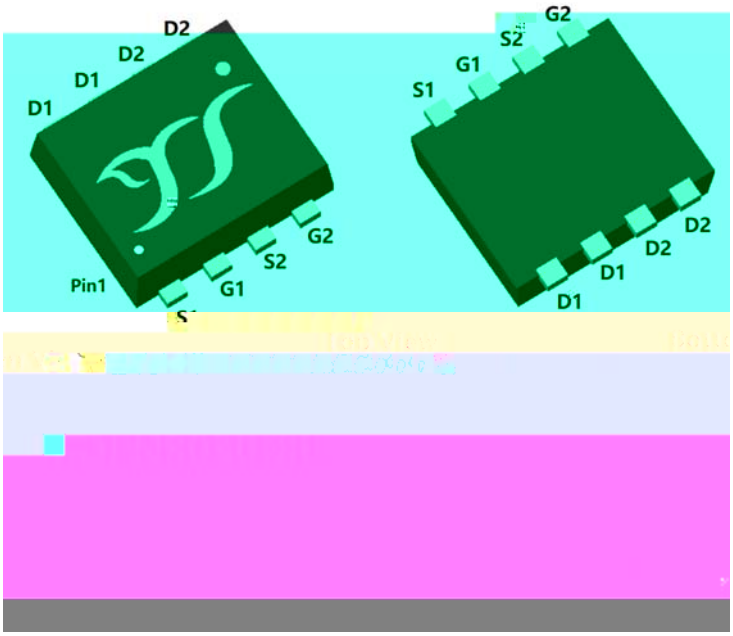
N-Channel and P-Channel Complementary MOSFET



Product Summary

NMOS

- V_{DS} 30V
- I_D 8A
- $R_{DS(ON)}$(at V_{GS}=10V) 19mΩ
- $R_{DS(ON)}$(at V_{GS}=4.5V) 23mΩ

PMOS

- V_{DS} -30V
- I_D -5A
- $R_{DS(ON)}$(at V_{GS}=-10V) 39mΩ
- $R_{DS(ON)}$(at V_{GS}=-4.5V) 54mΩ

General Description

- Trench Power LV MOSFET technology
- Excellent package for heat dissipation
- Hiq ! 'k h 1
- ●- 6 ■= ' ⅜A " A†

					Unit
Drain-source Voltage		V_{DS}	30	-30	V
Gate-source Voltage		V_{GS}	±20	±20	V
Drain Current	T_A=25	I_D	8	-5	A
	T_A=100		5	-8150	

■Thermal resistance

Parameter		Symbol	NMOS		PMOS		Units
			Typ	Max	Typ	Max	
Thermal Resistance Junction-to-Ambient [C]	Steady-State	$R_{\theta JA}$	80	-	90	-	/W

■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	Marking	DELIVERY MODE PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUMQ =	
YJU08NP03AJ	F1	Q08NP03A	3000	30000	120000	7“ reel

■ **PMOS Electrical Characteristics** (T_J=25 unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}= 0V, I_D=-250μA	-30	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-30V, V_{GS}=0V V_{DS}=-30V, V	-	-	-1	μA

