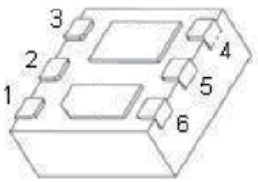
Dual P- Channel Power MOSFET

DFNWB2*2-6L-A



General Description

The FTK08DFN uses advanced trench technology and design to Provide excellent $R_{DS(on)}$ with low gate charge. This device is suitable for use in DC- DC conversion applications.

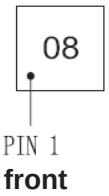
FEATURE

- Low Profile for Easy Fit in Thin Environments
- Bidirectional Current Folw with Common Source Configuration

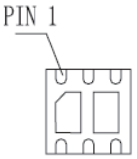
APPLICATIONS

- Optimized for Battery and Load Management Applications in Portable Equipment
- Li- Ion Battery Charging and Protection Circuits
- High Power Management in Portable , Battery Powered Products
- High Side Load Switch

MARKING:



front



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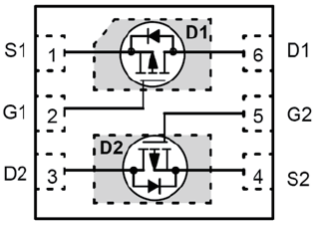
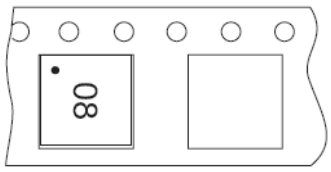


Tape Drawing (Unit : mm)



Maximum ratings (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain- Source Voltage	V_{DS}	- 20	V
Gate- Source Voltage	V_{GS}	± 8	
Continuous Drain Current(Note1a)	I_D	- 3.6	A
Power Dissipation(Note1a)	P_D	1.4	W
Power Dissipation(Note1b)	P_D	0.7	W
Thermal Resistance from Junction to Ambient(Note1a)	$R_{\Theta JA}$	86	℃/W

Thermal Resistance from Junction to Ambient(Note1b)	$R_{\theta JA}$	173	℃/W
Thermal Resistance from Junction to Ambient(Note1c)	$R_{\theta JA}$	69	℃/W
Thermal Resistance from Junction to Ambient(Note1d)	$R_{\theta JA}$	151	℃/W
Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	-55 ~+150	

Notes:1. $R_{\theta JA}$ is determined with the device mounted on a 1.5 x 1.5 in. PCB of FR-4 material.

(a) when mounted on a 1 in^2 pad of 2 oz copper, 1.5 " x 1.5 " x 0.062 " thick PCB. For single operation.

(b) when mounted on a minimum pad of 2 oz copper. For single operation.

(c) when mounted on a 1 in^2 pad of 2 oz copper, 1.5 " x 1.5 " x 0.062 " thick PCB. For dual operation.

(d) when mounted on a minimum pad of 2 oz copper. For dual operation.

Electrical characteristics (T_a=25℃ unless otherwise noted)

