SZCJ

Shenzhen Changji Semiconductor Co., LTD.

DFN1006-3L Plastic-Encapsulate MOSFETs

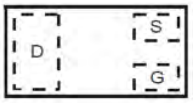
CJBA3541K N-Channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)}$MAX	I_D
30V	500mΩ@4.5V	0.6A
	600mΩ@2.5V	

DFN1006-3L



Bottom View



Top View
Internal Schematic

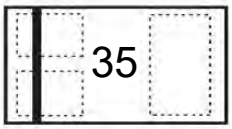
FEATURE

- 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

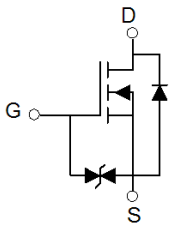
- Load/ Power Switching
- Interfacing Switching
- Battery Management for Ultra Small Portable Electronics
- Logic Level Shift

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}	30	V
Typical Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current (note 1)	I_D	0.6	A
Pulsed Drain Current (tp=10us)	I_{DM}	1.8	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

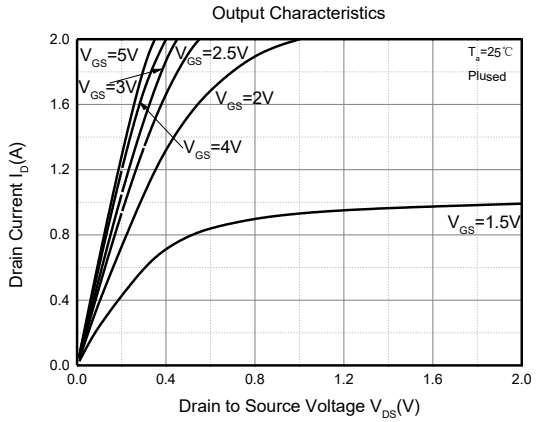
T_a=25℃ unless otherwise noted

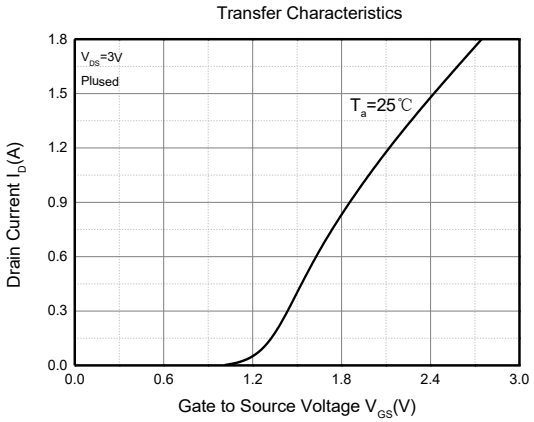
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =250μA	30			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =30V,V_{GS} = 0V			1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±10V, V_{DS} = 0V			±20	μA
Gate threshold voltage(2)	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	0.8	1.0	1.5	V
Drain-source on-resistance(2)	$R_{DS(on)}$	V_{GS} =4.5V, I_D =600mA		320	500	mΩ
		V_{GS} =2.5V, I_D =300mA		410	600	
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		44	120	pF
Output Capacitance	C_{oss}			15	20	
Reverse Transfer Capacitance	C_{rss}			8	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		5.0		ns
Turn-on rise time(3)	t_r			8.2		
Turn-off delay time(3)	$t_{d(off)}$			23		
Turn-off fall time(3)	t_f			41		
Source-Drain Diode characteristics						
Diode Forward voltage(3)	V_{DS}	I_S=0.15A, V_{GS} = 0V			1.2	V

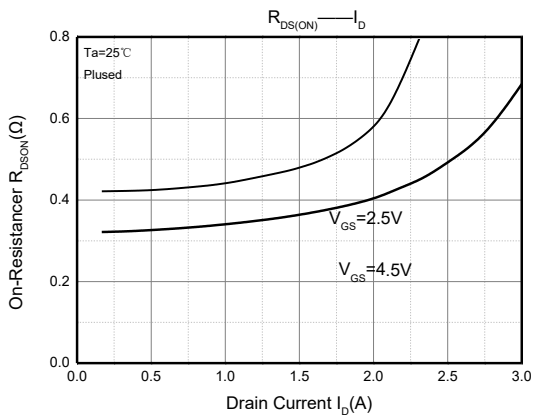
Notes:

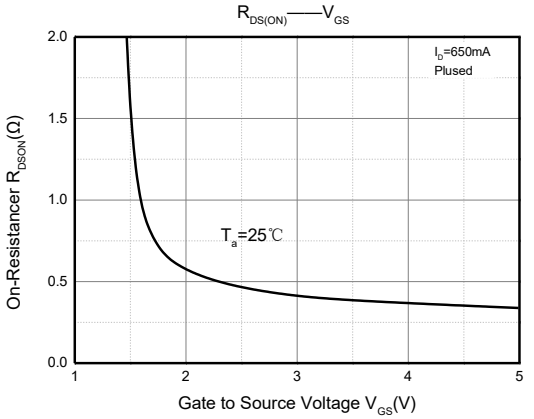
1. Surface mounted on FR4 board using 1 square inch pad size, 1oz copper.
2. Pulse Test : Pulse Width=300μs, Duty Cycle=2%.
3. Switching characteristics are independent of operating junction temperatures.
4. Guaranteed by design, not subject to producting.