■ NMOS Typical Electrical and Thermal Characteristics Diagrams

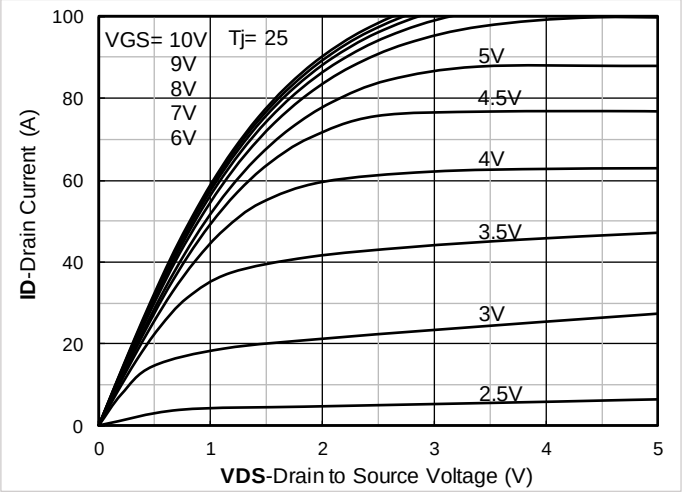


Figure 1. Output Characteristics

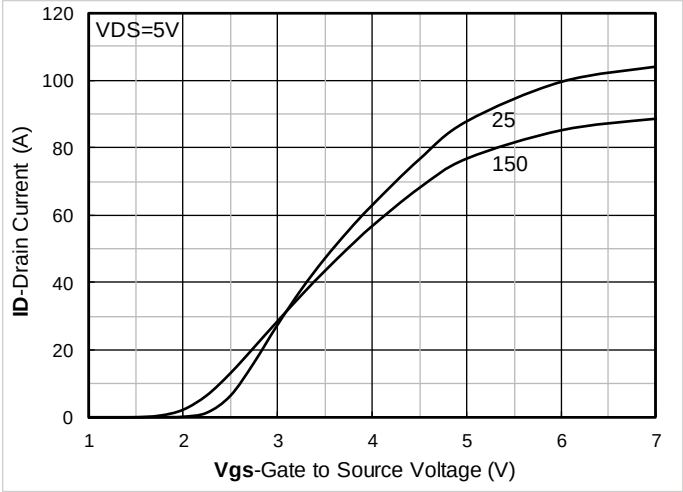


Figure 2. Transfer Characteristics

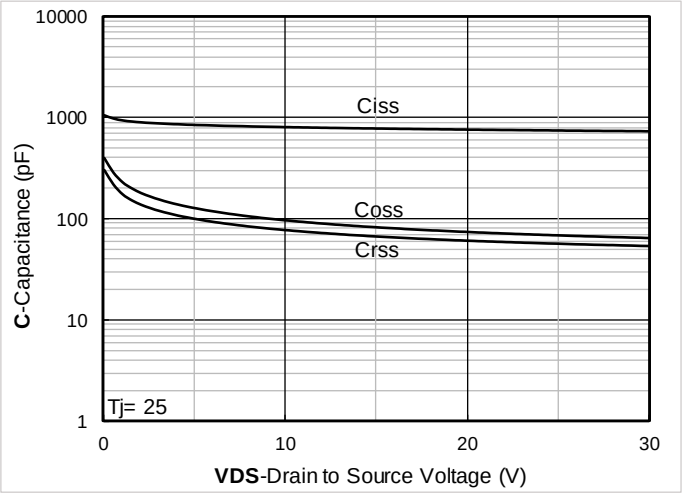


