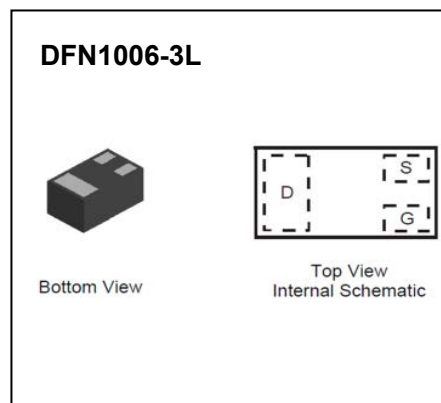




DFN1006-3L Plastic-Encapsulate MOSFETs

CJBA7002K N-Channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
60V	1.5Ω@10V	0.41A
	1.8Ω@4.5V	



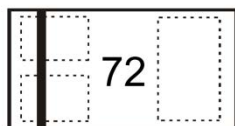
FEATURE

- Low On-Resistance
- Low Threshold Voltage
- Fast Switching Speed
- ESD Protected Gate

APPLICATION

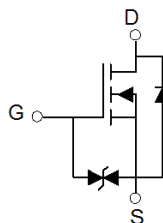
- Load Switch
- Portable Applications
- Power Management Functions

MARKING:



Top View
Bar Denotes Gate
and Source Side

Equivalent Circuit



ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter		Symbol	Value	Unit
Drain-Source Voltage		V_{DS}	60	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current	$T_a=25^\circ\text{C}$	I_D	0.41	A
	$T_a=85^\circ\text{C}$		0.30	
Pulsed Drain Current		I_{DM}	1.2	A
Power Dissipation		$P_D^{③}$	275	mW
Thermal Resistance from Junction to Ambient		$R_{\theta JA}^{③}$	455	$^\circ\text{C/W}$
Operation Junction and Storage Temperature Range		T_J, T_{STG}	-55~ +150	$^\circ\text{C}$

