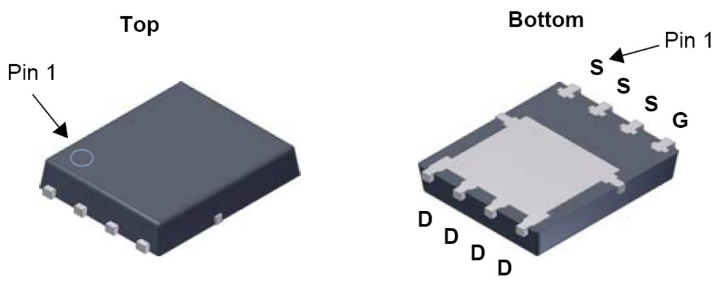
LXT **Langxintong**

FS4483

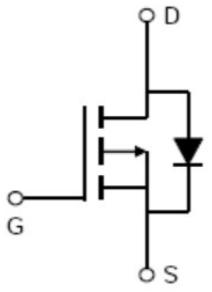
P-Channel -20V (D-S) MOSFET

● FEATURES	● GENERAL DESCRIPTION
RDS(ON) 9.5mΩ@VGS=-4.5V RDS(ON) 13mΩ@VGS=-2.5V RDS(ON) 18mΩ@VGS=-1.8V high density cell design for extremely low RDS(ON) Exceptional on-resistance and maximum DC current capability	The FS4483 combines advanced trench MOSFET technology with a low resistance package to provide extremely low $R_{DS(ON)}$. This device is ideal for load switch and battery protection applications.

● PIN CONFIGURATION



DFN3X3-8L



P-MOS

Absolute Maximum Ratings (T$_A$=25℃ Unless Otherwise Noted)

Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	±10	V
Drain Current-Continuous	I_D	-7	A
Drain Current -Pulsed (Note)	I_{DM}	-40	A
Maximum Power Dissipation	P_D	18	W
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-55 To 150	℃

●

Thermal Characteristics

Parameter	Symbol	Limit	Units
Thermal Resistance, Junction-to-Case	RqJC	6.9	℃/W

NOTE:

A: Surface mounted on FR4 Board using 1 in sq pad size, 1oz Cu.
B: Surface mounted on FR4 board using the minimum recommended pad size, 1oz Cu.
C: Repetitive rating, pulse width limited by junction temperature, t_p=10μs, Duty Cycle=1%
D: Repetitive rating, pulse width limited by junction temperature $T_{J(MAX)}$=150°C.

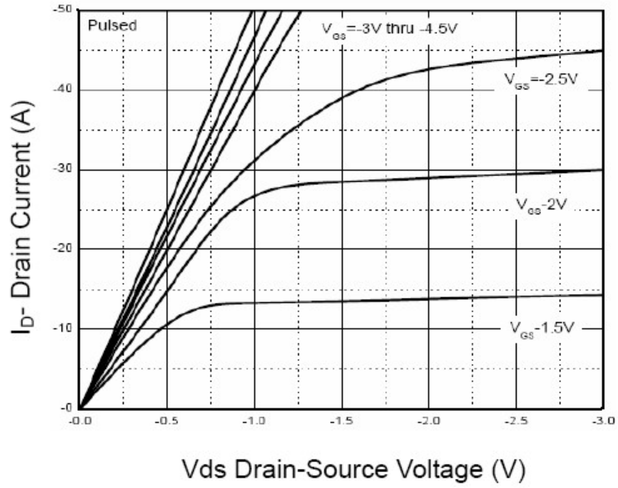
Electrical Characteristics (T_J=25°C unless otherwise noted)