Figure 3. Capacitance Characteristics

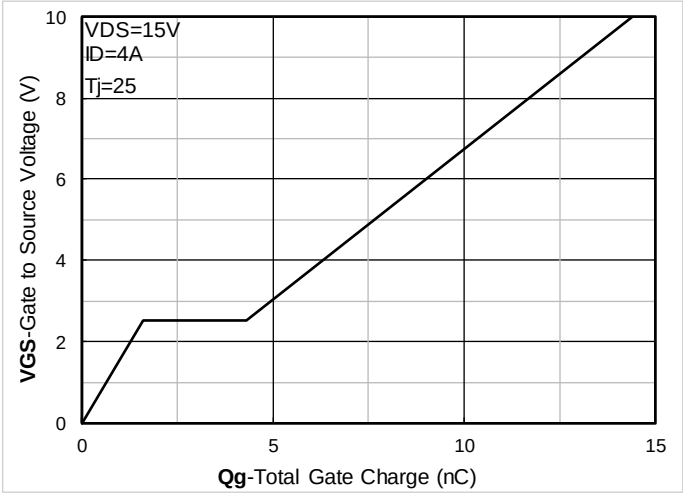


Figure 4. Gate Charge

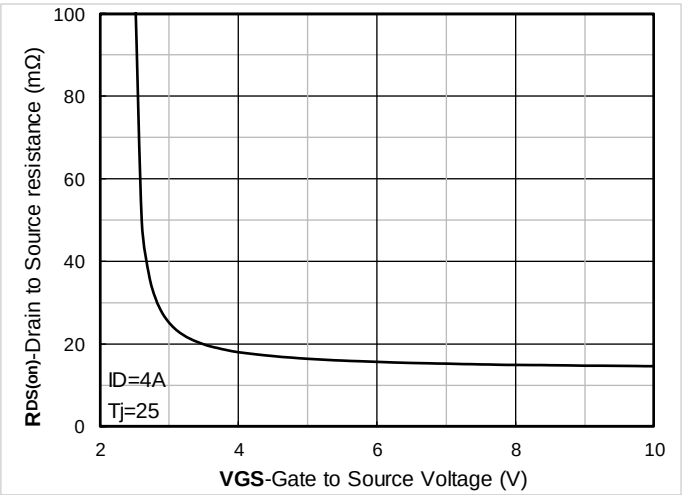


Figure 5. On-Resistance vs Gate to Source Voltage

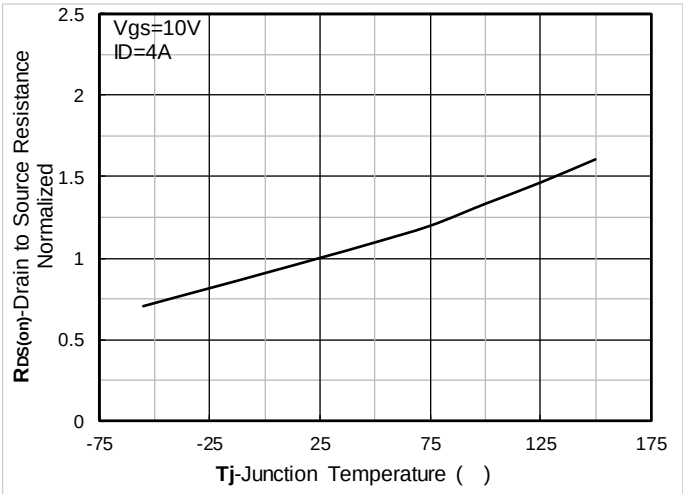


Figure 6. Normalized On-Resistan

