

Features

- High-speed switching
- Low threshold voltage

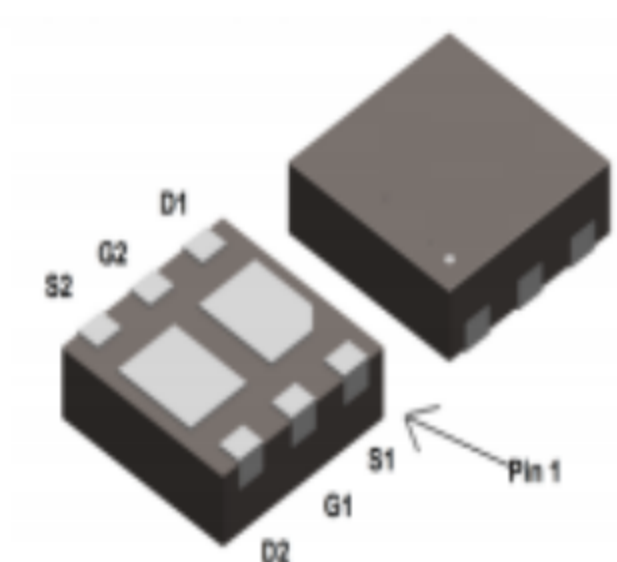
Application

- PWM applications
- Power management

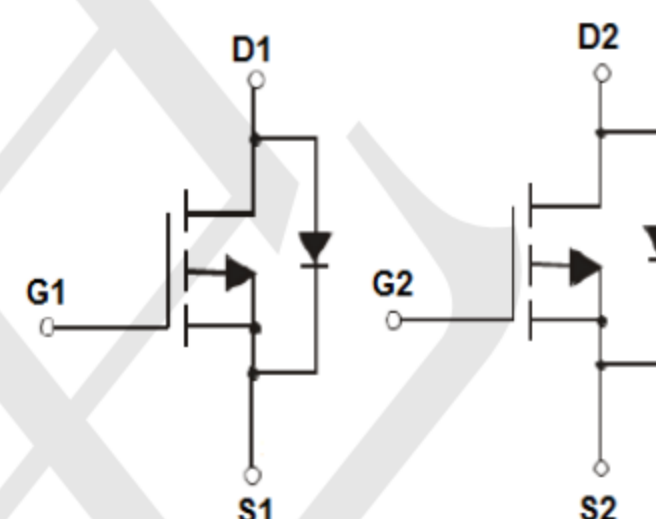
Ordering Information

- Package: DFN2x2-6LC
- Shipping Qty:3000/7inch Tape Reel

Package and Pin Configuration



Circuit diagram



Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Drain-to-Source Voltage	V _{DSS}	-20	V
Gate-to-Source Voltage	V _{GSS}	±12	V
Continuous Drain Current *2	I _D	-3.0	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation *1	P _D	2	W
Operating Junction Temperature Range	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
V _{DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0V, I _D = -250μA	-20	-	-	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = -20V, V _{GS} = 0V	-	-	-1	μA
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±8V, V _{DS} = 0V	-	-	±100	nA
On Characteristics ^{*2}						
R _{DS(ON)}	Static Drain-Source On-resistance	V _{GS} = -4.5V, I _D = -2.8A	-	-	100	mΩ
		V _{GS} = -2.5V, I _D = -2A	-	-	135	mΩ
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} , I _D = -250μA	-0.5	-	-1.0	V
Dynamic Characteristics ^{*3}						
C _{ISS}	Input Capacitance	V _{GS} = 0V	-	822	-	pF
C _{OSS}	Output Capacitance	V _{DS} = -15V	-	58	-	
C _{RSS}	Reverse Transfer Capacitance	f = 1.0MHz	-	52	-	
Switching Characteristics ^{*3}						
t _{d(ON)}	Turn-on Delay Time	V _{GS} = -4.5V	-	20	-	ns
t _r	Turn-on Rise Time	V _{DD} = -6V	-	40	-	
t _{d(OFF)}	Turn-Off Delay Time	I _D = -1A	-	30	-	
t _f	Turn-Off Fall Time	R _G = 6Ω	-	20	-	
Q _G	Total Gate-Charge	V _{DD} = -10V	-	4	-	nC
Q _{GS}	Gate to Source Charge	V _{GS} = -3V	-	1.2	-	
Q _{GD}	Gate to Drain (Miller) Charge	I _D = -1.7A	-	1.8	-	
Source-Drain Diode Characteristics						
V _{SD}	Diode Forward Voltage ^{*2}	I _{SD} = -0.3A, V _{GS} = 0V, T _J = 25°C	-	-	-1.2	V