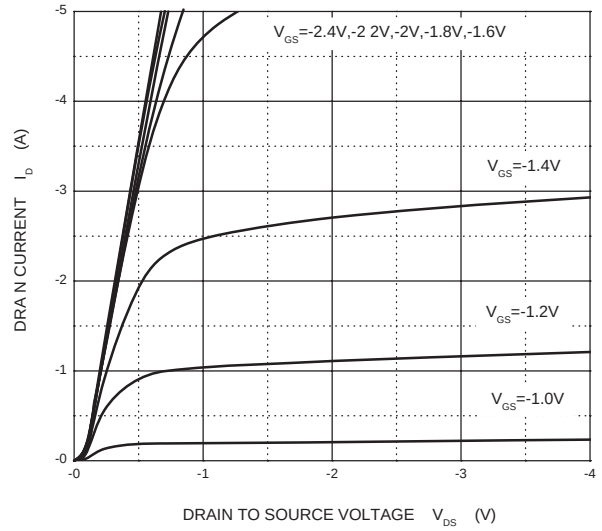
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
On/Off Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D=-250μA	-20			V
Gate- threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D=-250μA	-0.4		-1	
Gate-body leakage current	I_{GSS}	V_{DS} =0V, V_{GS} =±8V			±100	nA
Zero gate voltage drain current	I_{DSS}	V_{DS} =-16V, V_{GS} =0V			-1	μA
Drain-source on-state resistance (Note 2)	$R_{DS(on)}$	V_{GS} =-4.5V, I_D =-3.6A			60	mΩ
		V_{GS} =-2.5V, I_D =-3A			80	
		V_{GS} =-1.8V, I_D =-2A			110	
		V_{GS} =-1.5V, ID =-1A			170	
Forward transconductance (Note 2)	g_{FS}	V_{DS} =-10V, I_D =-2.7A	5.5			S
Charges , Capacitances and Gate resistance(Note3)						
Input capacitance	C_{iss}	V_{DS} =-15V,V_{GS}=0V,f =1MHz		480		pF
Output capacitance	C_{oss}			46		
Reverse transfer capacitance	C_{rss}			10		
Total gate charge	Q_g	V_{DS} =-4.5V,V_{GS}=-6V,I_D =-2.8A		7.2		nC
Gate-source charge	Q_{gs}			2.2		
Gate-drain charge	Q_{gd}			1.2		
Switching times (Note3)						
Turn-on delay time	$t_{d(on)}$	V_{DS}=-6V, I_D =-2.8A, V_{GS}=-4.5V,R_G=6Ω		38		ns
Rise time	t_r			25		
Turn-off delay time	$t_{d(off)}$			43		
Fall time	t_f			5		
Source-drain diode characteristics						
Forward on voltage (Note2)	V_{SD}	V_{GS} =0V, I_S=-1A			-0.8	V

Notes:

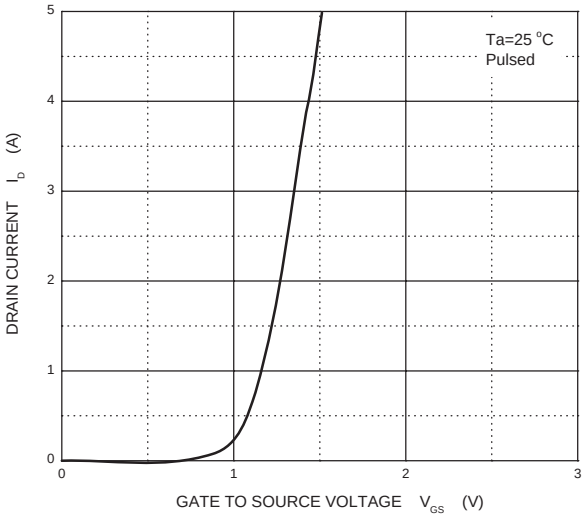
2. Pulse Test : Pulse width≤300μs, duty cycle ≤ 2%.
3. These parameters have no way to verify.

Typical Electrical and Thermal Characteristics (Curves)

