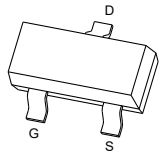
TKMN3400A

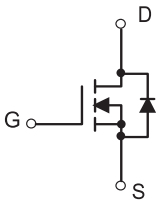
N-Channel 30-V(D-S) MOSFET

$V_{(BR)DSS}$	$R_{DS(on)}$MAX	I_D
30V	26mΩ@ 10 V	5.8A
	32mΩ@ 4.5V	
	50mΩ@ 2. 5V	

SOT-23



Schematic diagram



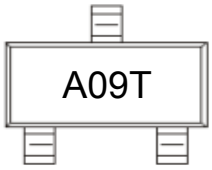
FEATURE

- High dense cell design for extremely low R DS(ON)
- Exceptional on-resistance and maximum DC current capability

APPLICATION

- Load/Power Switching
- Interfacing Switching

MARKING



Maximum ratings (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	±12	
Continuous Drain Current	I_D	5.8	A
Pulsed Drain Current (note1)	I_{DM}	30	
Maximum Power Dissipation	P_D	0.35	W
Thermal Resistance from Junction to Ambient(t ≤5s)	$R_{\theta JA}$	357	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{stg}	-55~+150	

MOSFET ELECTRICAL CHARACTERISTICS

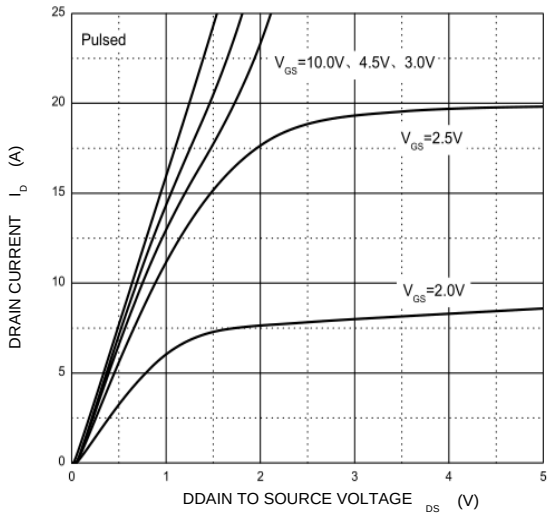
T_a=25℃ unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Static						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =250μA	30	33.5		V
Gate-source threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	0.7	0.9	1.4	
Gate-source leakage	I_{GSS}	V_{DS} =0V, V_{GS} =±12V			±100	nA
Zero gate voltage drain current	I_{DSS}	V_{DS} =24V, V_{GS} =0V			1	μA
Drain-source on-state resistance(note3)	$R_{DS(on)}$	V_{GS} =10V, I_D =5.8A		21	26	mΩ
		V_{GS} =4.5V, I_D =5.0A		23	32	
		V_{GS} =2.5V, I_D = 4.0A		31	50	
Forward transconductance	g_{fs}	V_{DS} =5V, I_D =5A	8			S
Dynamic(note4)						
Input capacitance	C_{iss}	V_{DS} =15V,V_{GS} =0V,f =1MHz			1050	pF
Output capacitance	C_{oss}			99		
Reverse transfer capacitance	C_{rss}			77		
Switching characteristics(note4)						
Turn-on delay time	$t_{d(on)}$	V_{GS}=10V, V_{DS} =15V R_L=2.7Ω, R_{GEN} =3Ω			5	ns
Rise time	t_r				7	
Turn-off delay time	$t_{d(off)}$				40	
Fall time	t_f				6	
Drain-source body diode characteristics						
Body diode voltage (note3)	V_{SD}	I_S=1A		0.8	1.0	V

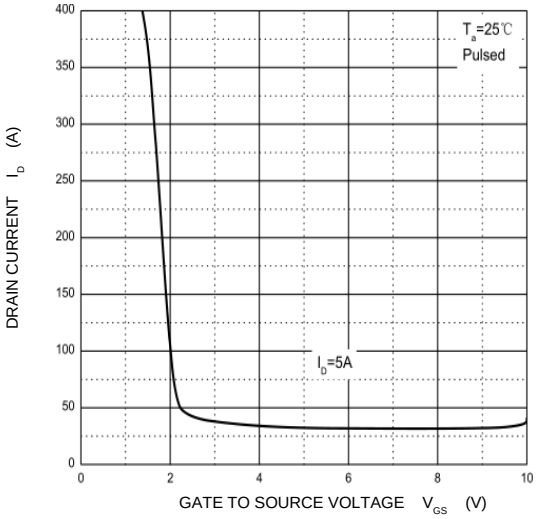
Notes :

1. Repetitive Rating : Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board, t < 5 sec.
3. Pulse Test : Pulse Width<300us, Duty Cycle<2%.
4. Guaranteed by design, not subject to production testing.