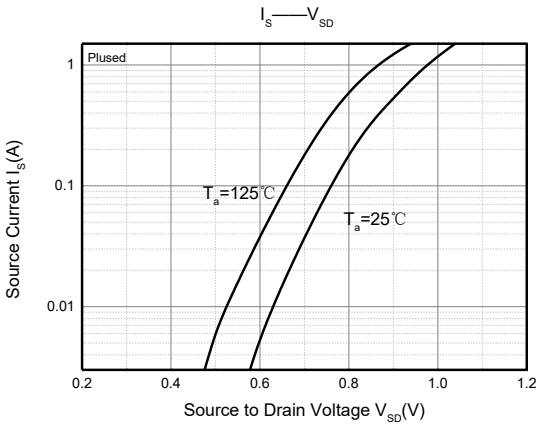
Typical Characteristics

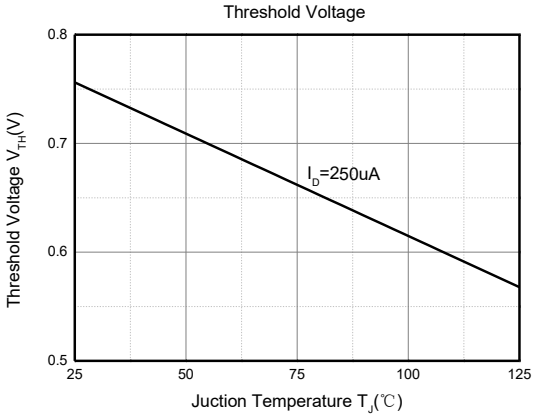




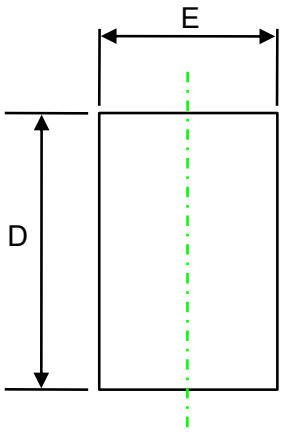




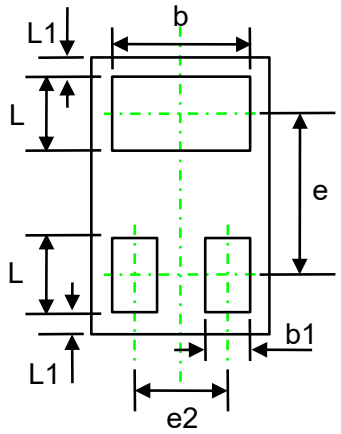




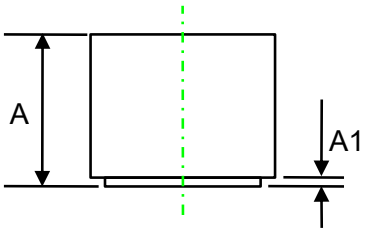
DFN1006-3L Package Outline Dimensions



TOP VIEW



BOTTOM VIEW



SIDE VIEW

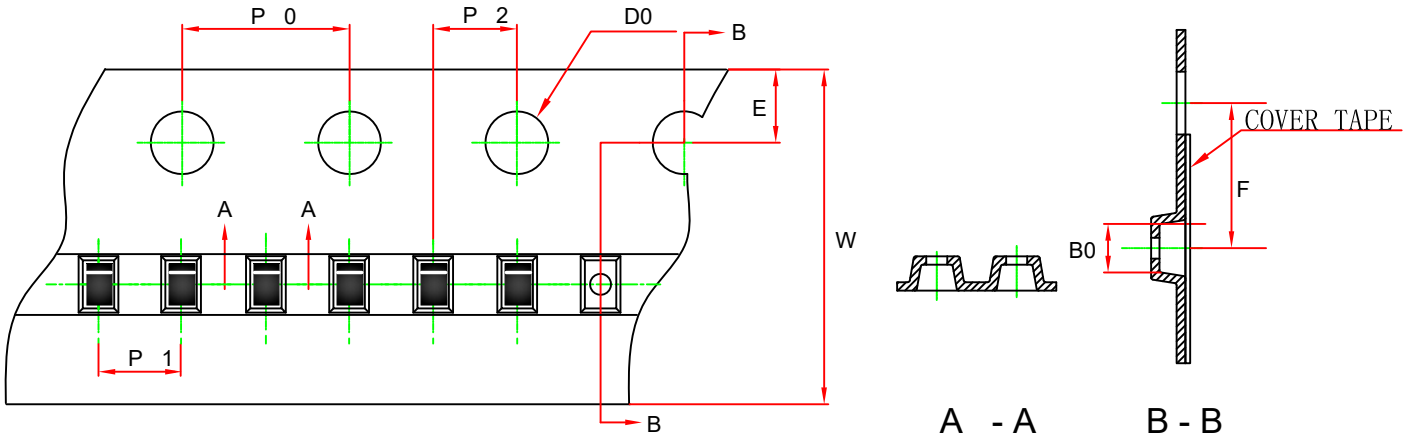
Symbol	Dimensions In Millimeters (mm)		
	Min.	Typ.	Max.
A	0.40	0.47	0.55
A1	0.00	0.03	0.05
D	0.95	1.00	1.05
E	0.55	0.60	0.65
b	0.45	0.50	0.55
e	-	0.65	-
e2	-	0.35	-
L1	0.05 REF.		
L	0.20	0.25	0.30
b1	0.10	0.15	0.20

