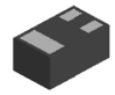
JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD

DFN1006-3L Plastic-Encapsulate MOSFETs

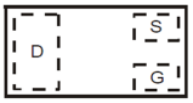
CJBA3134K N-Channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)}$MAX	I_D
20V	500mΩ@4.5V	0.75A
	700mΩ@2.5V	
	900mΩ@1.8V	

DFN1006-3L



Bottom View



Top View
Internal Schematic

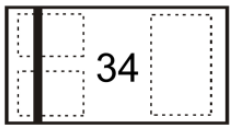
FEATURE

- Lead Free Product is Acquired
- Surface Mount Package
- N-Channel Switch with Low R_{DS}(on)
- Operated at Low Logic Level Gate Drive
- ESD Protected Gate

APPLICATION

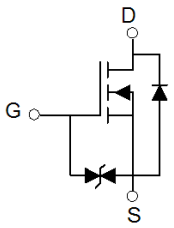
- Load/ Power Switching
- Interfacing Switching
- Battery Management for Ultra Small Portable Electronics
- Logic Level Shift

MARKING:



Top View
Bar Denotes Gate
and Source Side

Equivalent Circuit



ABSOLUTE MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	20	V
Typical Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current (note 1)	I_D	0.75	A
Pulsed Drain Current (tp=10us)	I_{DM}	1.8	A
Power Dissipation (note 1)	P_D	100	mW
Thermal Resistance from Junction to Ambient (note 1)	$R_{\theta JA}$	1250	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~ 150	℃
Lead Temperature for Soldering Purposes(1/8'' from case for 10 s)	T_L	260	℃

MOSFET ELECTRICAL CHARACTERISTICS

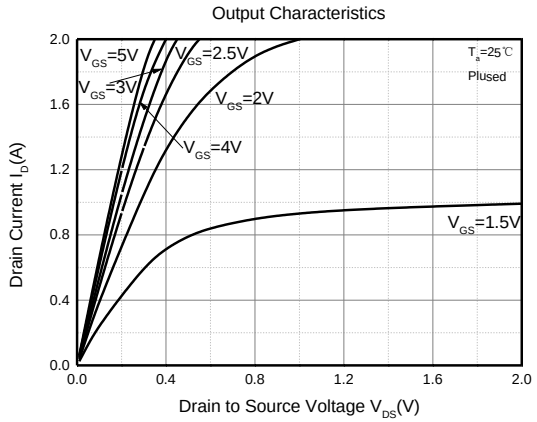
T_a=25℃ unless otherwise noted

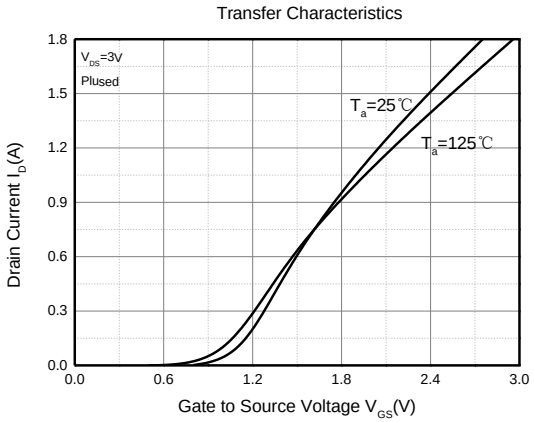
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =250μA	20			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =20V,V_{GS} = 0V			1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±10V, V_{DS} = 0V			±20	μA
Gate threshold voltage(2)	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	0.35	0.75	1.1	V
Drain-source on-resistance(2)	$R_{DS(on)}$	V_{GS} =4.5V, I_D =150mA		250	500	mΩ
		V_{GS} =2.5V, I_D =150mA		300	700	
		V_{GS} =1.8V, I_D =150mA		370	900	
		V_{GS} =1.5V, I_D =20mA		460		
		V_{GS} =1.2V, I_D =10mA		1200		
Forward tranconductance	g_{FS}	V_{DS} =10V, I_D =150mA	150			mS
Dynamic characteristics(4)						
Input Capacitance	C_{iss}	V_{DS}=16V,V_{GS}=0V,f=1MHz		79	120	pF
Output Capacitance	C_{oss}			13	20	
Reverse Transfer Capacitance	C_{rss}			9	15	
Switching Characteristics(4)						
Turn-on delay time(3)	$t_{d(on)}$	V_{DS}=10V,I_D=500mA, V_{GS}=4.5V,R_G=10Ω		6.7		ns
Turn-on rise time(3)	t_r			4.8		
Turn-off delay time(3)	$t_{d(off)}$			17.3		
Turn-off fall time(3)	t_f			7.4		
Source-Drain Diode characteristics						
Diode Forward voltage(3)	V_{DS}	I_S=0.15A, V_{GS} = 0V			1.2	V