Ratings and Characteristics Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

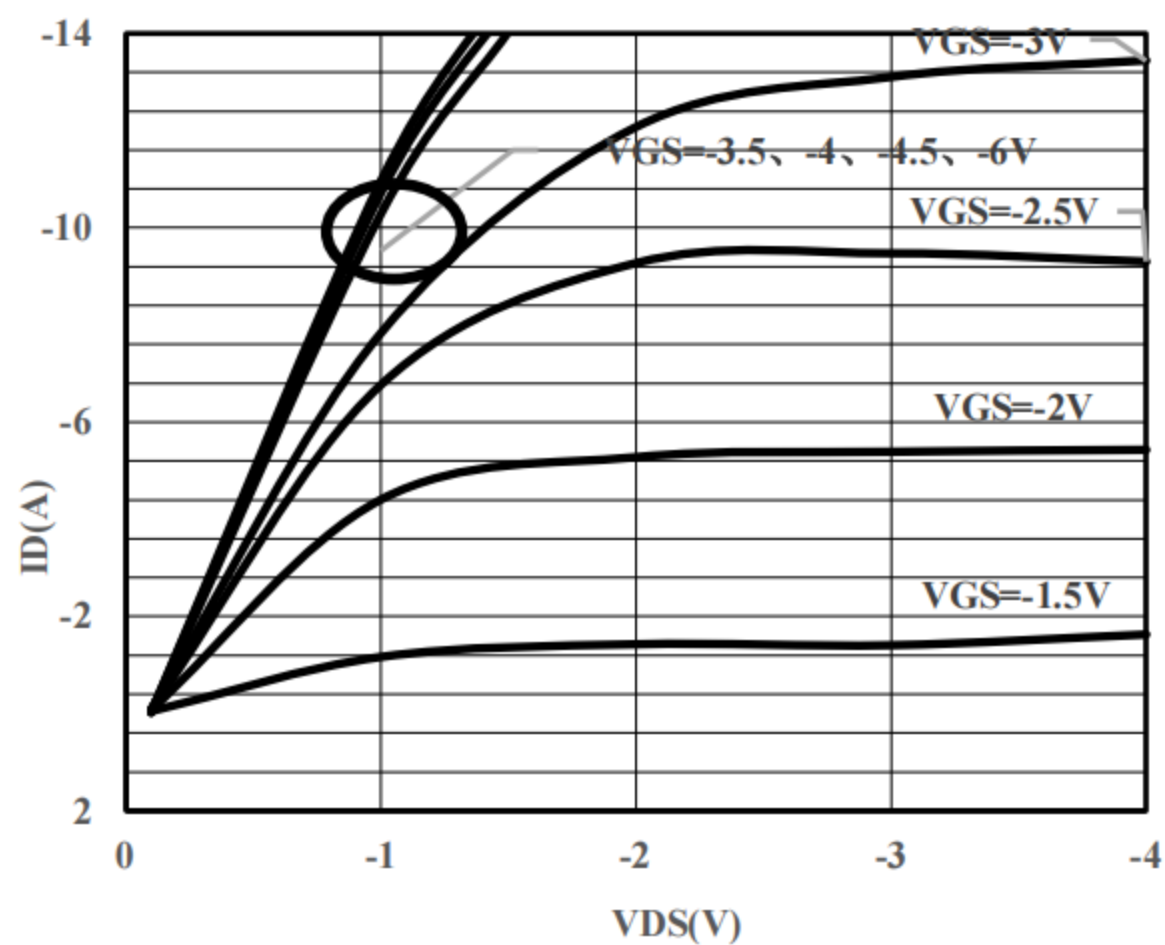


Fig 1 On-Region Characteristics