MOSFET ELECTRICAL CHARACTERISTICS

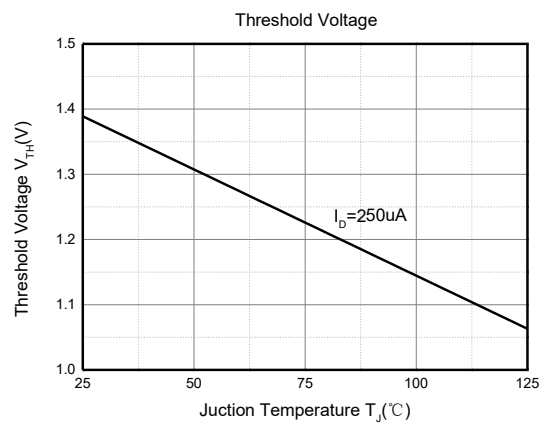
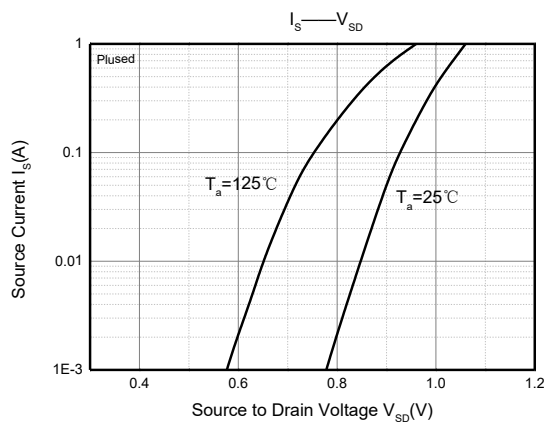
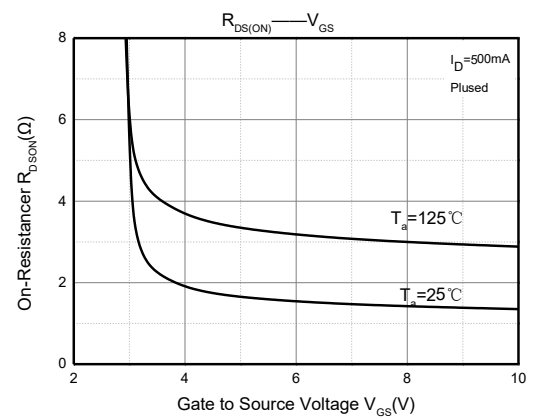
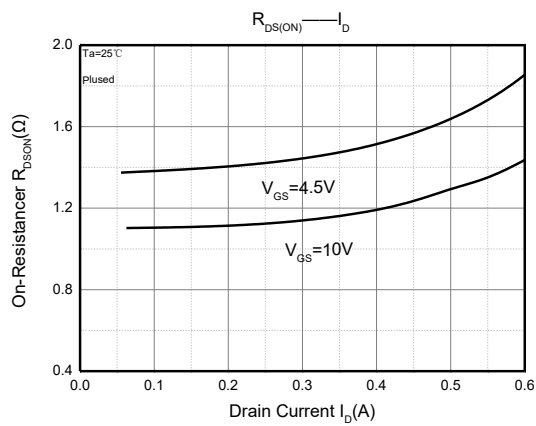
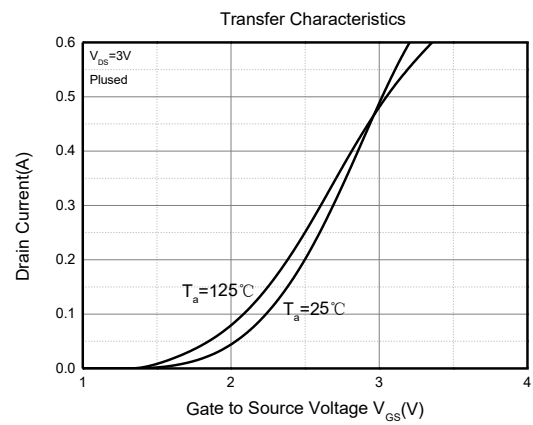
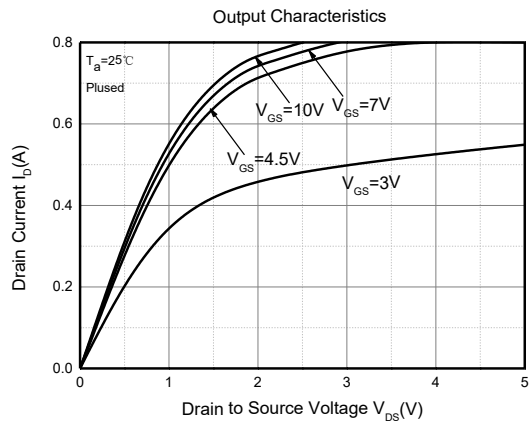
MOSFET ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	60			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 60V, V_{GS} = 0V$			100	nA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 10	μA
		$V_{GS} = \pm 5V, V_{DS} = 0V$			± 1	
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.3	1.4	2.3	V
Drain-source on-resistance ^①	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 40mA$		1.2	1.5	Ω
		$V_{GS} = 4.5V, I_D = 35mA$		1.3	1.8	
Forward tranconductance ^①	g_{fs}	$V_{DS} = 5V, I_D = 40mA$	100			mS
Diode forward voltage	V_{SD}	$V_{GS} = 0V, I_S = 300mA$		0.84	1.1	V
Dynamic characteristics						
Input Capacitance ^②	C_{iss}	$V_{DS} = 40V, V_{GS} = 0V, f = 1MHz$		41	80	pF
Output Capacitance ^②	C_{oss}			3.6	7	
Reverse Transfer Capacitance ^②	C_{rss}			2.9	5.6	
Gate resistance	R_g	$V_{DS} = 0V, V_{GS} = 0V, f = 1MHz$		81	200	Ω
Total Gate Charge	Q_g	$V_{GS} = 4.5V$		0.72	1.5	nC
Gate-Source Charge	Q_{gs}	$V_{GS} = 10V$ $V_{DS} = 50V, I_D = 0.41A$		1.41	2.8	
Gate-Drain Charge	Q_{gd}			0.24	0.4	
Turn-on delay time ^②	$t_{d(on)}$			0.24	0.5	
Turn-on rise time ^②	t_r	$V_{DS} = 30V, RL = 50\Omega, V_{GS} = 10V, RG = 6\Omega$		3.98	10	ns
Turn-off delay time ^②	$t_{d(off)}$			4.95	10	
Turn-off fall time ^②	t_f			18.52	40	
				11.94	25	

