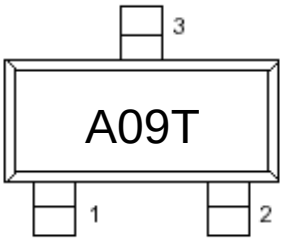
Kingtronics®

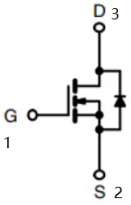
CDL3400A-ME

MOSFET

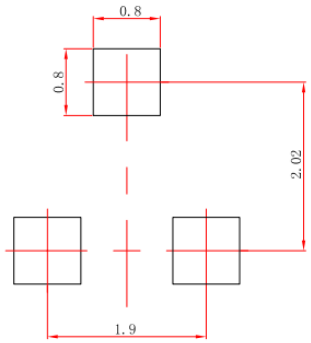
Marking: A09T



Top view



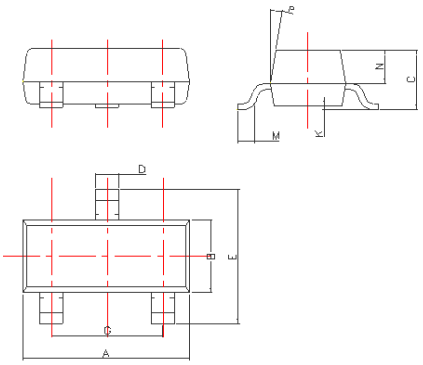
Suggested Layout



(±0.05mm)

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°

MAXIMUM RATINGS (Ta=25℃)

Characteristic	Symbol	Rating	Unit
Drain-Source Voltage	VDSS	30	Vdc
Gate-Source Voltage	VGSS	±12	Vdc
Drain Current—Continuous	I_D	5.8	Adc
Peak Drain Current	I_{DM}[1]	20	Adc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation TA=25℃	P_D	400	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	313	℃/W
Junction and Storage Temperature	T_J, T_{stg}	150， -55 to +150	℃

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

ELECTRICAL CHARACTERISTICS (TA=25℃ unless otherwise noted)

Characteristic	Symbol	Test Condition	Min	Type	Max	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V, I_D =250μA	30	—	—	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=24V, 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	0.70	0.95	1.2	V
Static Drain-Source On-State Resistance	RDS(on)	VGS=10V, ID =5.8A VGS=4.5V, ID =5.0A VGS=2.5V, ID =4.0A	— — —	22 25 37	35 40 52	mΩ

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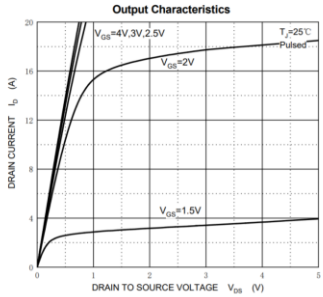
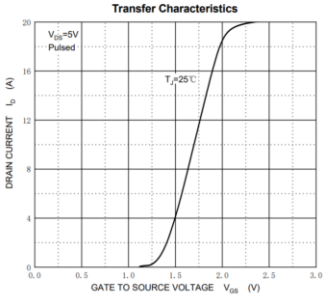
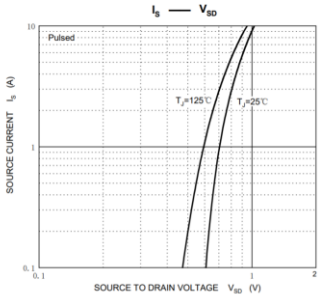
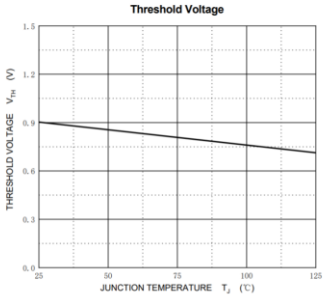
Forward Transconductance	g_{fs}	V_{DS}＝5V ,I_D=5.0A	8	—	—	S
Diode Forward On-Voltage	V_{SD}	V_{GS}=0V, I_S =5.0A	—	—	1.2	V
Turn-On Delay Time	$t_{d(on)}$	VDD = 10V,	—	4.4	—	ns
Turn-On Time	tr	VDS=15V, ID=5A,RL = 2.7Ω,RGEN = 3Ω	-	28.2	-	
Turn-Off Delay Time	$t_{d(off)}$		-	16.2	-	
Turn-On Fall Time	t_f		-	26	-	
Input Capacitance	Ciss	VDS = 15V, VGS = 0V,f = 1.0 MHz	-	630	-	pF
Output Capacitance	Coss		-	55	-	
Reverse Transfer Capacitance	Crss		-	71	-	
Total Gate Charge	Q_G	VDS = 10V, ID =5A,VGS=6V	-	17.25	-	nC
Gate.to source charge	Q_{GS}		-	2.1	-	
Gate.to drain charge	Q_{GD}		-	2	-	

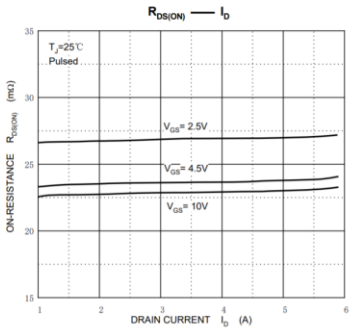
Typical Performance Characteristics

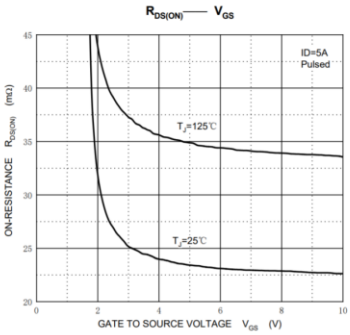












Note: Specifications are subject to change without notice.