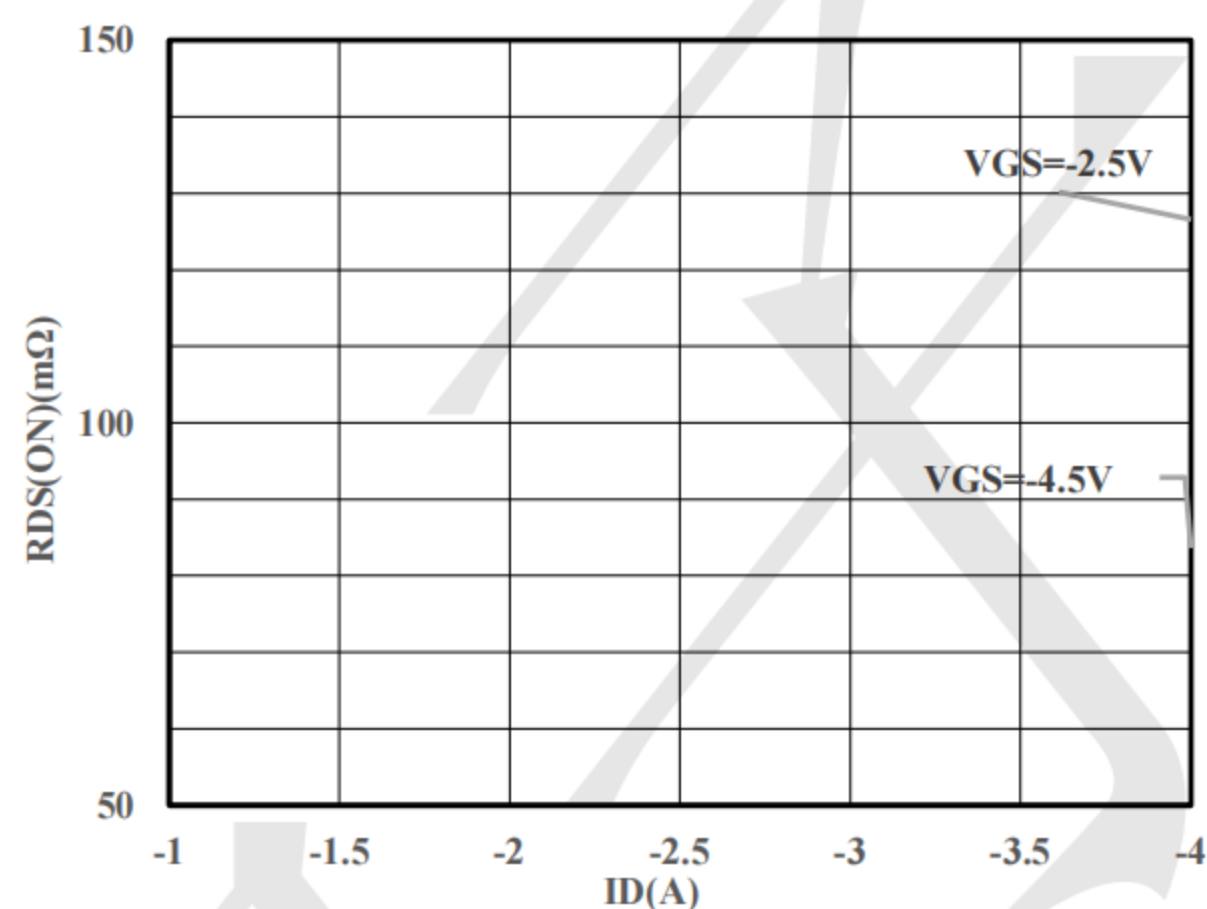


Fig 2 On-Resistance vs. Drain Current and Gate Voltage

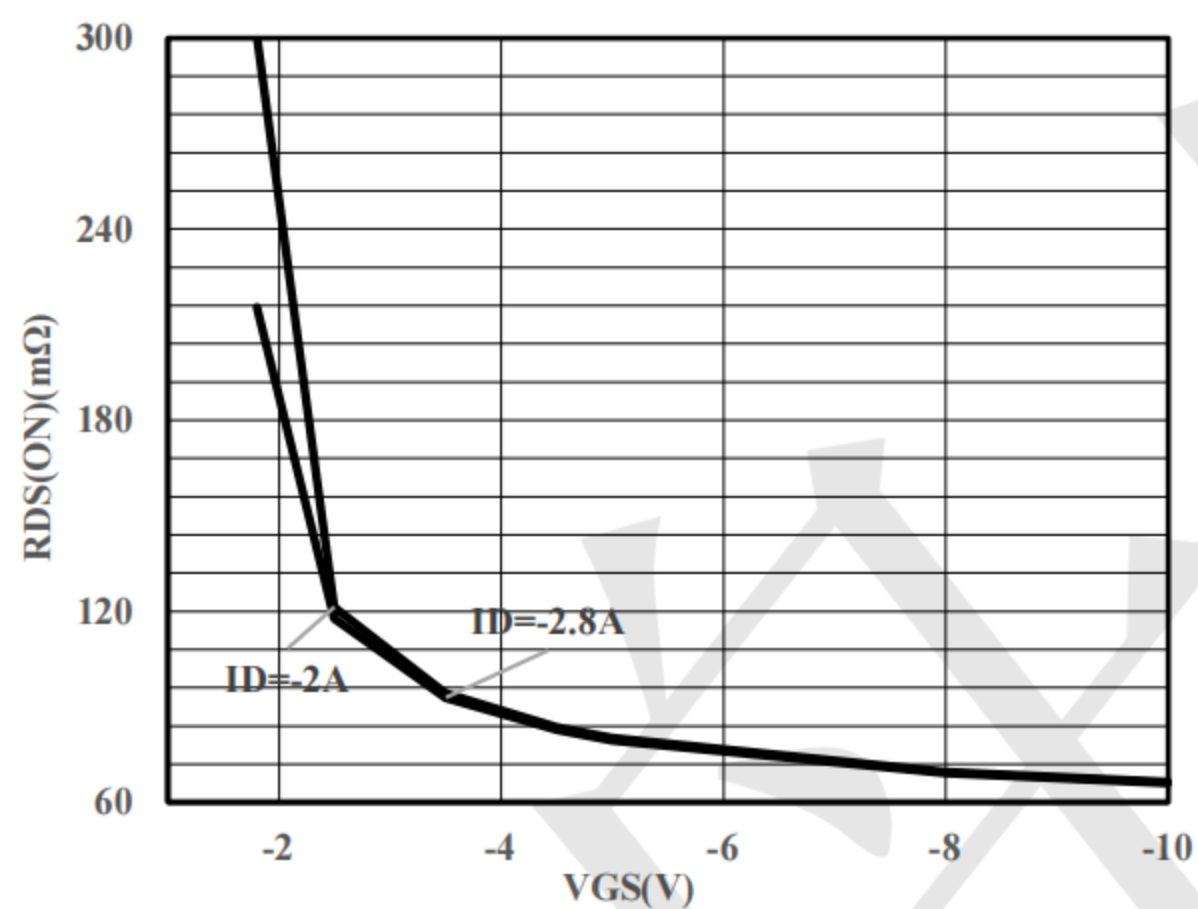