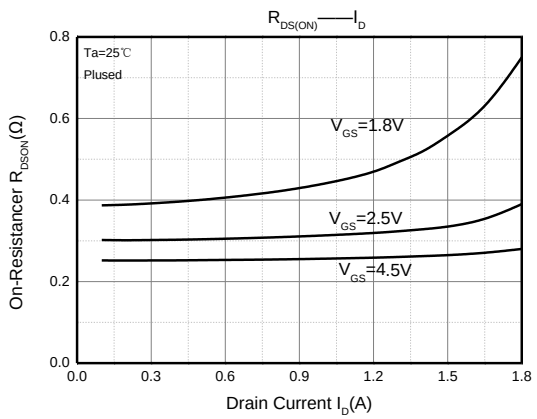
Notes:

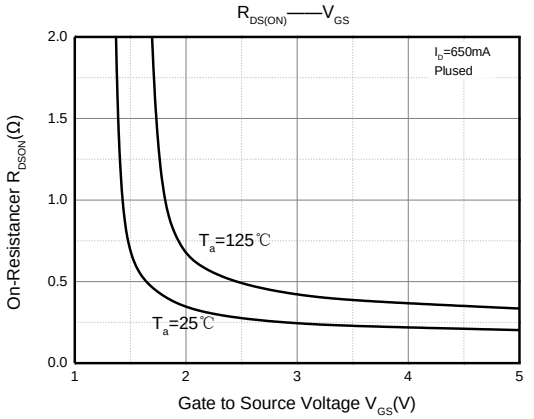
1. Surface mounted on FR4 board using the minimum recommended pad size.
2. Pulse Test : Pulse Width=300μs, Duty Cycle=2%.
3. Switching characteristics are independent of operating junction temperatures.
4. Guaranteed by design, not subject to producting.

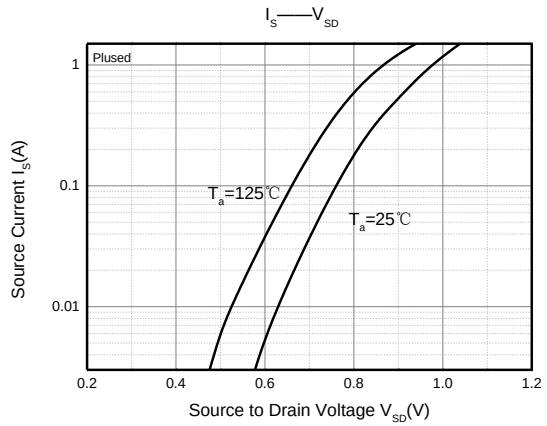
Typical Characteristics

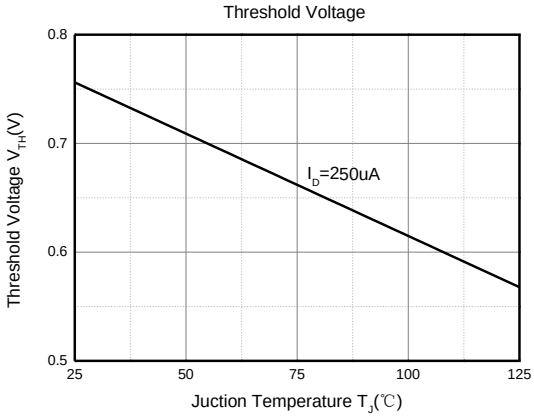




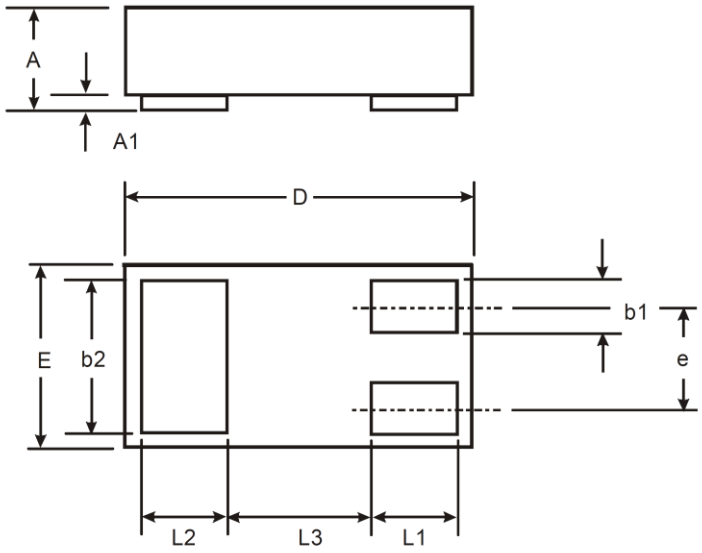








DFN1006-3L Package Outline Dimensions



X1-DFN1006-3			
Dim	**Min**	**Max**	**Typ**
A	0.47	0.53	0.50
A1	0	0.05	0.03
b1	0.10	0.20	0.15
b2	0.45	0.55	0.50
D	0.95	1.075	1.00
E	0.55	0.675	0.60
e	—	—	0.35
L1	0.20	0.30	0.25
L2	0.20	0.30	0.25
L3	—	—	0.40
All Dimensions in mm			