

### Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	$I_D$
30V	320mΩ@4.5V	0.6A
	410mΩ@2.5V	

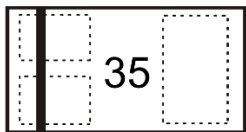
### Feature

- Surface Mount Package
- N-Channel Switch with Low  $R_{DS(on)}$
- Operated at Low Logic Level Gate Drive

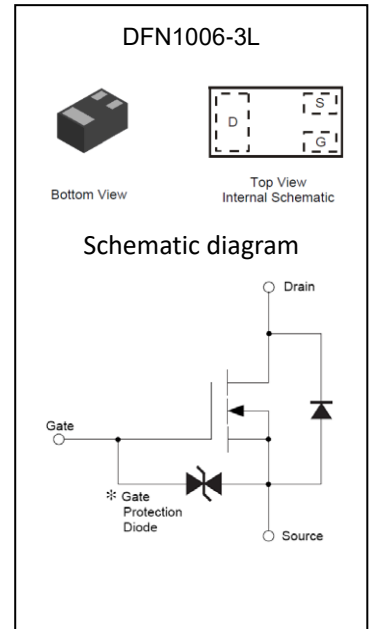
### Application

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

### MARKING:



Top View  
Bar Denotes Gate  
and Source Side



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DS}$	30	V
Gate-Source Voltage	$V_{GS}$	$\pm 12$	V
Continuous Drain Current	$I_D$	0.6	A
Pulsed Drain Current <sup>(1)</sup>	$I_{DM}$	1.8	A
Power Dissipation <sup>(2)</sup>	$P_D$	100	mW
Thermal Resistance from Junction to Ambient <sup>(1)</sup>	$R_{\theta JA}$	1250	$^\circ\text{C/W}$
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55~ +150	$^\circ\text{C}$

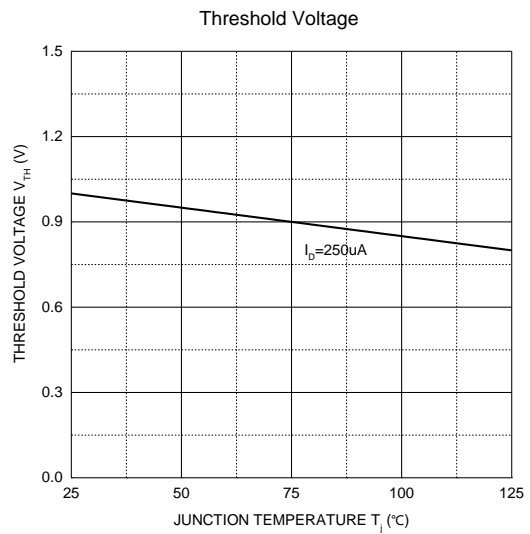
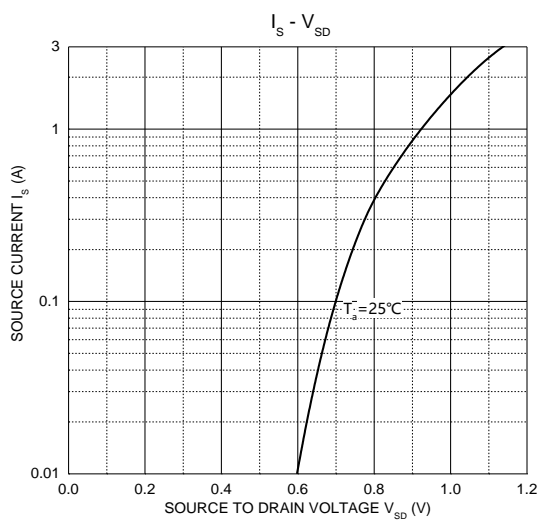
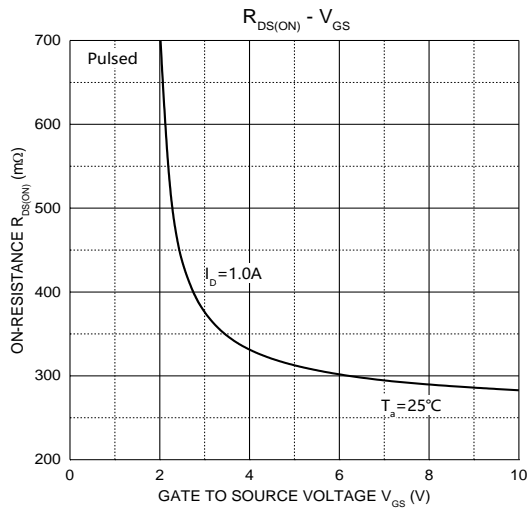
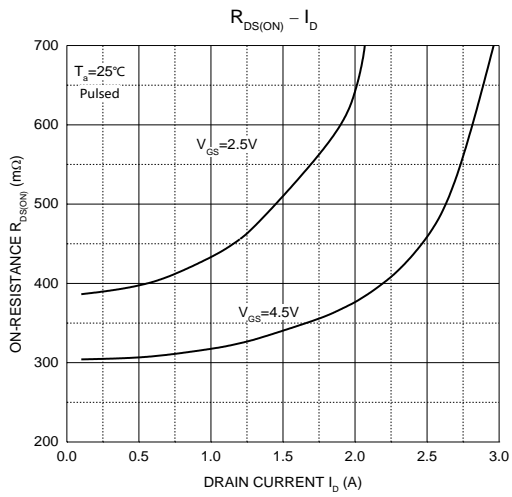
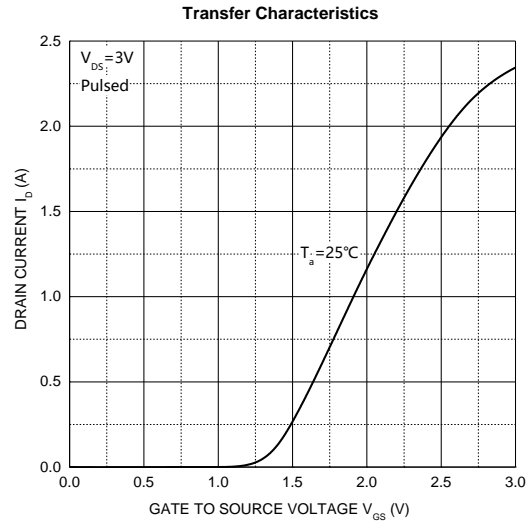
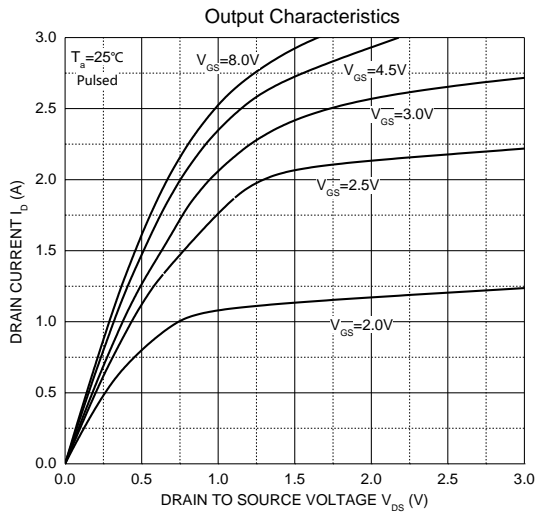
**MOSFET ELECTRICAL CHARACTERISTICS(T<sub>a</sub>=25°C unless otherwise noted)**

