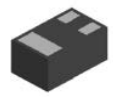
JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD.

DFN1006-3L-A Plastic-Encapsulate MOSFETs

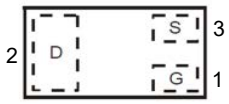
CJBB3139K P-Channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)}$MAX	I_D
-20V	520mΩ@-4.5V	-0.66A
	780mΩ@-2.5V	
	950mΩ(TYP)@-1.8V	

DFN1006-3L-A



Bottom View



Top View
Internal Schematic

FEATURE

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

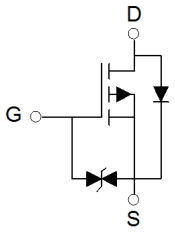
APPLICATION

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

MARKING:

Top View

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	-0.66	A
Pulsed Drain Current (tp=10us)	I_{DM}	-2.64	A
Power Dissipation (note 1)	P_D	275	mW
Thermal Resistance from Junction to Ambient (note 1)	$R_{\theta JA}$	455	℃/W
Operation Junction and Storage Temperature Range	T_J,T_{STG}	-55~ 150	℃
Lead Temperature for Soldering Purposes(1/8'' from case for 10 s)	T_L	260	℃

MOSFET ELECTRICAL CHARACTERISTICS

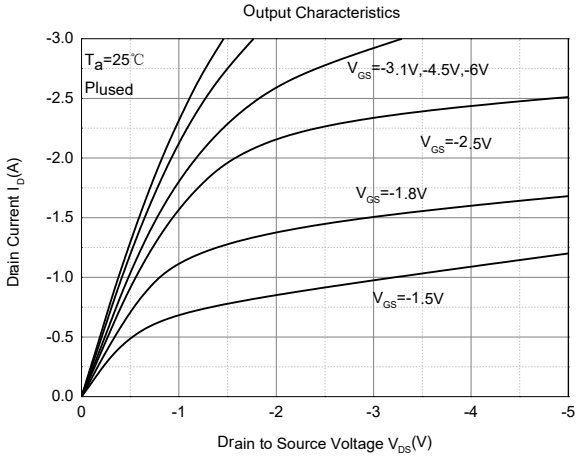
T_a=25℃ unless otherwise noted

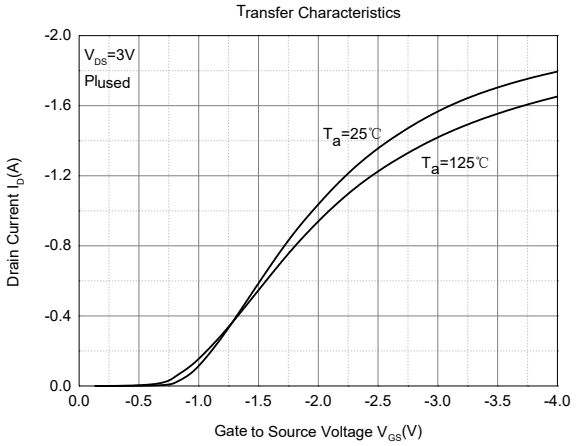
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =-250μA	-20			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-20V,V_{GS} = 0V			-1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±10V, V_{DS} = 0V			±20	uA
Gate threshold voltage (note 2)	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-0.35	-0.61	-1.1	V
Drain-source on-resistance(note 2)	$R_{DS(on)}$	V_{GS} =-4.5V, I_D =-1A		450	520	mΩ
		V_{GS} =-2.5V, I_D =-0.8A		650	780	mΩ
		V_{GS} =-1.8V, I_D =-0.5A		950		mΩ
Forward tranconductance(note 2)	g_{FS}	V_{DS} =-10V, I_D =-0.54A		1.2		S
Diode forward voltage	V_{SD}	I_S=-0.5A, V_{GS} = 0V			-1.2	V
DYNAMIC PARAMETERS(note 4)						
Input Capacitance	C_{iss}	V_{DS} =-16V,V_{GS} =0V,f =1MHz		113		pF
Output Capacitance	C_{oss}			15		pF
Reverse Transfer Capacitance	C_{rss}			9		pF
SWITCHING PARAMETERS (note 4)						
Turn-on delay time (note 3)	$t_{d(on)}$	V_{DD}=-4.5V,V_{GS}=-10V, I_D=-200mA,R_{GEN}=10Ω		9		ns
Turn-on rise time (note 3)	t_r			5.7		ns
Turn-off delay time (note 3)	$t_{d(off)}$			32.6		ns
Turn-off fall time (note 3)	t_f			20.3		ns