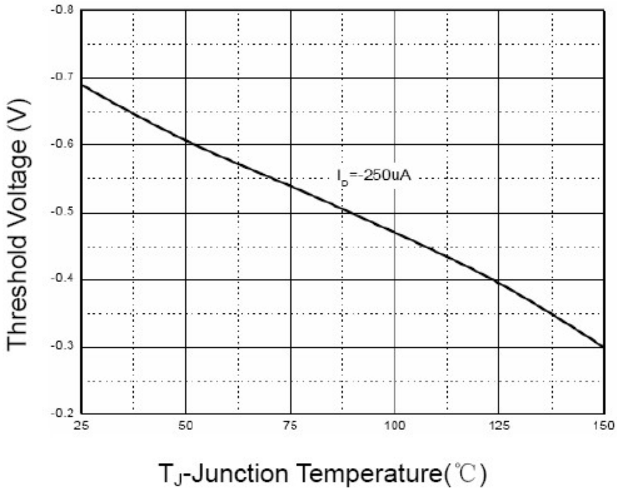
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V I_D=-250μA	-20	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-8V,V_{GS}=0V	-	-	-1	μA
Gate-Body Leakage Current	I_{GSS}	V_{GS}=±8V,V_{DS}=0V	-	-	±100	nA
On Characteristics(Note 3)						
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS},I_D=-250μA	-0.4	-0.65	-1.0	V
Drain-Source On-State Resistance	$R_{DS(ON)}$	V_{GS}=-4.5V, I_D=-6.6A	-	9.5	12	mΩ
		V_{GS}=-2.5V, I_D=-3.5A	-	13	16	mΩ
		V_{GS}=-1.8V, I_D=-2.0A	-	18	22	mΩ
Forward Transconductance	g_{FS}	V_{DS}=-5V,I_D=-6.7A	28	-	-	S
Dynamic Characteristics(Note4)						
Input Capacitance	C_{lss}	V_{DS}=-10V,V_{GS}=0V, F=1.0MHz	-	3500	-	PF
Output Capacitance	C_{oss}		-	980	-	PF
Reverse Transfer Capacitance	C_{rss}		-	860	-	PF
Switching Characteristics (Note 4)						
Turn-on Delay Time	$t_{d(on)}$	V_{DD}=-10V,I_D=-1A V_{GS}=-4.5V,R_{GEN}=10Ω	-	22	-	nS
Turn-on Rise Time	t_r		-	70	-	nS
Turn-Off Delay Time	$t_{d(off)}$		-	60	-	nS
Turn-Off Fall Time	t_f		-	20	-	nS
Total Gate Charge	Q_g	V_{DS}=-6V,I_D=-10A, V_{GS}=-4.5V	-	60	90	nC
Gate-Source Charge	Q_{gs}		-	10	-	nC
Gate-Drain Charge	Q_{gd}		-	20	-	nC
Drain-Source Diode Characteristics						
Diode Forward Voltage(Note 3)	V_{SD}	V_{GS}=0V,I_S=-1A	-	-	-1.2	V
Diode Forward Current (Note 2)	I_S		-	-	-1.6	A

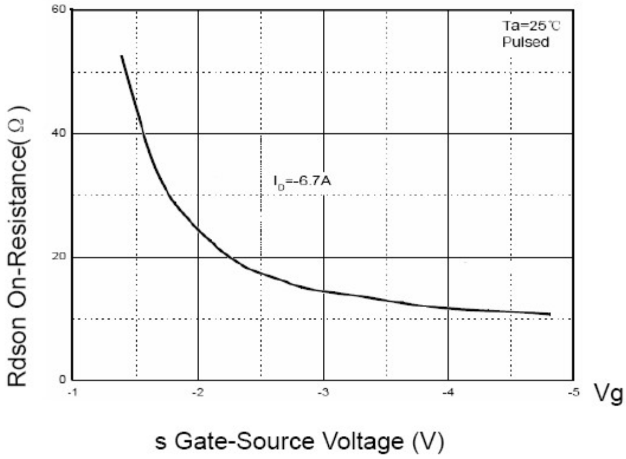
Notes:

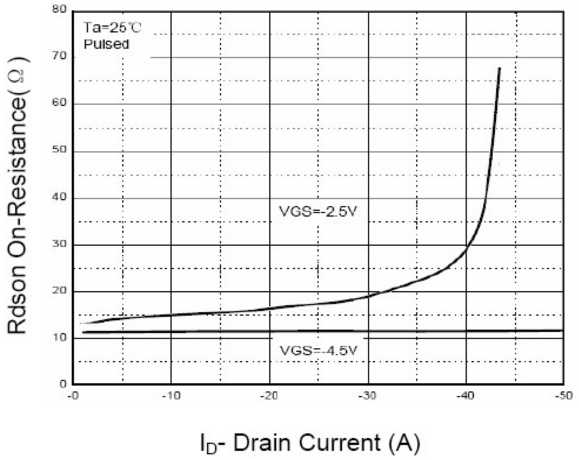
1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board, t ≤ 10 sec.
3. Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.
4. Guaranteed by design, not subject to production

