

SOT-23-3L Plastic-Encapsulate MOSFETS

LJ3400

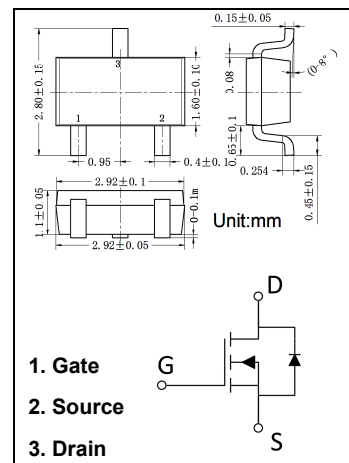
N-Channel Enhancement Mode Field Effect Transistor

Features

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

Applications

- Load/Power Switching
- Interfacing Switching



Maximum Ratings ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Value	Unit
V_{DS}	Drain-Source voltage	30	V
V_{GS}	Gate-Source voltage	± 12	
I_D	Continuous Drain Current	5.8	A
I_{DM}	Drain Current-Pulsed ¹⁾	30	
P_D	Power Dissipation	1.2	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient ²⁾	104	$^{\circ}\text{C/W}$
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	-55 to +150	

Electrical Characteristics (T_J=25°C unless otherwise specified)

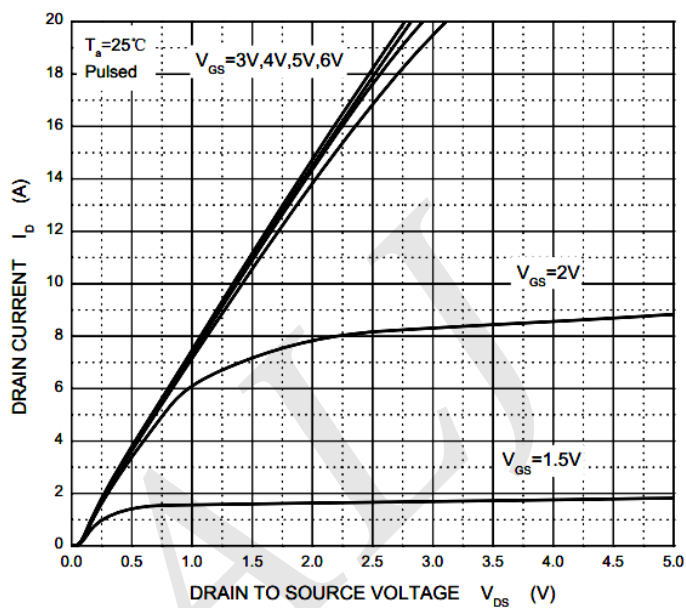
Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Off Characteristics						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0V, I _D = 250μA	30			V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 24V, V _{GS} = 0V			1	μA
I _{GSS}	Gate-body Leakage current	V _{DS} = 0V, V _{GS} = ±12V			±100	nA
On characteristics ³⁾						
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V, I _D = 5.8A		29	32	mΩ
		V _{GS} = 4.5V, I _D = 5A		32	38	mΩ
		V _{GS} = 2.5V, I _D = 4A		40	45	mΩ
g _{fs}	Forward Trans conductance	V _{DS} = 5V, I _D =5A	8			S
V _{GS(th)}	Gate-Threshold Voltage	V _{DS} = V _{GS} , I _D = 250μA	0.7	0.9	1.4	V
Dynamic Characteristics ^{4,5)}						
C _{iss}	Input Capacitance	V _{GS} = 0V, V _{DS} = 15V, f = 1MHz			1155	pF
C _{oss}	Output Capacitance			108		
C _{rss}	Reverse Transfer Capacitance			84		
R _g	Gate resistance	V _{DS} =0V, V _{GS} =0V, f = 1MHz			3.6	Ω
Switching Characteristics ^{4,5)}						
t _{d(on)}	Turn-On Delay Time	V _{GS} = 10V, V _{DS} = 15V, R _L = 2.7Ω, R _{GEN} = 3Ω		5		ns
t _r	Rise Time			7		
t _{d(off)}	Turn-Off Delay Time			40		
t _f	Fall Time			6		
Drain-source diode characteristics and maximum ratings						
V _{SD}	Diode forward voltage ³⁾	I _S = 1A, V _{GS} = 0V			1	V

