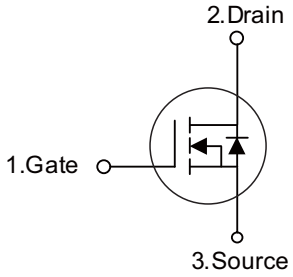
■ PRODUCT CHARACTERISTICS

VDSS	30V
R_{DS}(on)Typ(V_{GS} @=4.5 V)	28mΩ
R_{DS}(on)Typ(V_{GS}@=2.5 V)	32mΩ
ID	4

Symbol



■ APPLICATIONS

Load/Power Switching

Interfacing Switching

■ FEATURES

High dense cell design for extremely low $R_{DS(ON)}$

Exceptional on-resistance and maximum DC current capability

■ ORDER INFORMATION

Order codes		Package	Packing
Halogen-Free	Halogen		
N/A	MOT3400A3	SOT-23A-3L	3000pieces/Real

■ ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current	I_D	4.0	A
Drain Current-Pulsed (note 1)	I_{DM}	16	A
Power Dissipation	P_D	240	mW
Thermal Resistance from Junction to Ambient (note 2)	$R_{\theta JA}$	246	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~ +150	℃

■ELECTRICAL CHARACTERISTICS (T_C=25°C, unless otherwise specified)

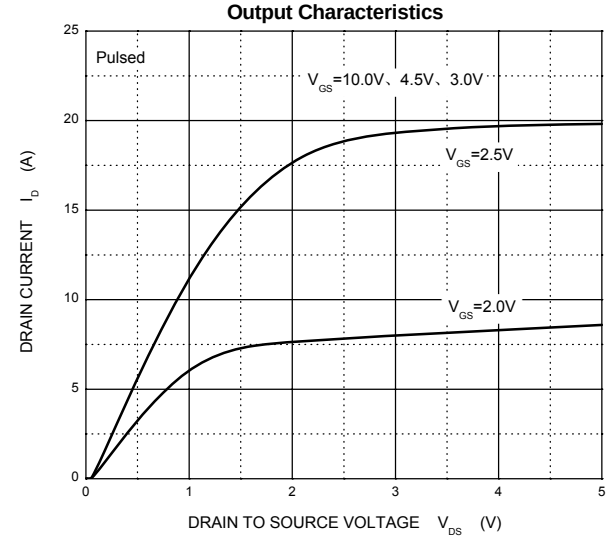
Parameter	Symbol	Test condition	Min	Typ	Max	Unit
Off characteristics						
Drain-source breakdown voltage	$V_{(BR)\,DSS}$	V_{GS} = 0V, I_D =250μA	30	-	-	V
Zero gate voltage drain current	I_{DSS}	V_{DS} =24V,V_{GS} = 0V	-	-	1	μA
Gate-source leakage current	I_{GSS}	V_{GS} =±12V, V_{DS} = 0V	-	-	±100	nA
On characteristics						
Drain-source on-resistance	$R_{DS(on)}$	V_{GS} =4.5V, I_D =3A	-	28	40	mΩ
		V_{GS} =2.5V,I_D=2A	-	32	54	mΩ
Forward tranconductance	g_{FS}	V_{DS} =5V, I_D =4A	8	-	-	S
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	0.7	-	1.4	V
Dynamic characteristics						
Input capacitance	C_{iss}	V_{DS} =15V,V_{GS} =0V,f =1MHz	-	-	1050	pF
Output capacitance	C_{oss}		-	99	-	pF
Reverse transfer capacitance	C_{rss}		-	77	-	pF
Gate resistance	R_g	V_{DS} =0V,V_{GS} =0V,f =1MHz	-	-	3.6	Ω
Switching characteristics						
Turn-on delay time	$t_{d(on)}$	V_{GS}=10V,V_{DS}=15V, R_L=2.7Ω,R_{GEN}=3Ω	-	-	5	ns
Turn-on rise time	t_r		-	-	7	ns
Turn-off delay time	$t_{d(off)}$		-	-	40	ns
Turn-off fall time	t_f		-	-	6	ns
Drain-source diode characteristics						
Diode forward voltage	V_{SD}	I_S=2.9 A,V_{GS}=0V	-	-	1	V