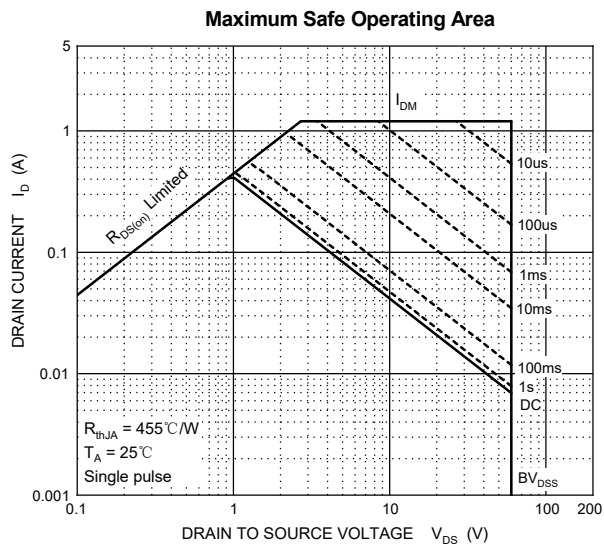
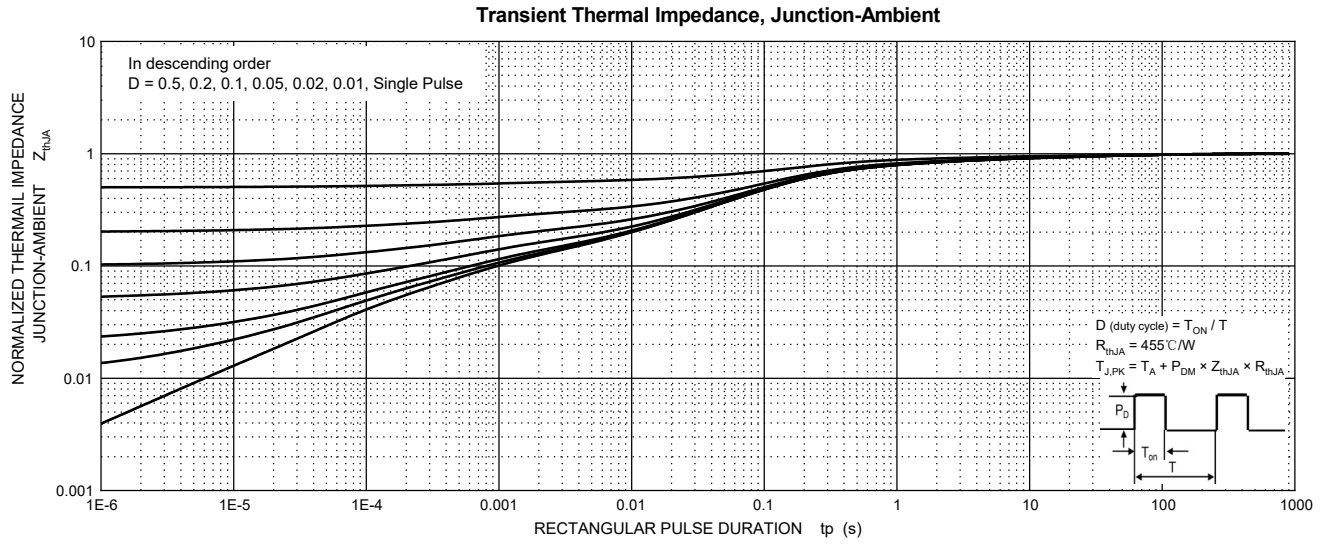
Notes:

1. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
2. These parameters have no way to verify.
3. Surface mounted on FR4 board using 1 square inch pad size, 1oz copper.

