Product Summary

| V$_{(BR)DSS}$	R$_{DS(on)TYP}$	I$_D$
20V	11mΩ@4.5V	9A
	20mΩ@2.5V	

Feature

- R$_{DS(ON)}$ (at V$_{GS}$ =4.5V) < 23 mΩ
- R$_{DS(ON)}$ (at V$_{GS}$ =2.5V) < 38 mΩ
- Fast Switching
- ESD Protected

Package
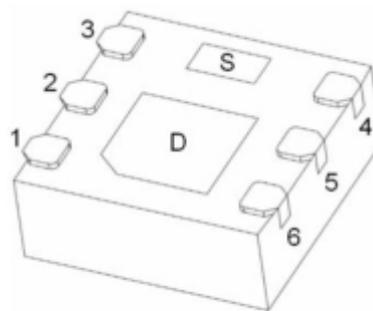
DFNWB2*2-6L

Circuit diagram
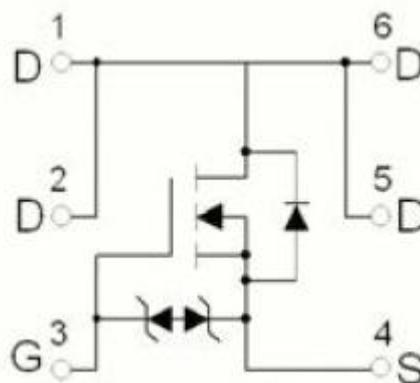
Marking

20N11K

20N11K   =Device Code

Absolute maximum ratings

(T_a=25℃ unless otherwise noted)

| Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	±10	V
Continuous Drain Current	I_D	9	A
Pulsed Drain Current	I_{DM}	36	A
Power Dissipation	P_D	2.1	W
Thermal Resistance Junction-to-Ambient	$R_{\theta JA}$	59	℃/W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 To 150	℃

Electrical characteristics

(T_A=25℃, unless otherwise noted)

| Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Parameter						
Drain-source breakdown voltage	BV_{DSS}	V_{GS} = 0V, I_D =250mA	20			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =20V, V_{GS} = 0V			1	uA
Gate-body leakage current	I_{GSS}	V_{GS} =±10V , V_{DS}=0V			±100	uA
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250mA	0.4	0.65	1	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS} =4.5V, I_D =4A		11	23	mΩ
		V_{GS} =2.5V, I_D =3A		20	38	
Dynamic Parameters						
Input Capacitance	C_{iss}	V_{GS}=0V, V_{DS}=10V, f=1MHz		982		pF
Output Capacitance	C_{oss}			228		
Reverse Transfer Capacitance	C_{rss}			125		
Switching Parameters						
Total Gate Charge	Q_g	V_{GS}=4.5V, V_{DS}=10V, I_D =7A		8.7		pF
Gate Source Charge	Q_{gs}			2.5		
Gate Drain Charge	Q_{gd}			3.1		
Turn-On Delay Time	$T_{d(on)}$	V_{GS}=4.5V, V_{DS}=10V, R_L=1.5Ω, R_{GEN}=3Ω		1.3		nS
Rise Time	T_r			2.5		
Turn-Off Delay Time	$T_{d(off)}$			28		
Fall Time	T_f			8		
Drain-Source Diode Characteristics						
Diode Forward Voltage [2]	V_{SD}	I_S=1A, V_{GS} = 0V			1.2	V

