

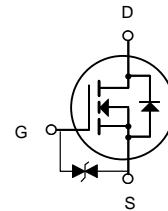


Description

The DMN26D0UFB4-7B uses advanced trench technology to provide excellent $R_{DS(ON)}$, low gate charge and operation with gate voltages as low as 2.5V. This device is suitable for use as a Battery protection or in other Switching application.



DFN1006-3L
(X2-DFN1006-3)



N-Channel MOSFET

General Features

$V_{DS} = 20V$ $I_D = 0.7A$

$R_{DS(ON)} < 350 m\Omega @ V_{GS} = 4.5V$

$R_{DS(ON)} < 420 m\Omega @ V_{GS} = 2.5V$

ESD=2500V HBM

Application

Load/Power Switching

Interfacing Switching

Battery Management for Ultra Small Portable Electronics

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
DMN26D0UFB4-7B	DFN1006-3L(X2-DFN100-3)	34	10000

Absolute Maximum Ratings ($T_A = 25^\circ C$ unless otherwise noted)

Symbol	Parameter	Limit	Unit
V_{DS}	Drain-Source Voltage	20	V
V_{GS}	Gate-Source Voltage	± 10	V
I_D	Drain Current-Continuous	0.7	A
P_D	Maximum Power Dissipation	0.15	W
T_J, T_{STG}	Operating Junction and Storage Temperature Range	-55 To 150	$^\circ C$
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient ^(Note 2)	1250	$^\circ C/W$



Electrical Characteristics (TA = 25°C, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	20	--	--	V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 20V, V_{GS} = 0V$	--	--	1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 10V, V_{DS} = 0V$	--	--	± 10	μA
Gate threshold voltage (note2)	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.45	0.7	1.1	V
Drain-source on-resistance (note2)	$R_{DS(on)}$	$V_{GS} = 4.5V, I_D = 0.5A$	--	0.22	0.35	Ω
		$V_{GS} = 2.5V, I_D = 0.5A$	--	0.28	0.42	Ω
Forward tranconductance (note2)	g_{fs}	$V_{DS} = 5.0V, I_D = 0.5A$	--	1.6	--	S
Diode forward voltage	V_{SD}	$I_S = 0.8A, V_{GS} = 0V$	--	--	1.2	V
Dynamic Characteristics (note4)						
Input capacitance	C_{iss}	$V_{DS} = 10V, V_{GS} = 0V,$ $f = 1MHz$	--	43.6	--	pF
Output capacitance	C_{oss}		--	6.8	--	pF
Reverse transfer capacitance	C_{rss}		--	4.6	--	pF
Switching Characteristics (note4)						
Turn-on delay time (note3)	$t_{d(on)}$	$V_{GS} = 4.5V, V_{DS} = 10V, R_L = 20\Omega$	--	1.4	--	nS
Turn-on rise time (note3)	t_r		--	27.8	--	nS
Turn-off delay time (note3)	$t_{d(off)}$		--	54.6	--	nS
Turn-off fall time (note3)	t_f		--	25.6	--	nS

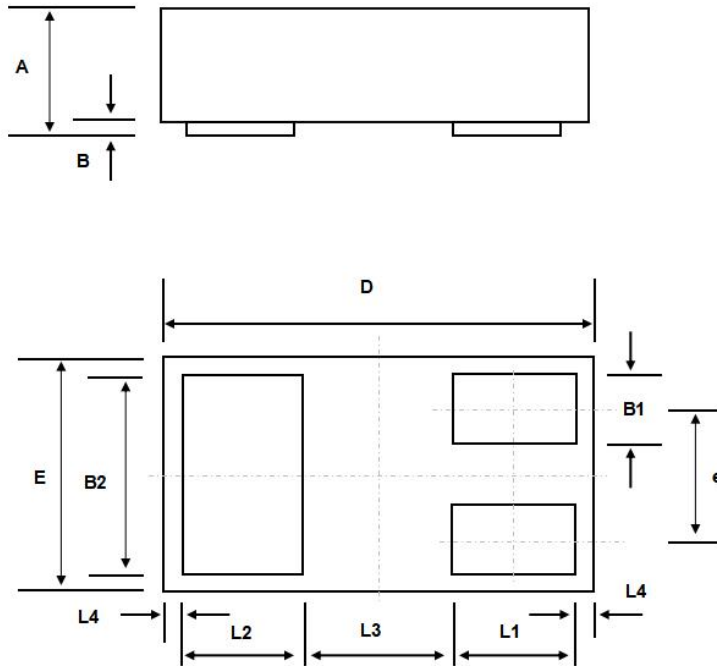
Notes:

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



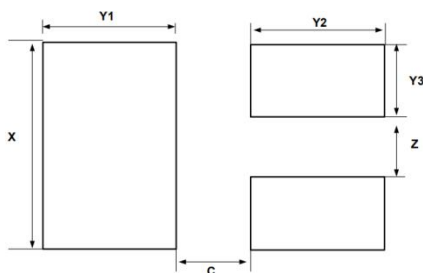
Package Outline Dimensions

DFN1006-3L(X2-DFN1006-3)



Symbol	Dimensions In Millimet	
	Min	Max
A	0.33	0.50
B	0.00	0.05
B1	0.10	0.20
B2	0.45	0.55
D	0.90	1.05
E	0.50	0.65
e	0.35	
L1	0.20	0.30
L2	0.20	0.30
L3	0.39	
L4	0.05	

Suggested Pad Layout (mm)



Symbol	Dimensions
C	0.25
X	0.65
Y1	0.50
Y2	0.50
Y3	0.25
Z	0.20



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