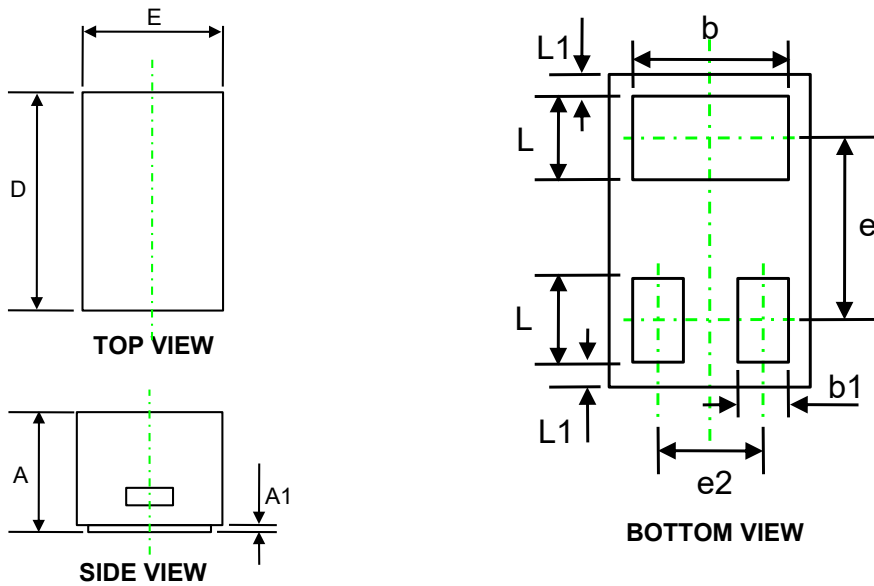
Typical Characteristics



Typical Characteristics

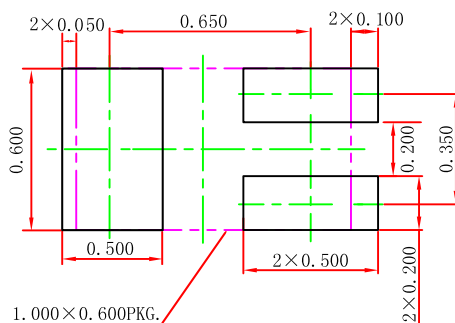


DFN1006-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.400	0.550	0.016	0.022
A1	0.000	0.050	0.000	0.002
D	0.950	1.050	0.037	0.041
E	0.550	0.650	0.022	0.026
b	0.450	0.550	0.018	0.022
e	0.650 REF.		0.026 REF.	
e2	0.350 REF.		0.014 REF.	
L1	0.050 REF.		0.002 REF.	
L	0.200	0.300	0.008	0.012
b1	0.100	0.200	0.004	0.008

DFN1006-3L Suggested Pad Layout



Note:

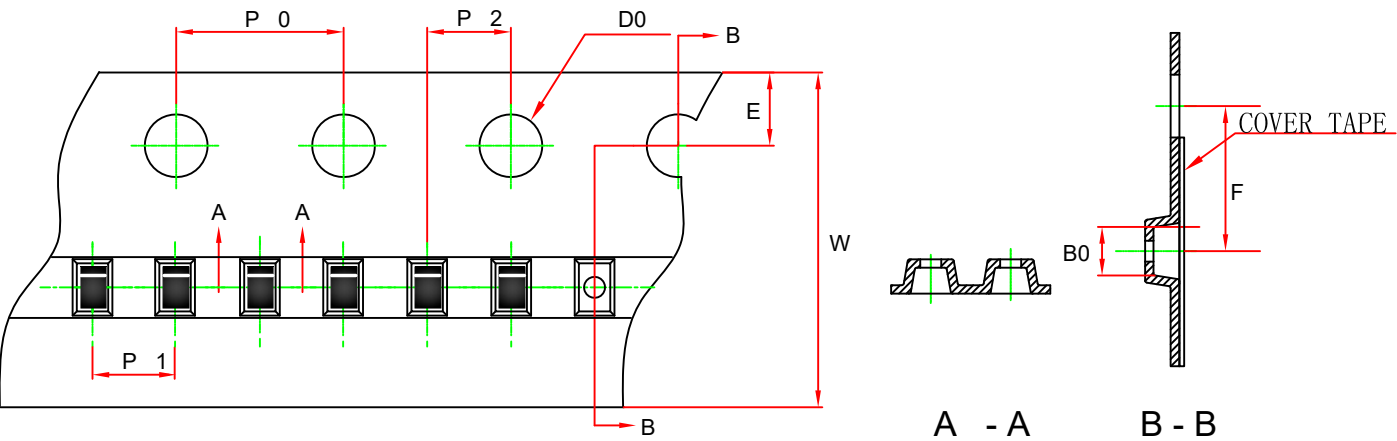
1. Controlling dimension: In millimeters.
2. General tolerance: $\pm 0.050\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

