

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-20V	70mΩ@-4.5V	-2.3A
	100mΩ@-2.5V	

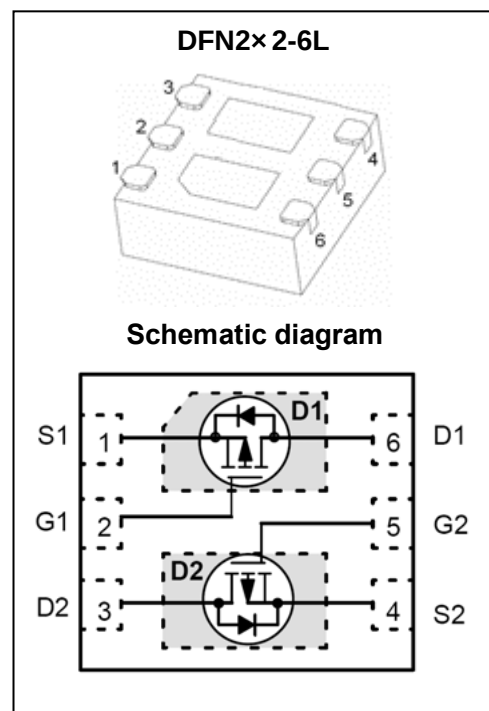
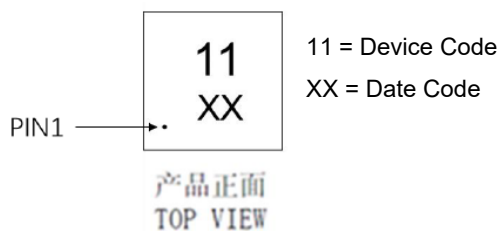
Feature

- TrenchFET Power MOSFET
- Excellent $R_{DS(on)}$ and Low Gate Charge

Application

- 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:



ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ 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	-2.3	A
Pulsed Drain Current	I_{DM}	-10	A
Power Dissipation	P_D	0.7	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	178	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^\circ\text{C}$