Fig 3 On-Resistance vs. Gate-Source Voltage

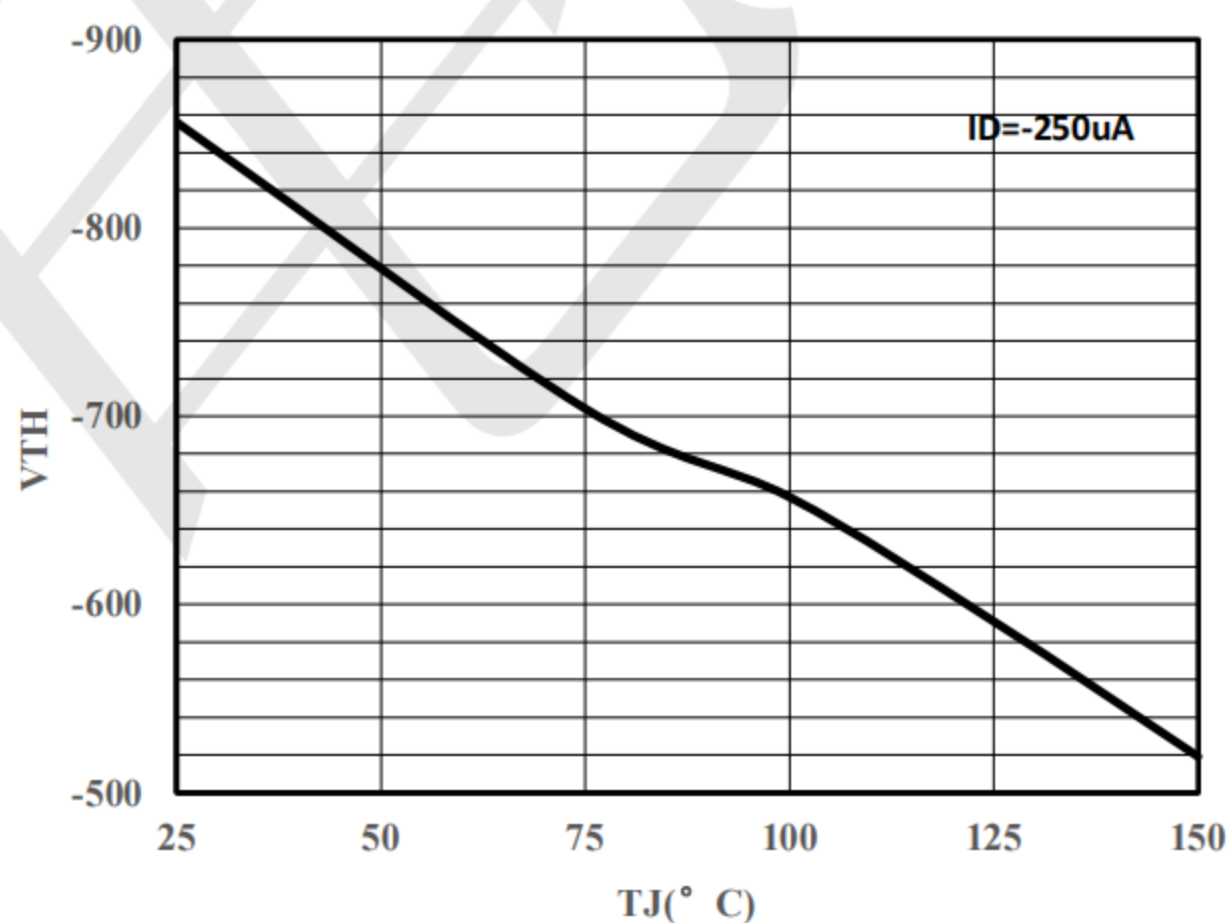


Fig 4 Gate Voltage vs. Junction Temperature