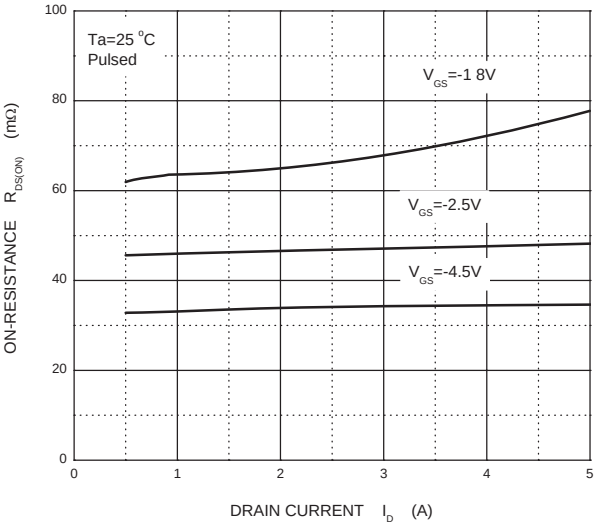
Output Characteristics



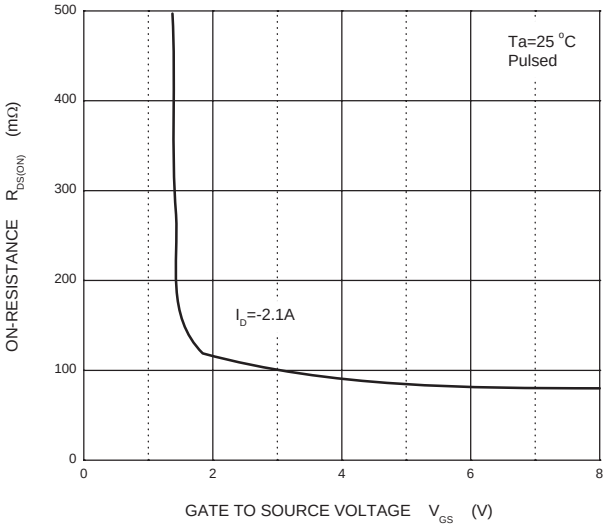
Transfer Characteristics



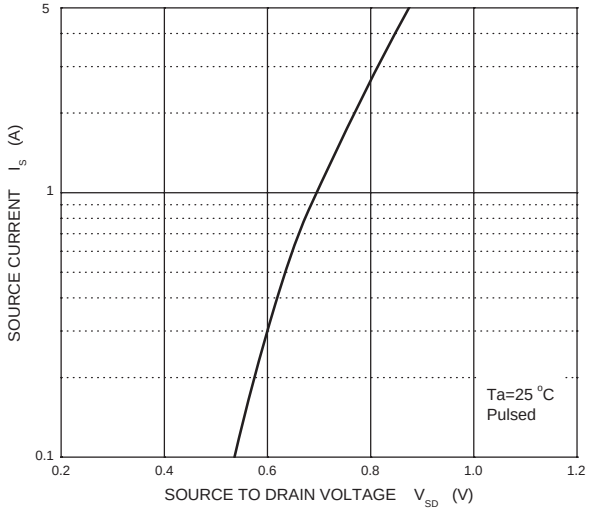
$R_{DS(ON)}$ —— I_D



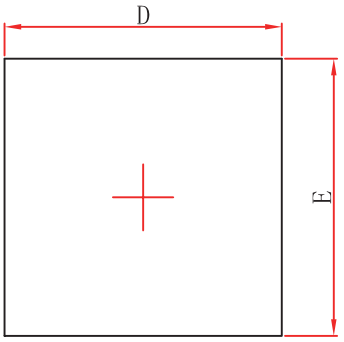
$R_{DS(ON)}$ —— V_{GS}



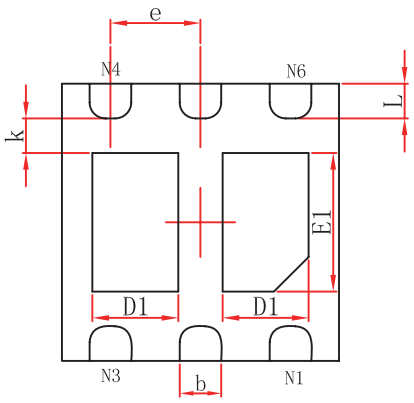
I_S —— V_{SD}



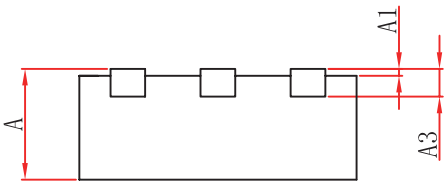
DFNWB2×2-6L-A(P0.65T0.75/0.85) PACKAGE OUTLINE DIMENSIONS



Top View



Bottom View



Side View

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700/0.800	0.800/0.900	0.028/0.031	0.031/0.035
A1	0.000	0.050	0.000	0.002
A3	0.203REF.		0.008REF.	
D	1.924	2.076	0.076	0.082
E	1.924	2.076	0.076	0.082
D1	0.520	0.720	0.020	0.028
E1	0.900	1.100	0.035	0.043
k	0.200MIN.		0.008MIN.	
b	0.250	0.350	0.010	0.014
e	0.650TYP.		0.026TYP.	
L	0.174	0.326	0.007	0.013