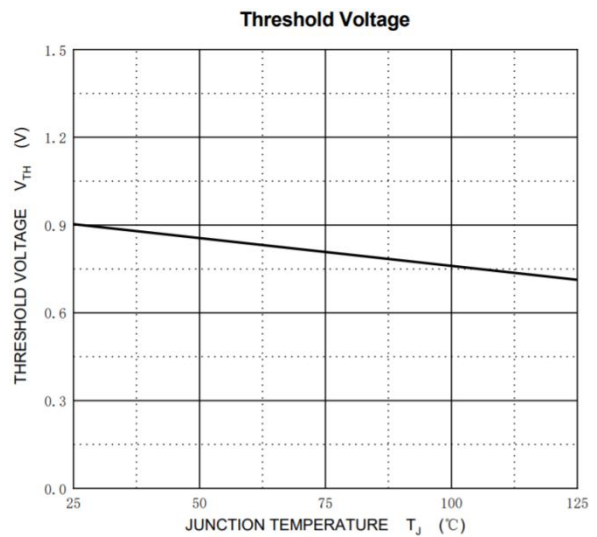
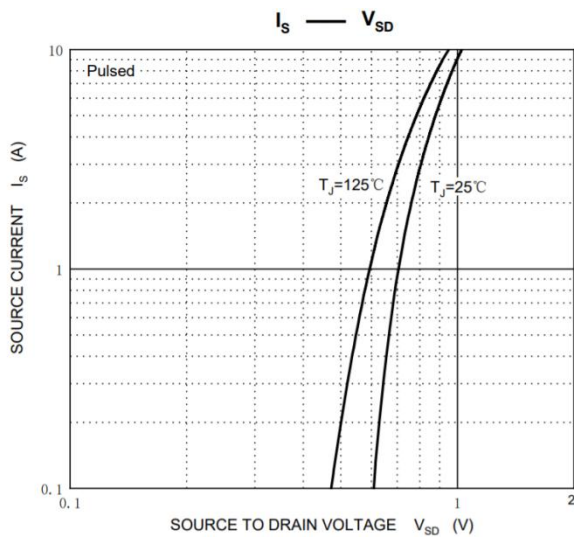
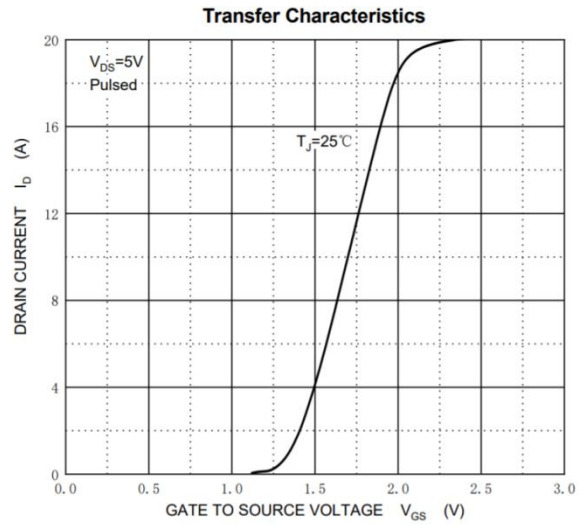
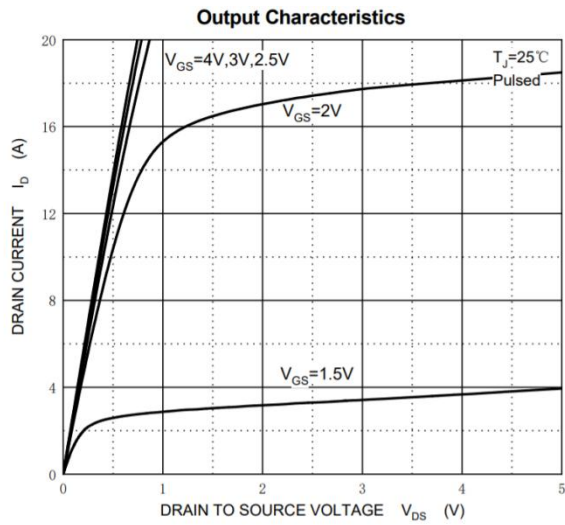
ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

Characteristic	Symbol	Test Condition	Min	Type	Max	Unit
Drain-Source Breakdown Voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> =0V, I <sub>D</sub> =250μA	30	—	—	V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =24V, V <sub>GS</sub> =0V	—	—	1.0	μA
Gate-Body Leakage Current, Forward	I <sub>GSS</sub>	V <sub>GS</sub> =±12V	—	—	±100	nA
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250μA	0.70	0.95	1.2	V
Static Drain-Source On-State Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =5.8A	—	22	35	mΩ
		V <sub>GS</sub> =4.5V, I <sub>D</sub> =5.0A	—	25	40	
		V <sub>GS</sub> =2.5V, I <sub>D</sub> =4.0A	—	37	52	
Forward Transconductance	g <sub>fs</sub>	V <sub>DS</sub> =5V, I <sub>D</sub> =5.0A	8	—	—	S
Diode Forward On-Voltage	V <sub>SD</sub>	V <sub>GS</sub> =0V, I <sub>S</sub> =5.0A	—	—	1.2	V
Turn-On Delay Time	t <sub>d(on)</sub>	V <sub>DD</sub> = 10V,	—	4.4	—	ns
Turn-On Time	t <sub>r</sub>	V <sub>DS</sub> =15V, I <sub>D</sub> =5A, R <sub>L</sub> = 2.7Ω, R <sub>GEN</sub> = 3Ω	-	28.2	-	
Turn-Off Delay Time	t <sub>d(off)</sub>		-	16.2	-	
Turn-On Fall Time	t <sub>f</sub>		-	26	-	
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 15V, V <sub>GS</sub> = 0V, f = 1.0 MHz	-	630	-	pF
Output Capacitance	C <sub>oss</sub>		-	55	-	
Reverse Transfer Capacitance	C <sub>rss</sub>		-	71	-	
Total Gate Charge	Q <sub>G</sub>	V <sub>DS</sub> = 10V, I <sub>D</sub> =5A, V <sub>GS</sub> =6V	-	17.25	-	nC
Gate.to source charge	Q <sub>GS</sub>		-	2.1	-	
Gate.to drain charge	Q <sub>GD</sub>		-	2	-	

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### Typical Performance Characteristics



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