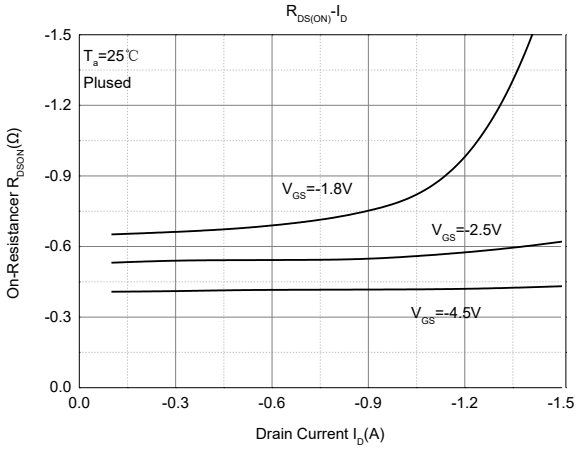
Notes:

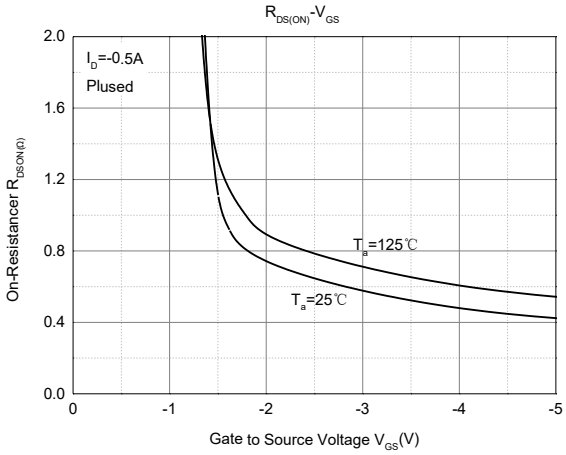
1. Surface mounted on FR4 board using 1 square inch pad size, 1oz copper.
2. Pulse Test : Pulse Width=300μs, Duty Cycle=2%.
3. Switching characteristics are independent of operating junction temperatures.
4. Guaranteed by design, not subject to producting.