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

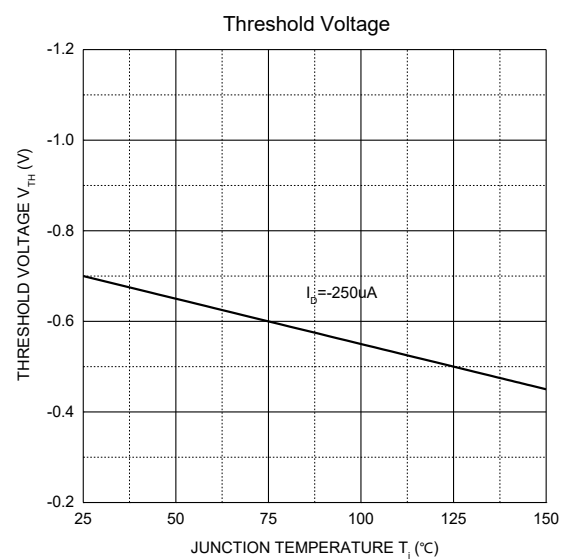
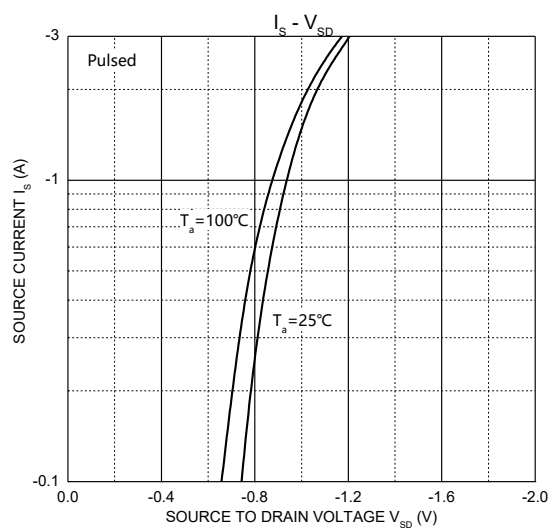
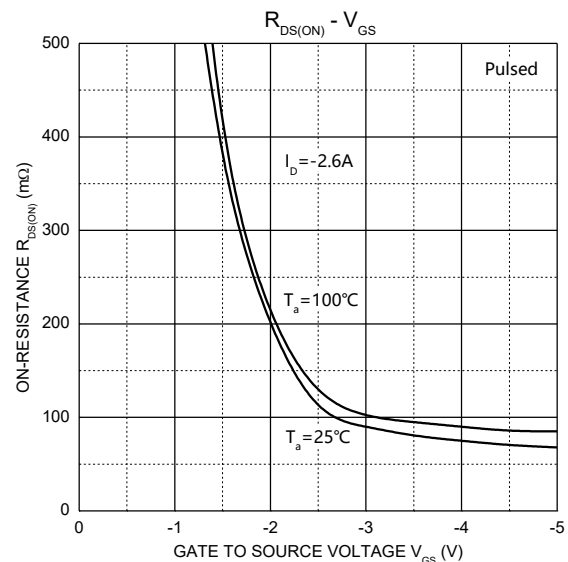
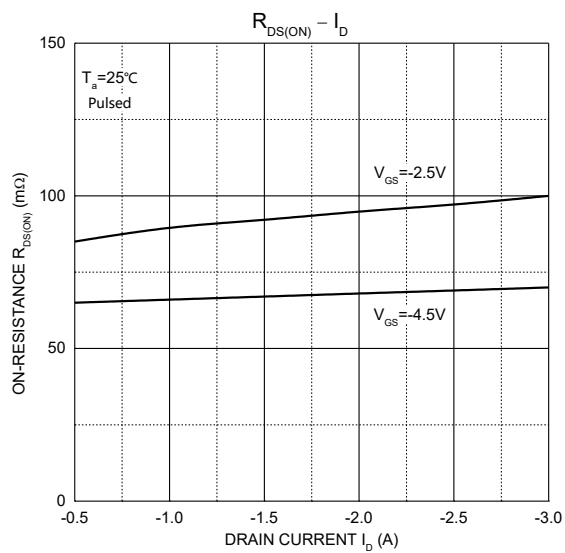
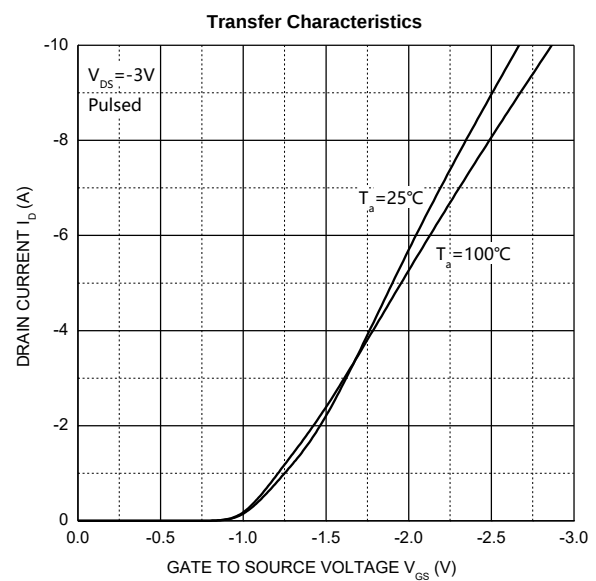
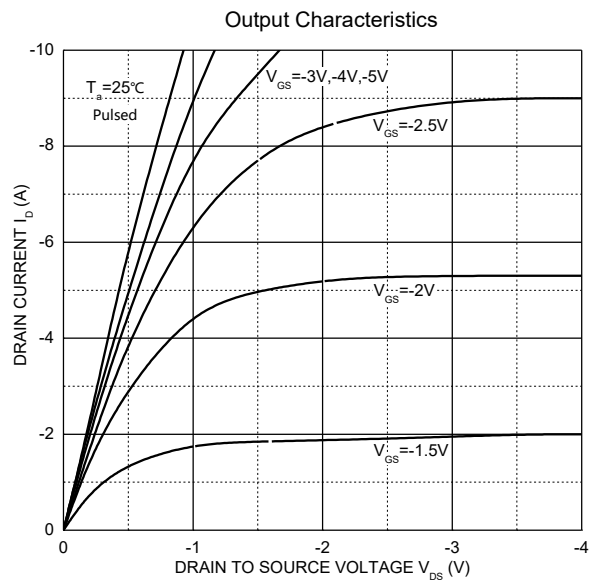
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-20			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = -18V, V_{GS} = 0V$			-1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 10V, V_{DS} = 0V$			± 100	nA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.4	-0.7	-1	V
Drain-source on-resistance ^a	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -2.8A$		70	110	m Ω
		$V_{GS} = -2.5V, I_D = -2A$		100	140	
Dynamic characteristics ^b						
Input Capacitance	C_{iss}	$V_{DS} = -10V, V_{GS} = 0V, f = 1MHz$		363		pF
Output Capacitance	C_{oss}			70		
Reverse Transfer Capacitance	C_{rss}			60		
Gate resistance	R_g	$f = 1MHz$			50	Ω
Total Gate Charge	Q_g	$V_{DS} = -10V, V_{GS} = -2.5V, I_D = -3A$		3.2		nC
Gate-Source Charge	Q_{gs}			0.6		
Gate-Drain Charge	Q_{gd}			1.2		
Turn-on delay time	$t_{d(on)}$	$V_{DD} = -10V, V_{GEN} = -4.5V, I_D = -1A$ $R_L = 10\Omega, R_{GEN} = 1\Omega$		9		ns
Turn-on rise time	t_r			33		
Turn-off delay time	$t_{d(off)}$			29		
Turn-off fall time	t_f			9		
Source-Drain Diode characteristics						
Diode forward current	I_S	$T_C = 25^{\circ}C$			-2.3	A
Diode pulsed forward current ^a	I_{SM}				-10	A
Diode Forward voltage	V_{DS}	$V_{GS} = 0V, I_S = -1.3A$			-1.2	V