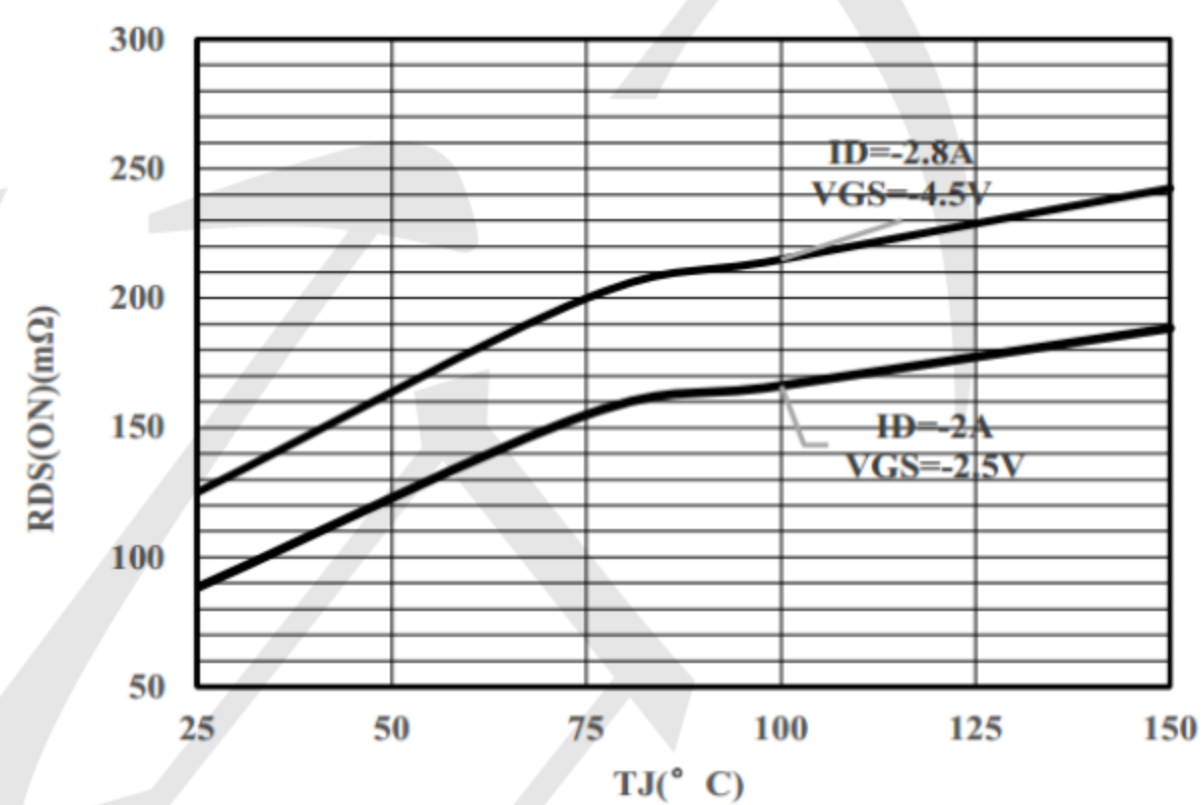


Fig 5 On-Resistance vs. Junction Temperature

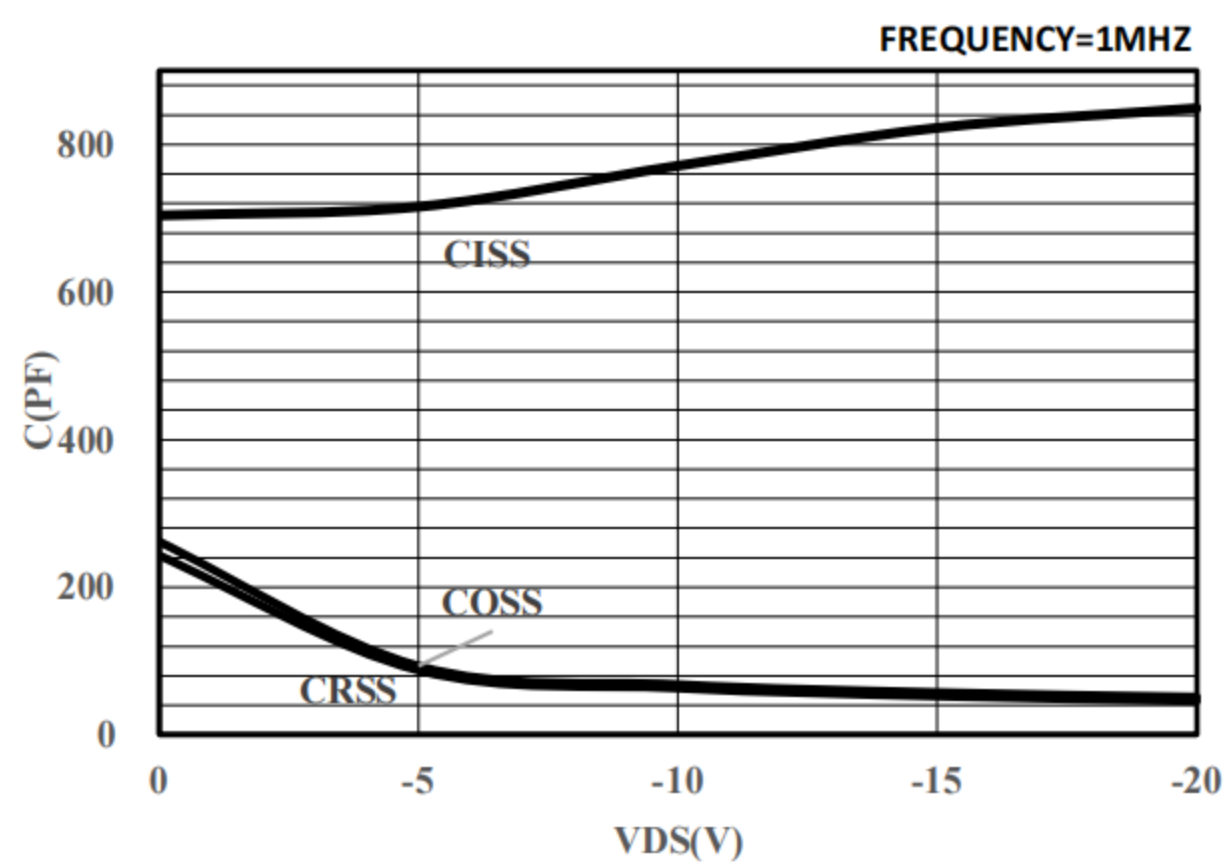