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
<b>Static Characteristics</b>						
Drain-source breakdown voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> = 0V, I <sub>D</sub> =250μA	30			V
Zero gate voltage drain current	I <sub>DSS</sub>	V <sub>DS</sub> =30V, V <sub>GS</sub> = 0V			1	μA
Gate-body leakage current	I <sub>GSS</sub>	V <sub>GS</sub> =±10V, V <sub>DS</sub> = 0V			±3	μA
Gate threshold voltage <sup>(3)</sup>	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250μA	0.5	1.0	1.5	V
Drain-source on-resistance <sup>(3)</sup>	R <sub>DS(on)</sub>	V <sub>GS</sub> =4.5V, I <sub>D</sub> =0.6A		320	430	mΩ
		V <sub>GS</sub> =2.5V, I <sub>D</sub> =0.3A		410	600	
Forward tranconductance	g <sub>FS</sub>	V <sub>DS</sub> =5V, I <sub>D</sub> =0.5A	0.1			S
<b>Dynamic characteristics<sup>(4)</sup></b>						
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =10V, V <sub>GS</sub> =0V, f=1MHz		44		pF
Output Capacitance	C <sub>oss</sub>			15		
Reverse Transfer Capacitance	C <sub>rss</sub>			8		
Total gate charge	Q <sub>g</sub>	V <sub>DS</sub> =15V, V <sub>GS</sub> =4.5V, I <sub>D</sub> =0.8A		1.2		nC
Gate-source charge	Q <sub>gs</sub>			0.28		
Gate-drain charge	Q <sub>gd</sub>			0.3		
<b>Switching Characteristics<sup>(4)</sup></b>						
Turn-on delay time	t <sub>d(on)</sub>	V <sub>DS</sub> =15V, I <sub>D</sub> =0.7A, V <sub>GS</sub> =4.5V, R <sub>G</sub> =51Ω		5.0		ns
Turn-on rise time	t <sub>r</sub>			8.2		
Turn-off delay time	t <sub>d(off)</sub>			23		
Turn-off fall time	t <sub>f</sub>			41		
<b>Source-Drain Diode characteristics</b>						
Diode Forward voltage <sup>(3)</sup>	V <sub>DS</sub>	I <sub>S</sub> =0.6A, V <sub>GS</sub> = 0V		0.87	1.2	V