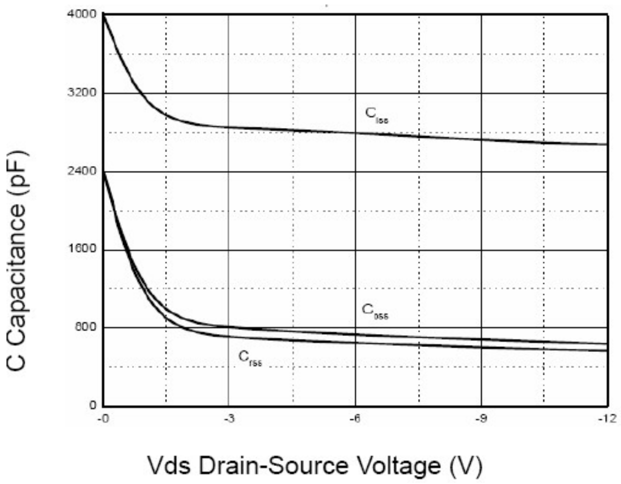
- **Typical Performance Characteristics** (T =25℃)

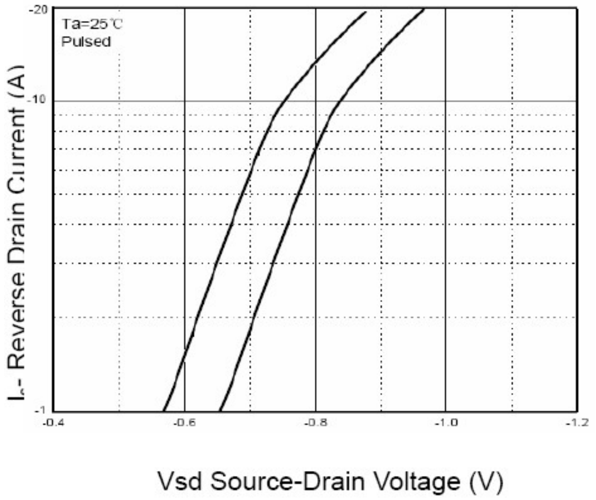




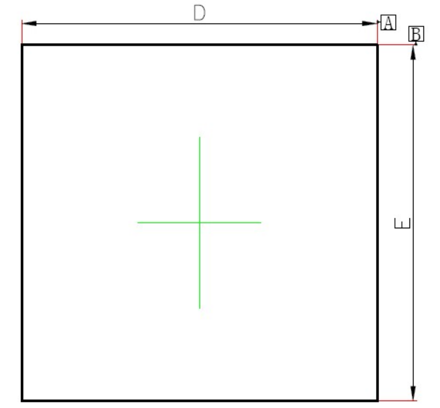




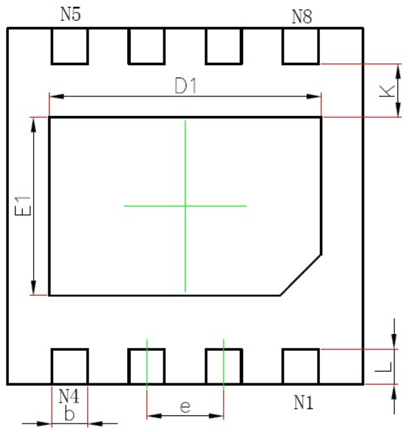




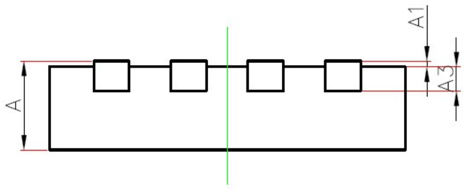
- **DFN3X3-8L Package Information**



TOP VIEW



BOTTOM VIEW



SIDE VIEW

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.800	0.028	0.031
A1	0.000	0.050	0.000	0.002
A3	0.203REF.		0.008REF.	
D	3.000BSC.		0.118BSC.	
E	3.000BSC.		0.118BSC.	
D1	2.200	2.450	0.087	0.096
E1	1.400	1.600	0.055	0.063
k	0.250MIN.		0.010MIN.	
b	0.250	0.350	0.010	0.014
e	0.650TYP.		0.026TYP.	
L	0.250	0.450	0.01	0.018

Notes

1. All dimensions are in millimeters.
2. Tolerance ±0.10mm (4 mil) unless otherwise specified
3. Package body sizes exclude mold flash and gate burrs. Mold flash at the non-lead sides should be less than 5 mils.
4. Dimension L is measured in gauge plane.
5. Controlling dimension is millimeter, converted inch dimensions are not necessarily exact.