## Typical Characteristics
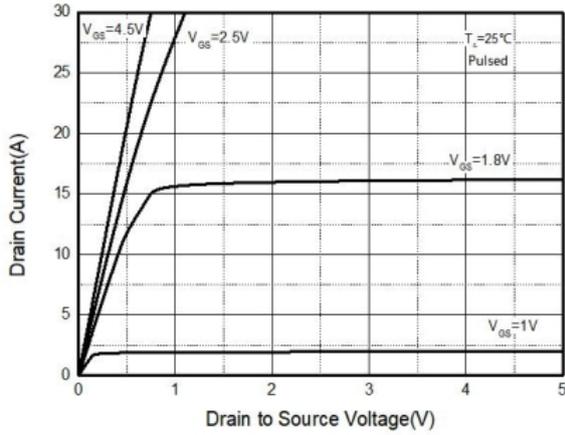
**Output Characteristics**
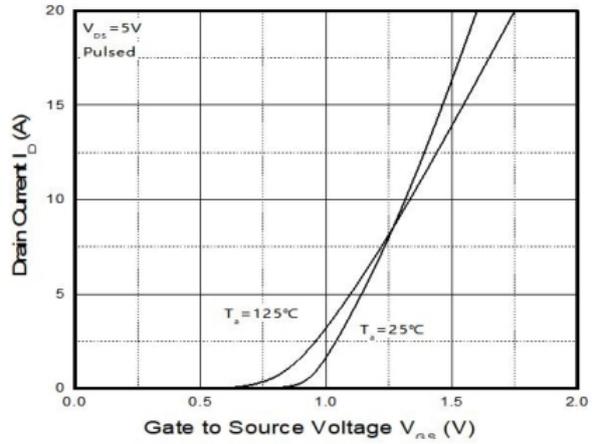
**Transfer Characteristics**
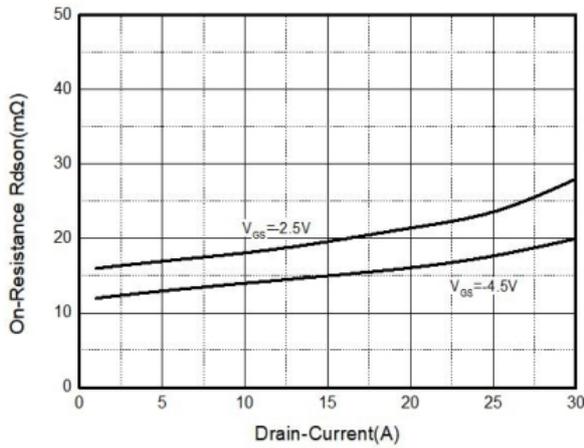
Drain-Source On Resistance
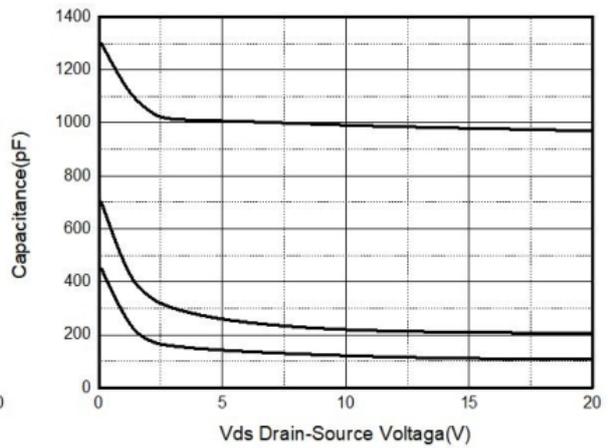
Capacitance Characteristics
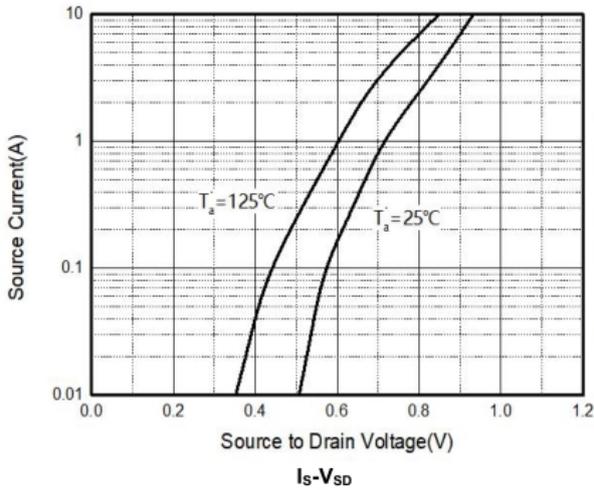
I$_S$-V$_{SD}$
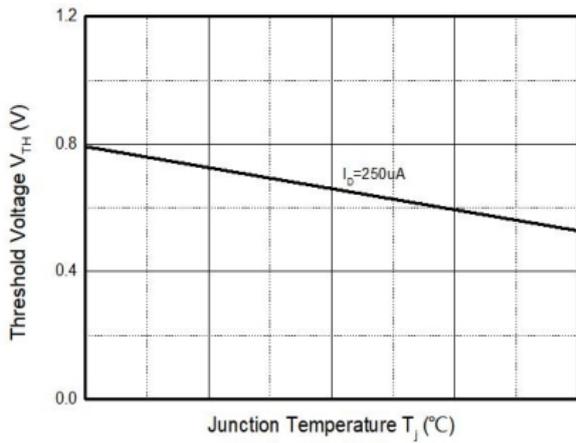
Threshold

DFN2*2-6L Package Information
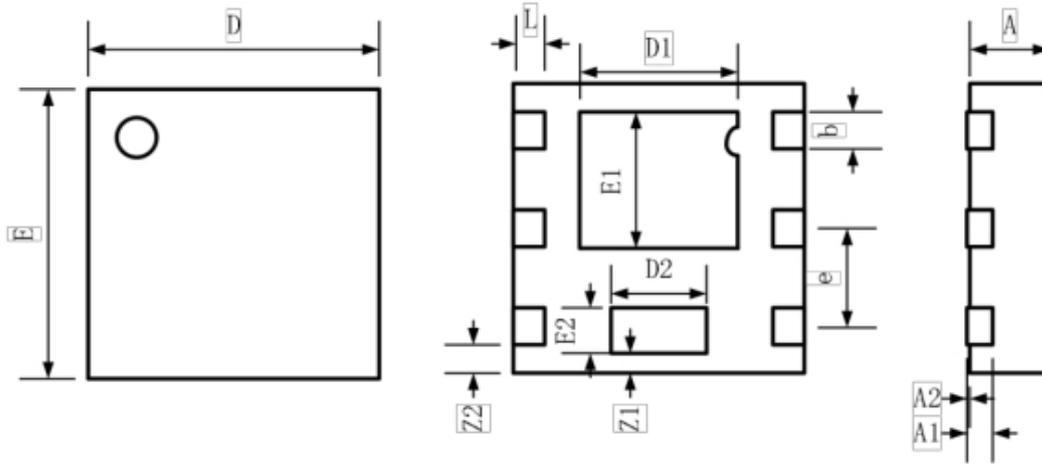
Symbol	Dimensions In Millimeters		
	Min.	Typ.	Max.
D	1.95	2.00	2.05
E	1.95	2.00	2.05
D1	1.10	1.15	1.20
E1	0.90	0.95	1.00
D2	0.65	0.70	0.75
E2	0.33	0.38	0.43
L	0.225	0.275	0.325
b	0.25	0.30	0.35
e	0.65BSC		
A	0.47	0.5	0.55
A1	0.20REF		
A2	0.00		0.05
Z1	0.06	0.11	0.16
Z2	0.15	0.20	0.25