NOTICE

SZCJ reserves the right to make modifications,enhan nts,improvements,corrections or other es without further notice to any product herein. SZCJ does not assume any liability arising out of the application or use of any product described h

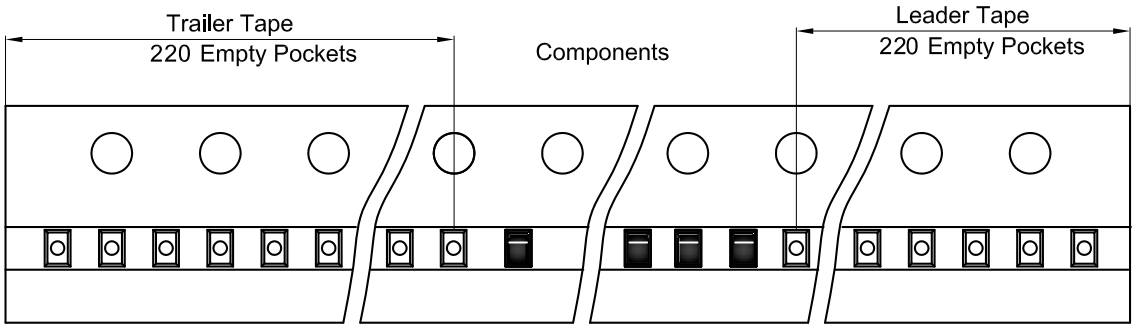
DFN1006-3L Tape and Reel

DFN1006-3L Embossed Carrier Tape

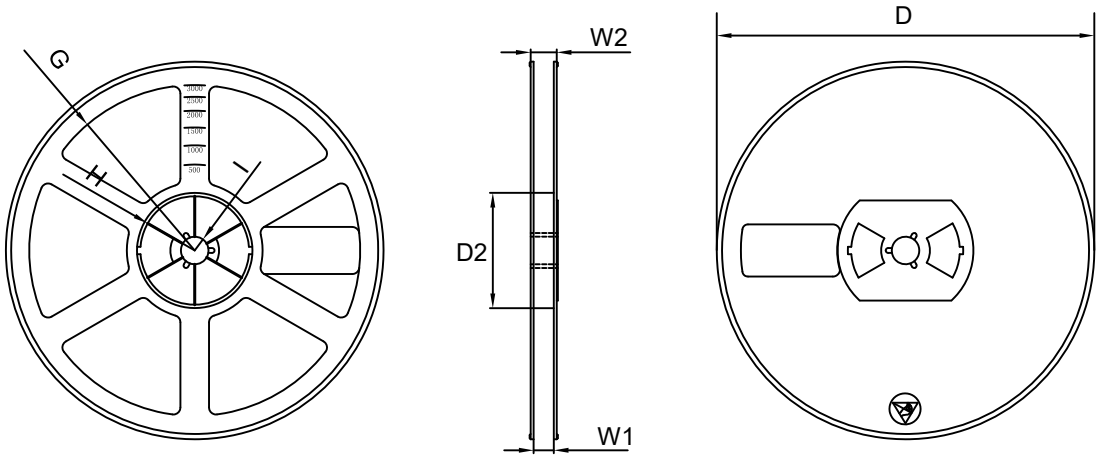


Dimensions In Millimeters (mm)								
Pkg type	B0	P0	P1	P2	E	F	W	D0
DFN1006-3L	1.11	4.00	2.00	2.00	1.75	3.50	8.00	1.55
Tolerance	+/-0.06	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.3	+/-0.1

DFN1006-3L Tape Leader and Trailer



DFN1006-3L Reel



Symbol	Dimensions In Millimeters (mm)						
	D	D2	G	H	I	W1	W2
7" Dia	Φ178.00	54.50	R78.00	R25.6	R6.5	9.50	12.30
Tolerance	+/-2	+/-1	+/-1	+/-1	+/-1	+/-2	+/-1.5

REEL	Reel Size	Box	Box size(mm)	Carton	Carton Size(mm)
10000 pcs	7 inch	150000 pcs	220×220×210	600000 pcs	450×450×240