Note :

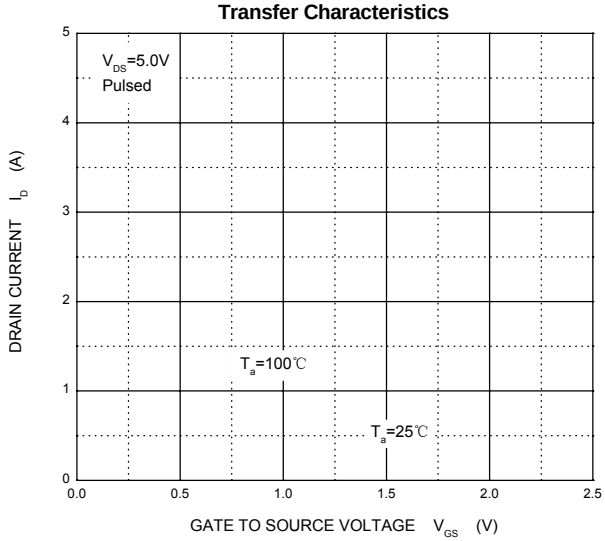
1. Repetitive Rating : Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board, t < 5 sec.
3. Pulse Test : Pulse Width≤300μs, Duty Cycle ≤ 2%.
4. Guaranteed by design, not subject to production testing.