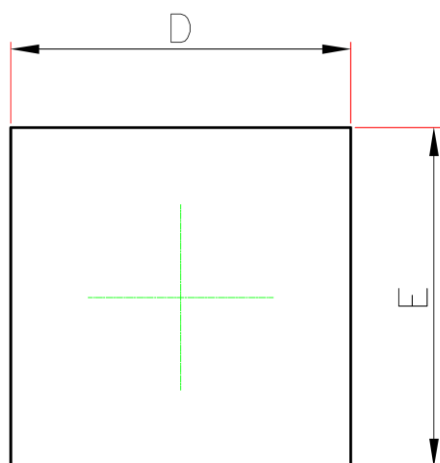
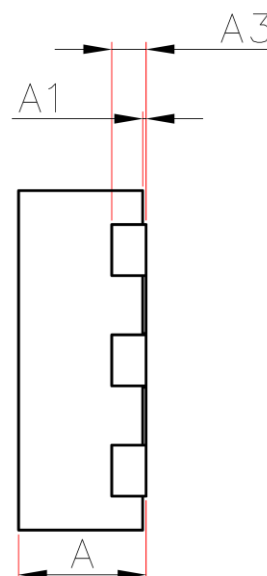
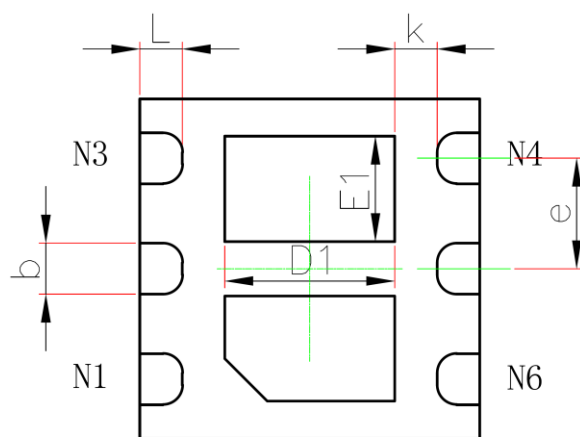
Notes :

a.Pulse Test : Pulse Width < 300 μs , Duty Cycle $\leq 2\%$.

b.Guaranteed by design, not subject to production testing

Typical Electrical and Thermal Characteristics



DFN2×2-6L Package Information

TOP VIEW

SIDE VIEW

BOTTOM VIEW

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.800	0.028	0.031
A1	0	0.050	0	0.002
A3	2.03REF		0.008REF	
D	1.900	2.100	0.075	0.083
E	1.900	2.100	0.075	0.083
D1	0.900	1.100	0.035	0.043
E1	0.520	0.720	0.020	0.028
k	0.200MIN		0.008MIN	
b	0.250	0.350	0.010	0.014
e	0.65BSC		0.026TYP	
L	0.174	0.326	0.007	0.013