Notes

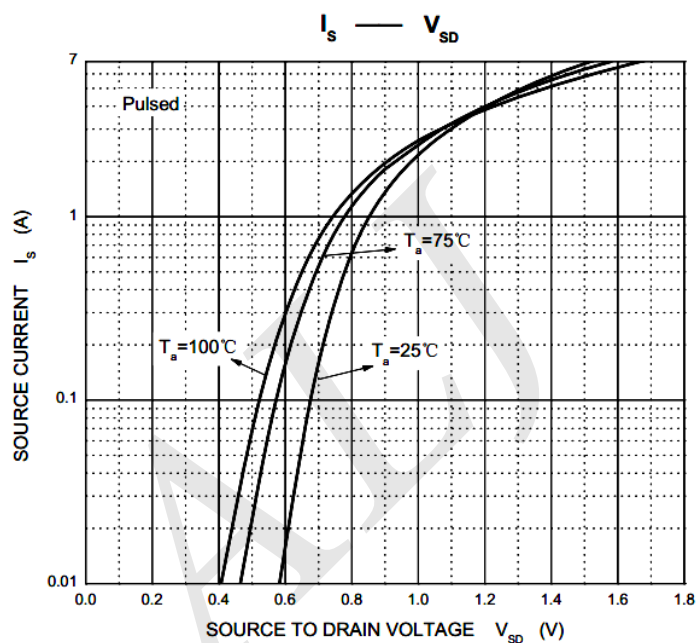
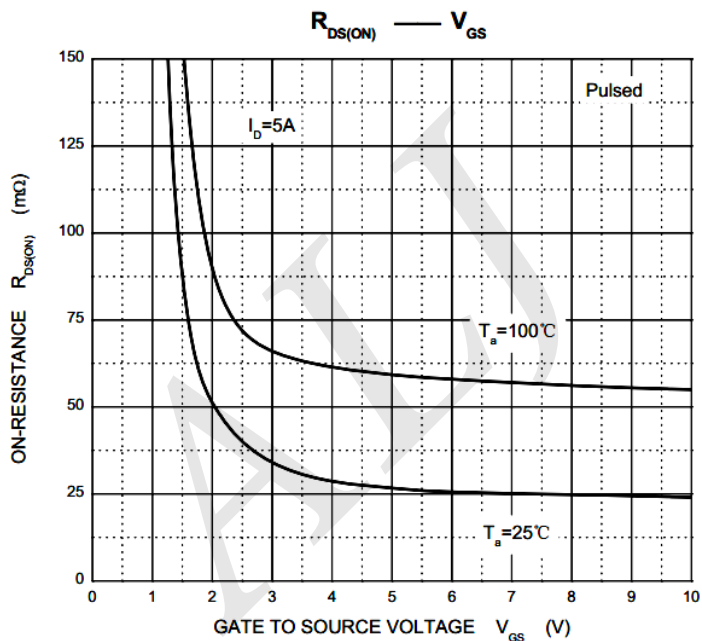
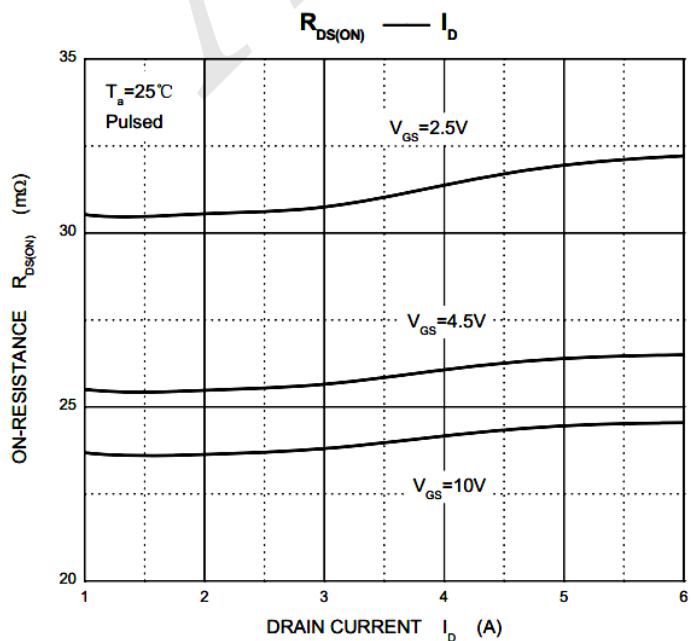
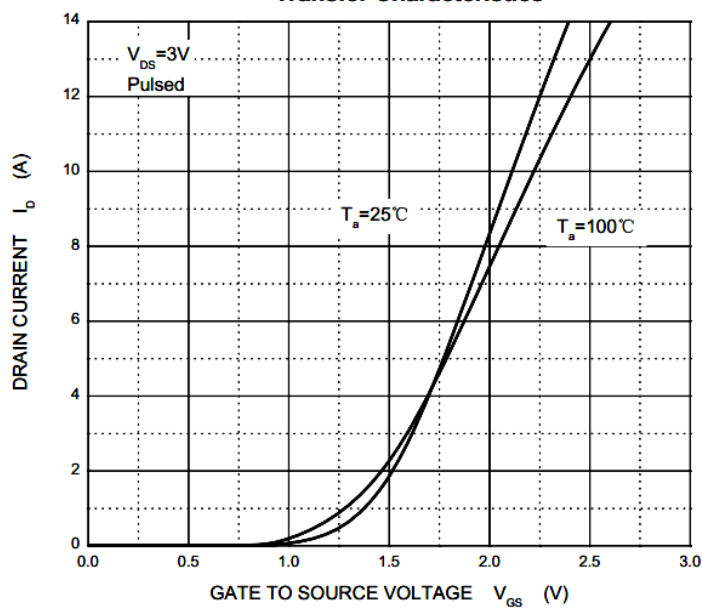
- 1. Repetitive Rating: Pulse width limited by maximum junction temperature.
- 2. Surface Mounted on FR4 Board, t < 5 sec.
- 3. Pulse Test : Pulse Width≤300μs, Duty Cycle ≤ 2%.
- 4. Guaranteed by design, not subject to production testing.

Typical Characteristics

Output Characteristics



Transfer Characteristics



Threshold Voltage