■ TYPICAL CHARACTERISTICS

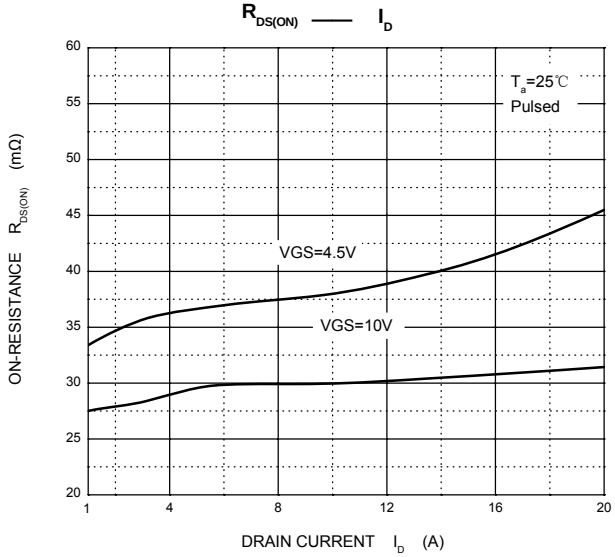
Output Characteristics



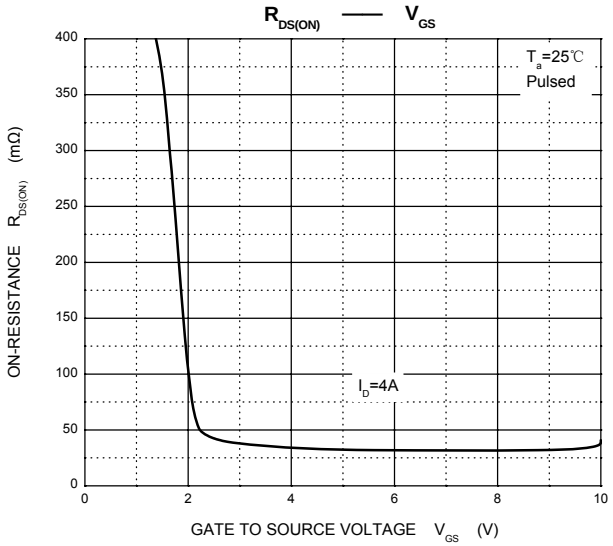
Transfer Characteristics



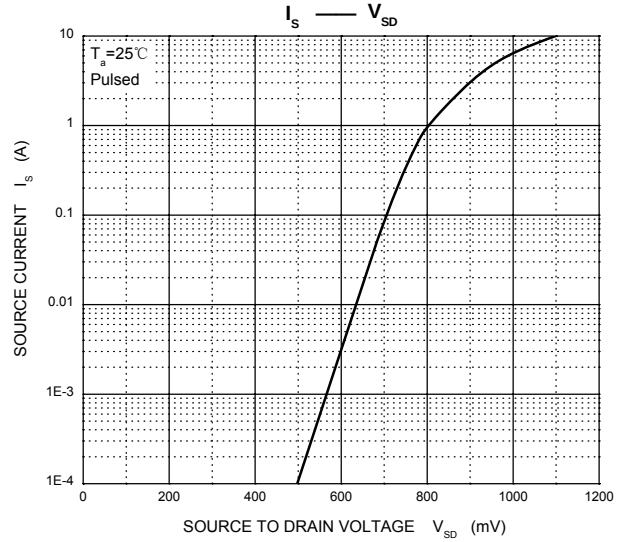
$R_{DS(ON)}$ —— I_D



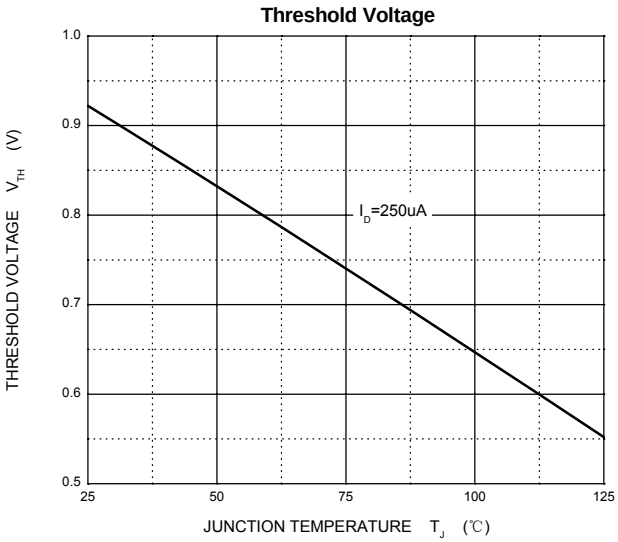
$R_{DS(ON)}$ —— V_{GS}



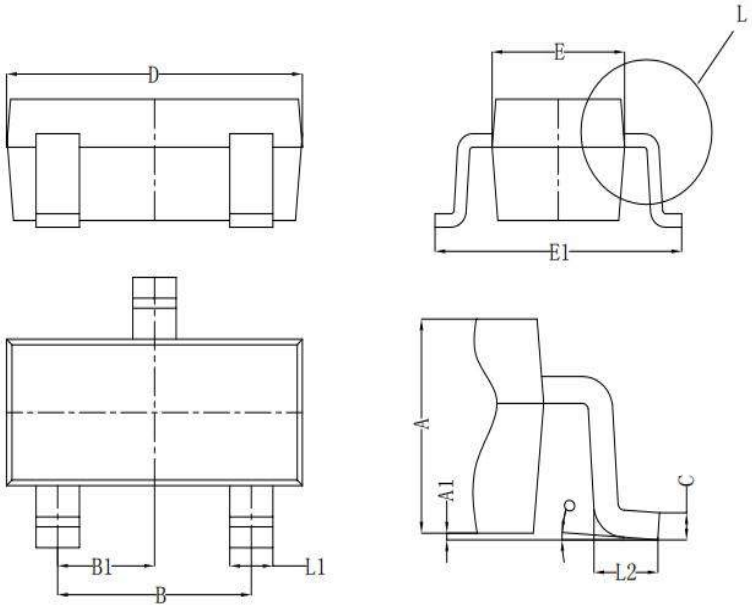
I_S —— V_{SD}



Threshold Voltage



■SOT-23A-3L PACKAGE OUTLINE DIMENSIONS



Symbol	Dim in mm		
	Min	Nor	Max
A	1.050	1.100	1.150
A1	0.000	0.050	0.100
L1	0.300	0.400	0.500
C	0.100	0.150	0.200
D	2.820	2.920	3.020
E	1.500	1.600	1.700
E1	2.650	2.800	2.950
B	1.800	1.900	2.000
B1	0.950 TYP		
L2	0.300	0.450	0.600
o	0°	4°	8°