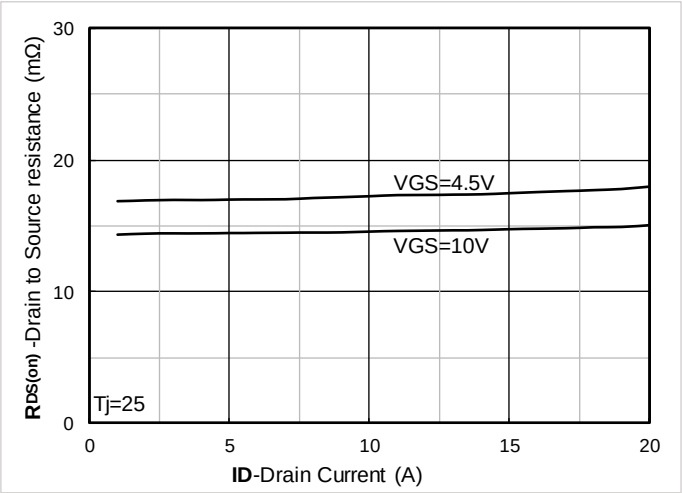


Figure 7. $R_{DS(on)}$ VS Drain Current

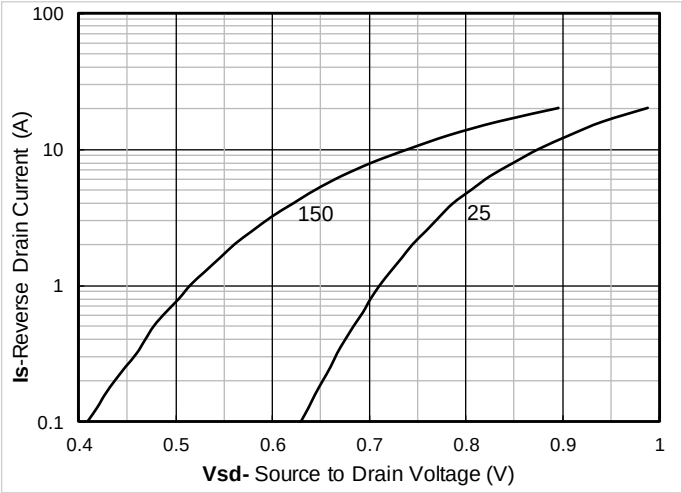
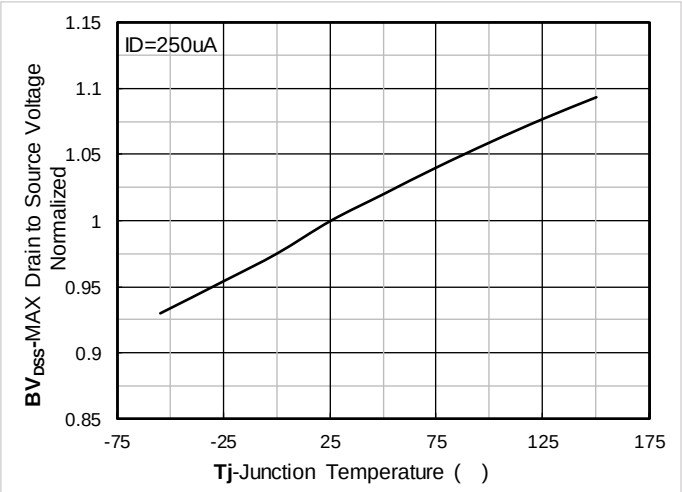
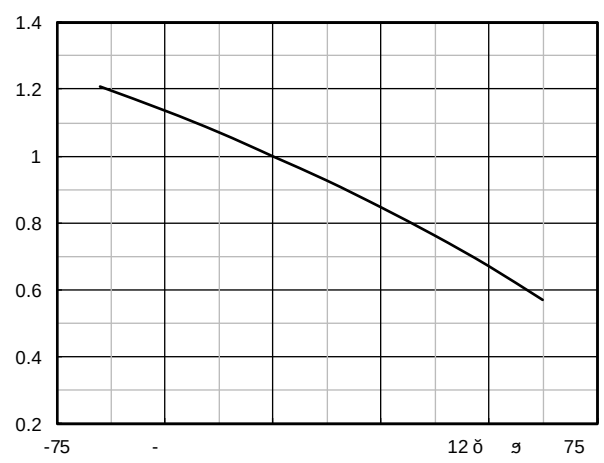
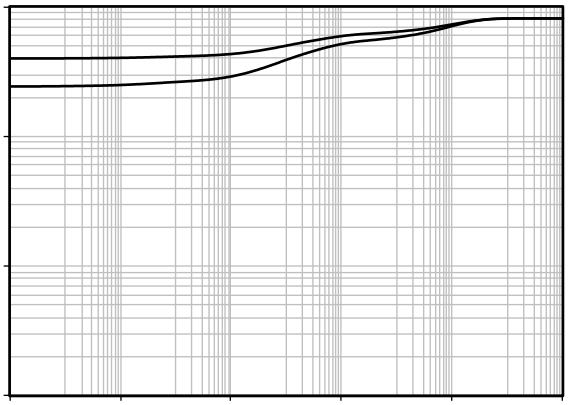