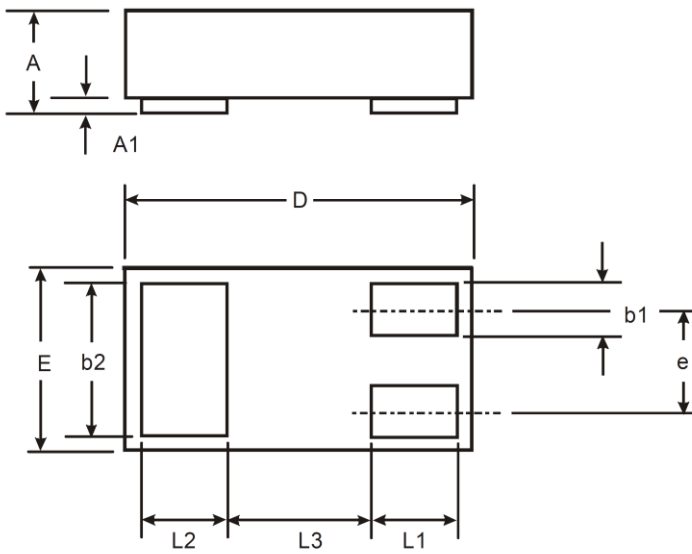
**Notes:**

1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. This test is performed with no heat sink at T<sub>a</sub>=25°C.
3. Pulse Test : Pulse Width≤300μs, Duty Cycle≤0.5%.
4. These parameters have no way to verify.

**Typical Electrical and Thermal Characteristics**



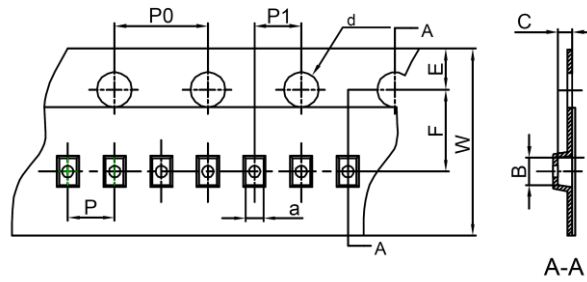
## DFN1006-3L Package Information



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
<b>All Dimensions in mm</b>			

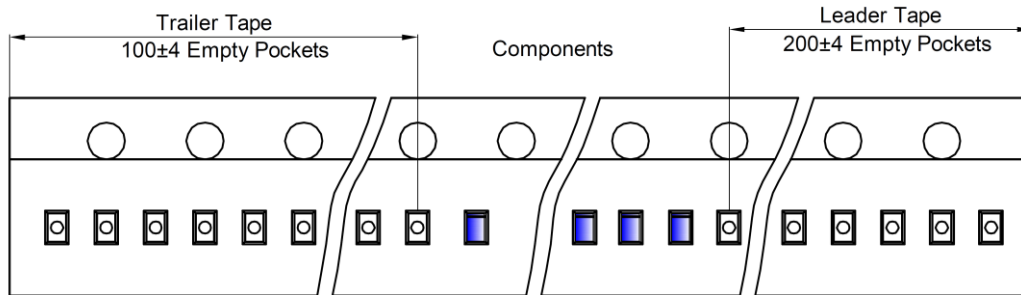
## DFN1006-3L Tape and Reel

### DFN1006-3L Embossed Carrier Tape

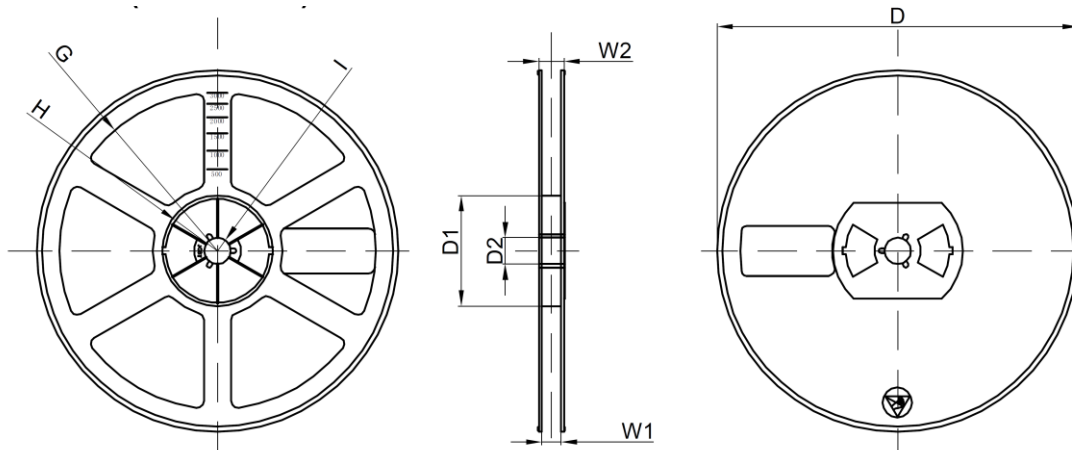


Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
DFN1006-3L	0.66	1.15	0.66	Ø1.50	1.75	3.50	4.00	2.00	2.00	8.00

### DFN1006-3L Tape Leader and Trailer



### DFN1006-3L 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	100,000 pcs	203×203×195	400,000 pcs	438×438×220	

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)