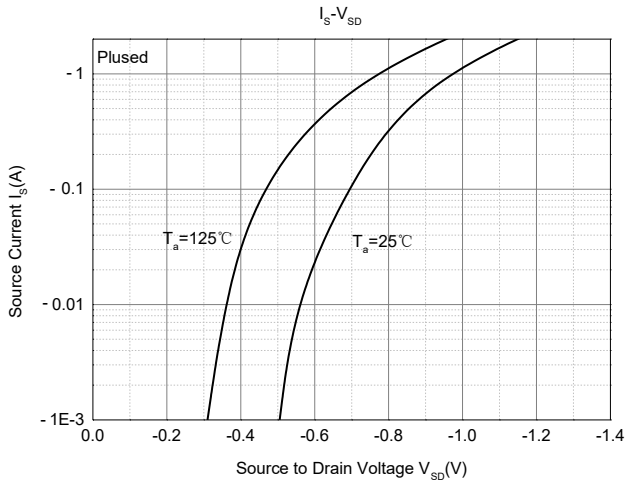
Typical Characteristics

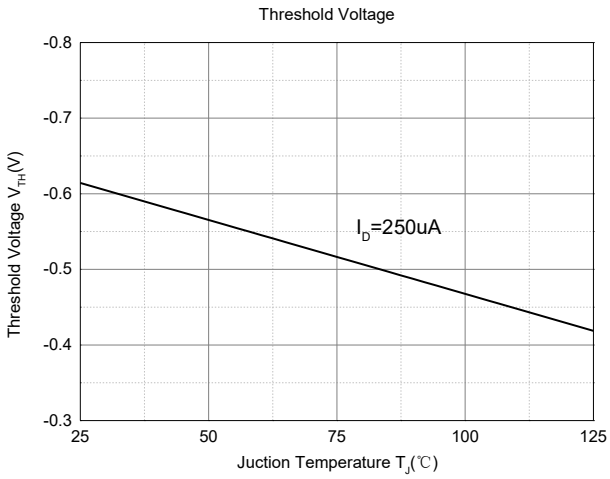




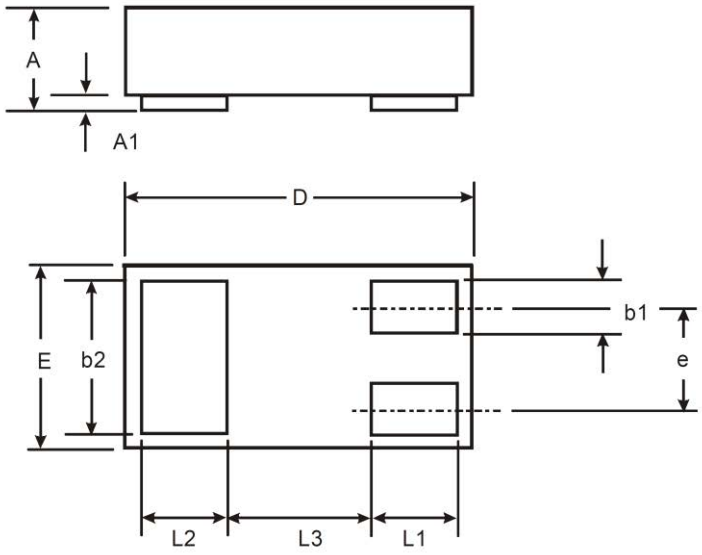






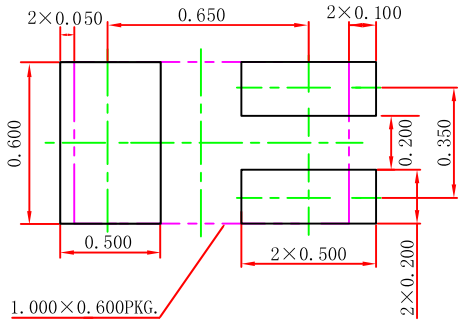


DFN1006-3L-A Package Outline Dimensions



DFN1006-3L-A			
Dim	**Min.**	**Max.**	**Typ.**
A	0.34	0.40	0.37
A1	0.00	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			

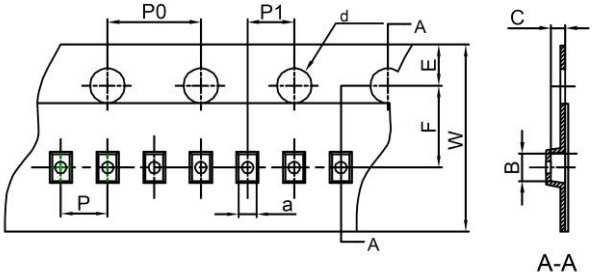
DFN1006-3L-A Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.050mm.
3.The pad layout is for reference purposes only.

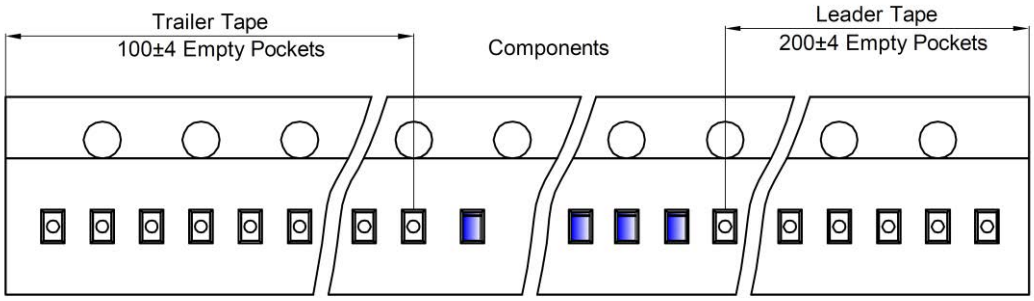
DFN1006-3L-A Tape and Reel

DFN1006-3L-A Embossed Carrier Tape

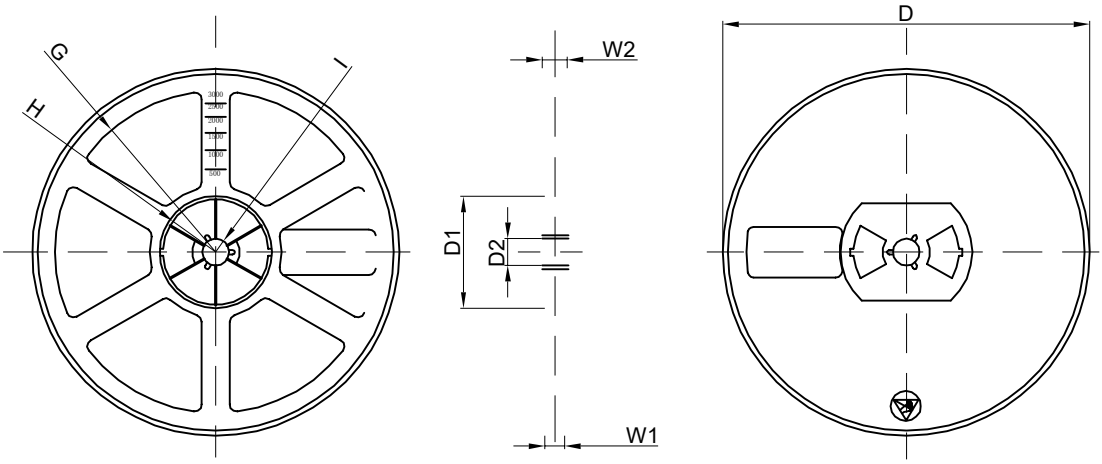


Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
DFN1006-3L-A	0.66	1.15	0.66	Ø1.50	1.75	3.50	4.00	2.00	2.00	8.00

DFN1006-3L-A Tape Leader and Trailer



DFN1006-3L-A Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
10000 pcs	7 inch	150,000 pcs	203×203×195	600,000 pcs	438×438×220	