Fig 6 Capacitance Characteristics

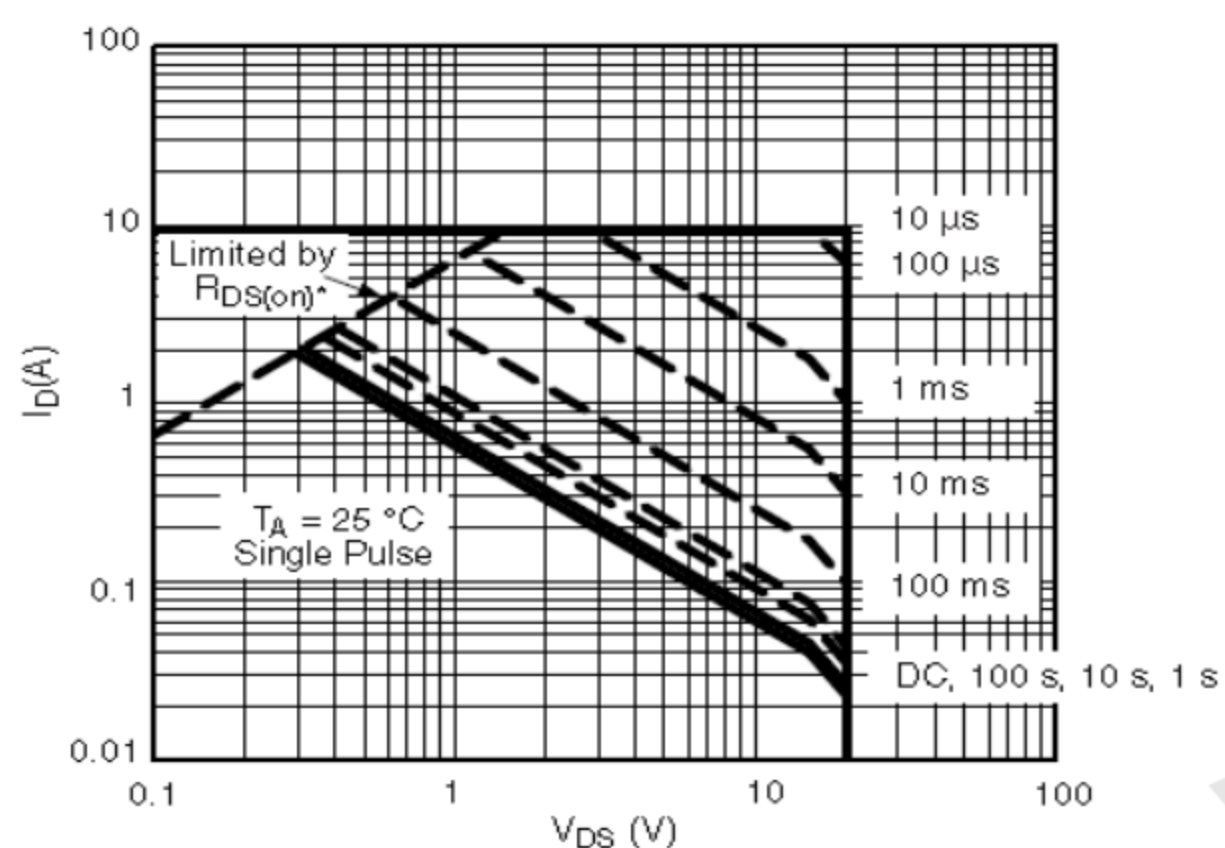


Fig 7 Maximum Safe Operating Area

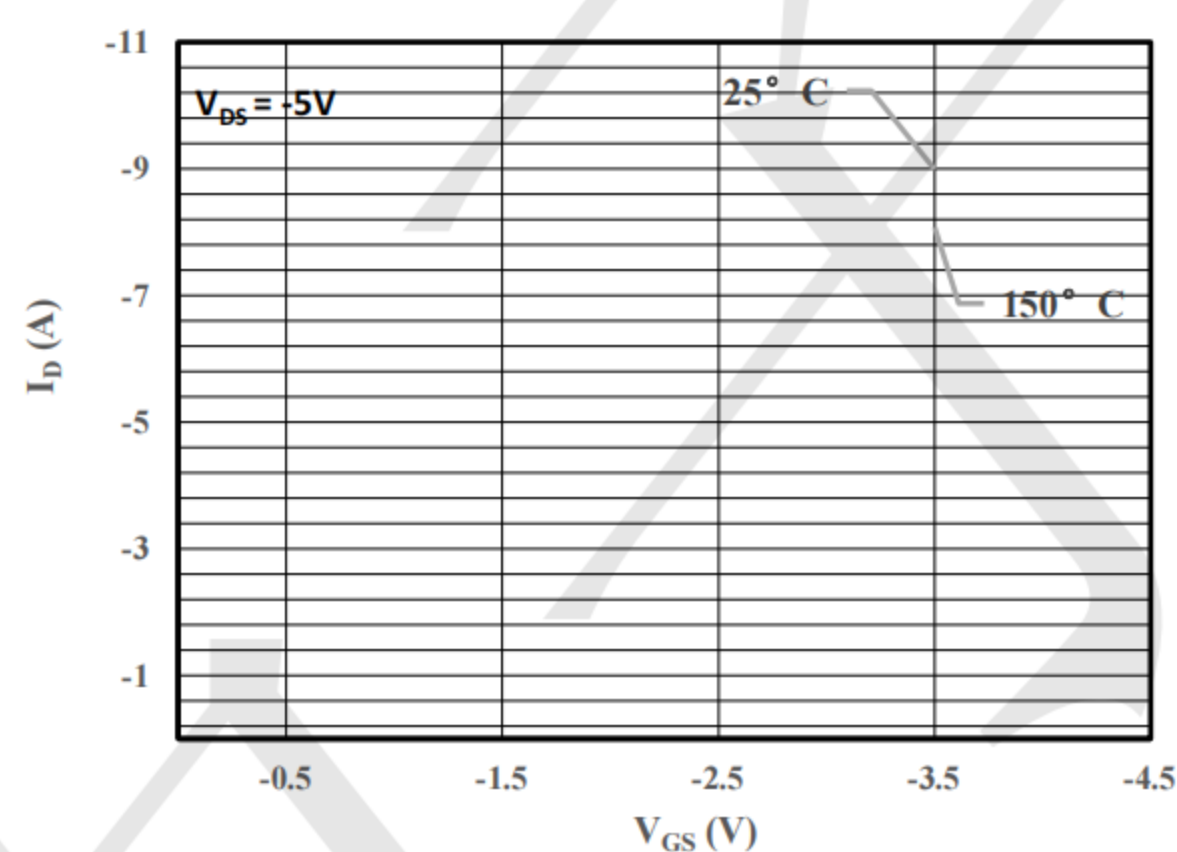