JSCJ reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSCJ does not assume any liability arising out of the application or use of any product described herein.

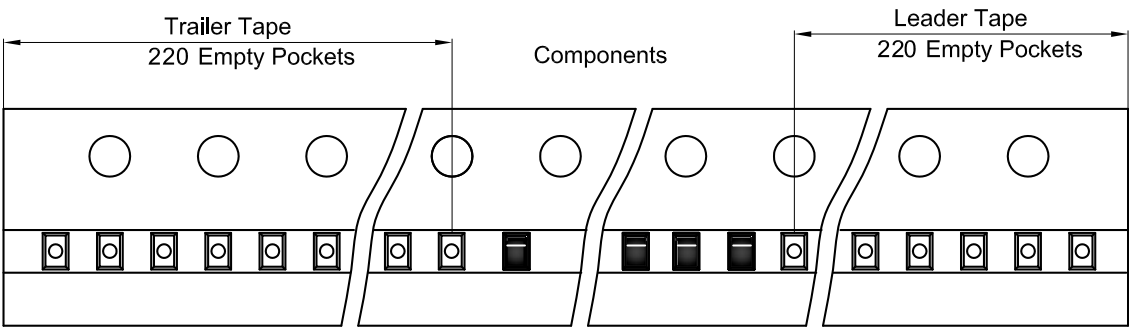
DFN1006-3L Tape and Reel

DFN1006-3L Embossed Carrier Tape

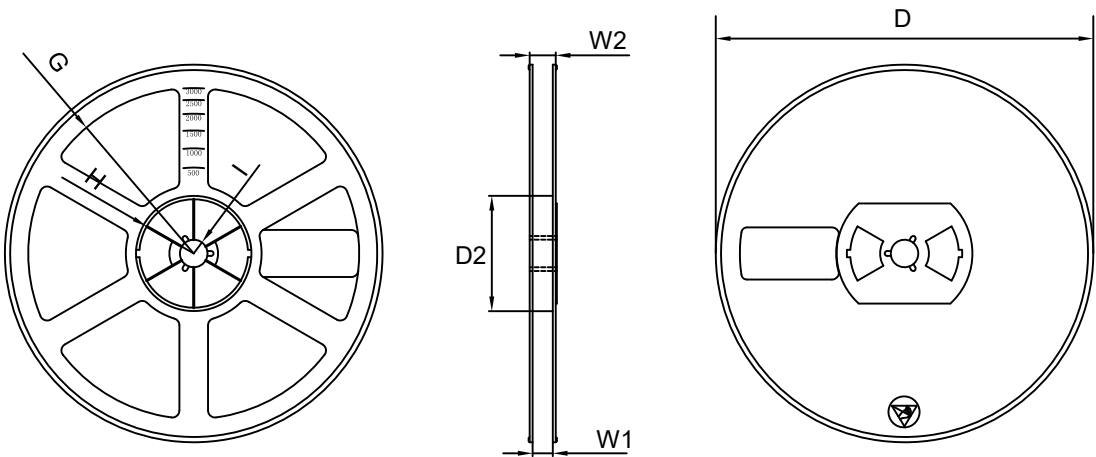


Dimensions In Millimeters (mm)								
Pkg type	B0	P0	P1	P2	E	F	W	D0
DFN1006-3L	1.11	4.00	2.00	2.00	1.75	3.50	8.00	1.55
Tolerance	+/-0.06	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.3	+/-0.1

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	6 00000 pcs	450×450×240