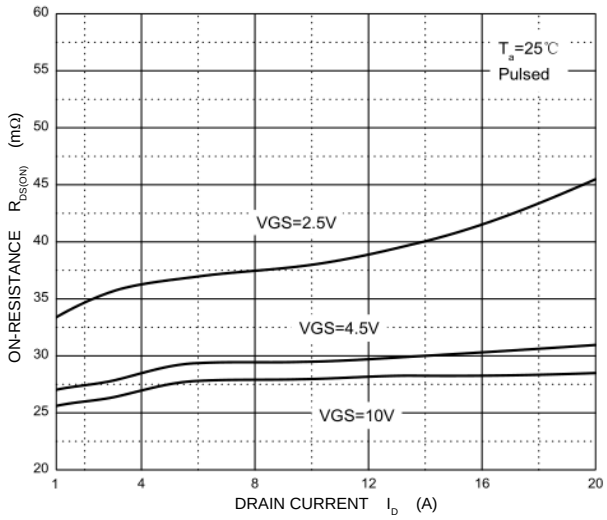
Output Characteristics



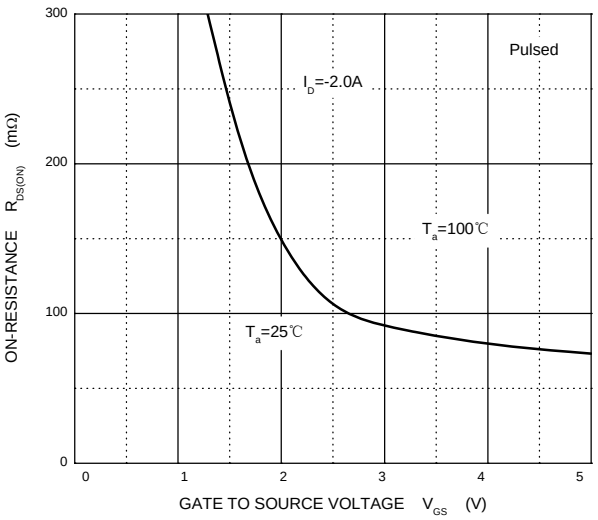
Transfer Characteristics



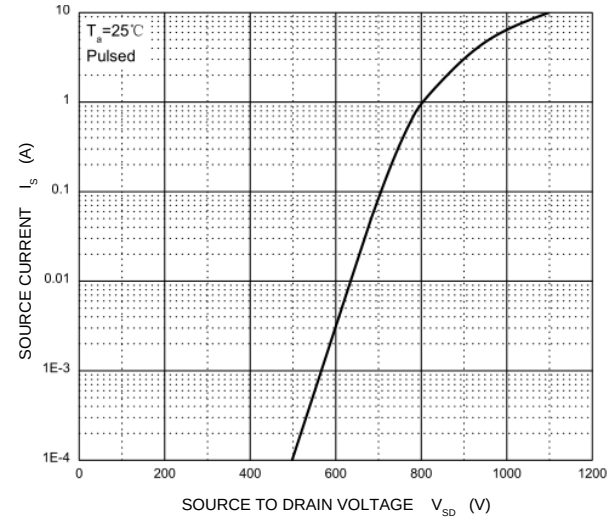
$R_{DS(ON)}$ —— I_D



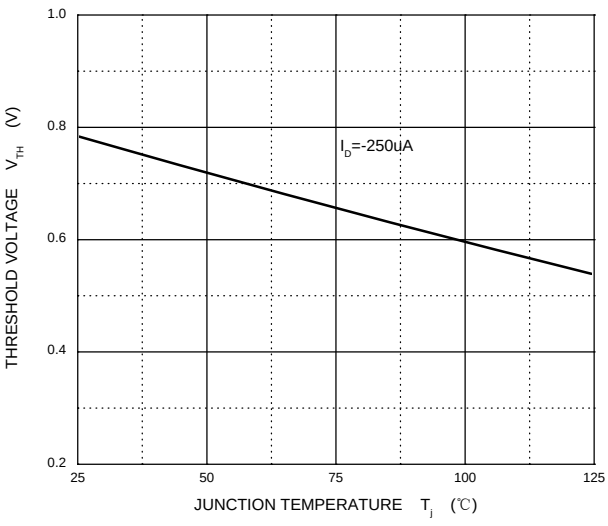
$R_{DS(ON)}$ —— V_{GS}

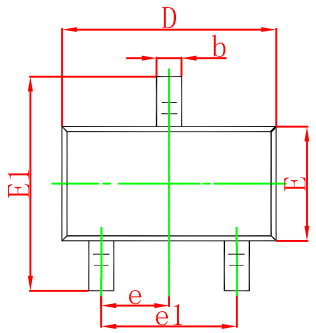


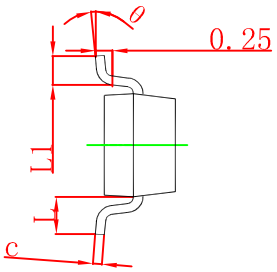
I_S —— V_{SD}

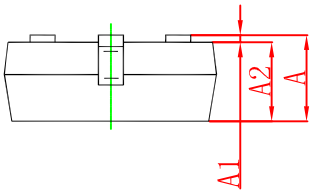


Threshold Voltage



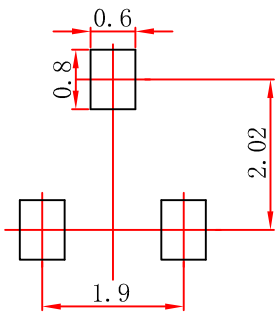






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.