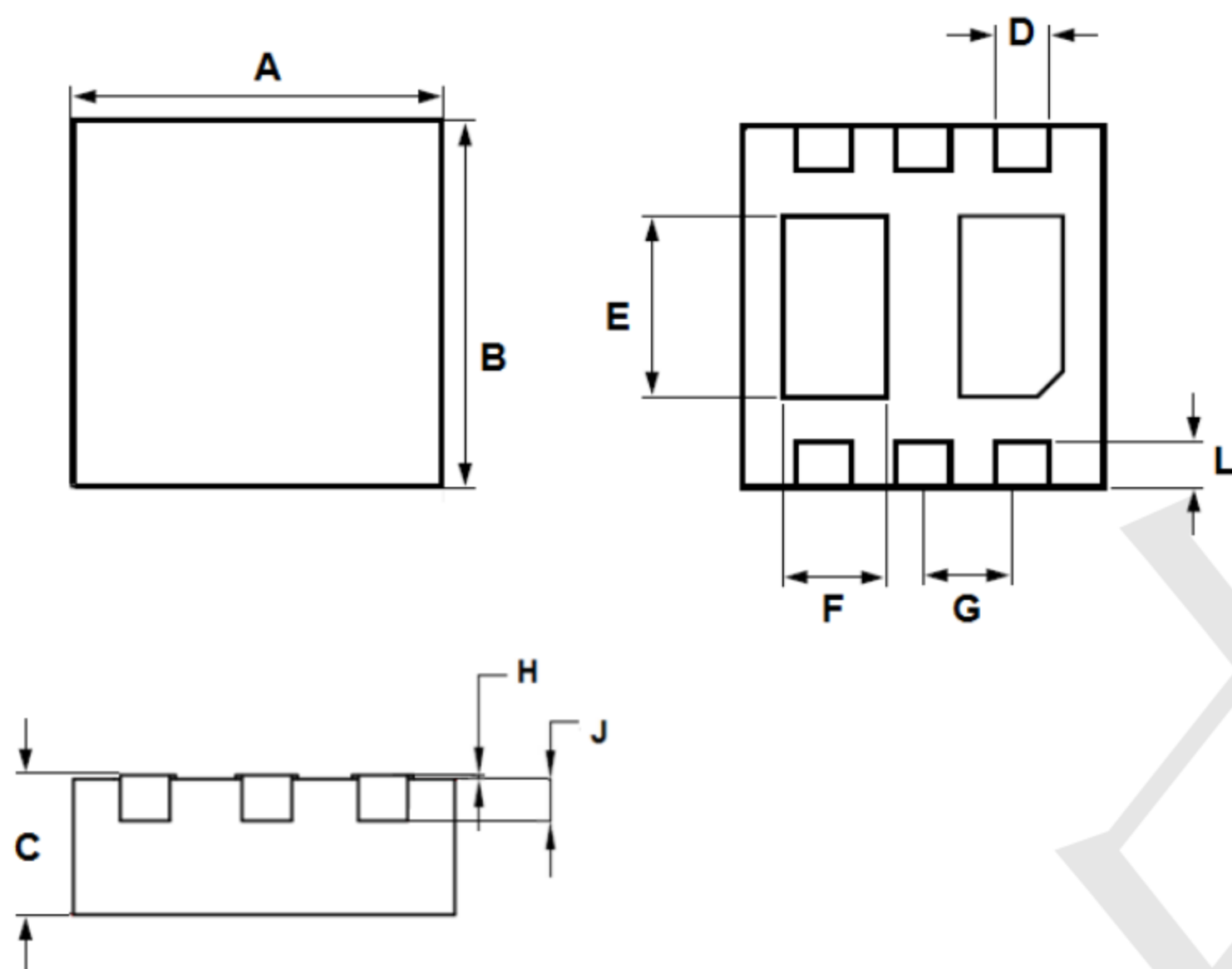


Fig 8 Transfer Characteristics

DFN2X2-6LC Package Outline Drawing



Dimension	Min.	Max.
A	1.900	2.100
B	1.900	2.100
C	0.500	0.600
D	0.250	0.350
E	0.800	1.000
F	0.600	0.800
G	0.550	0.750
H	0.000	0.050
J	0.103	0.303
L	0.174	0.326

Suggested Pad Layout