Figure 8. Forward characteristics of reverse diode







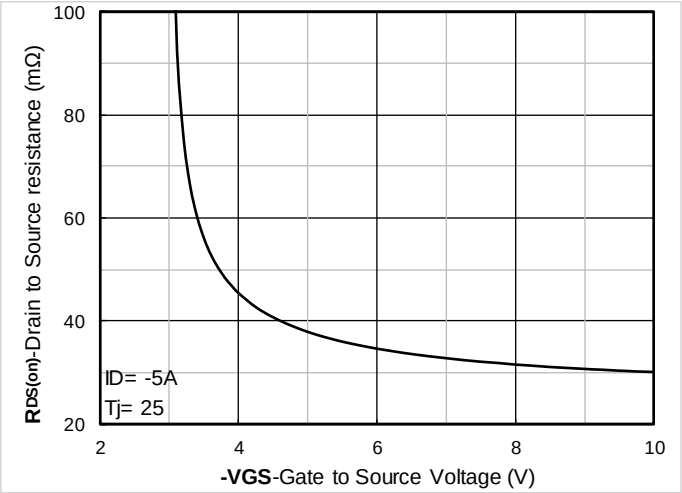


Figure 5. On-Resistance vs Gate to Source Voltage

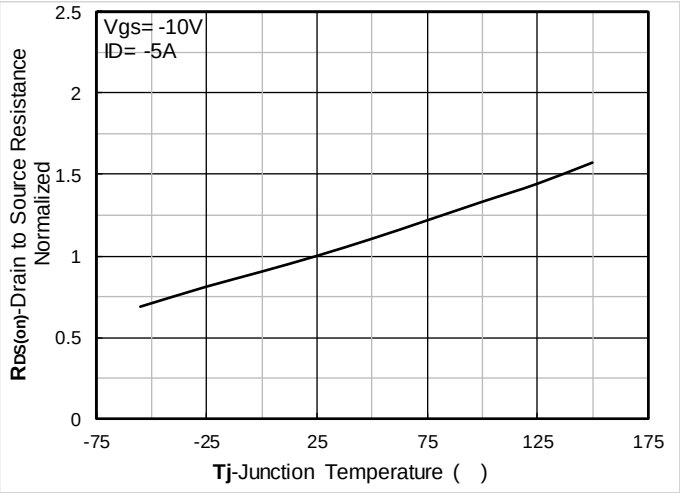


Figure 6. Normalized On-Resistance

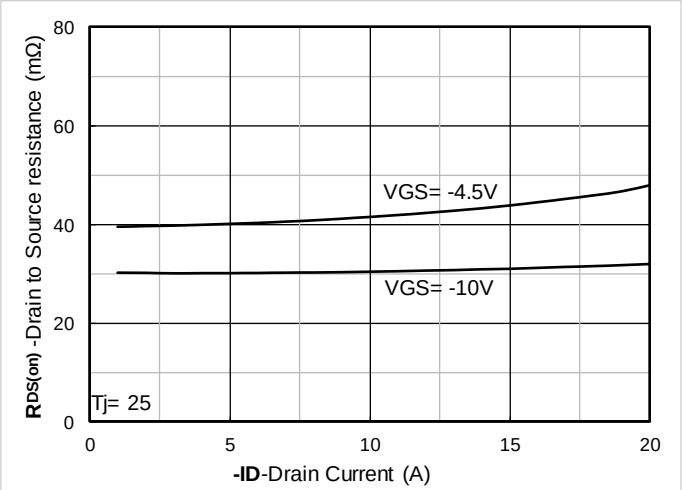


Figure 7. $R_{DS(on)}$ VS Drain Current

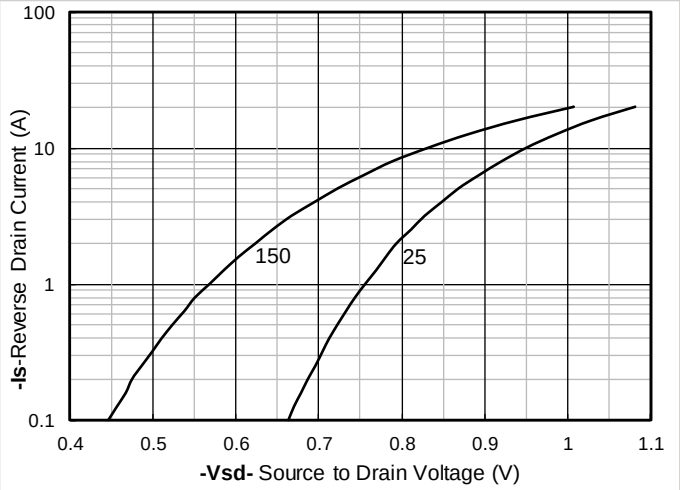
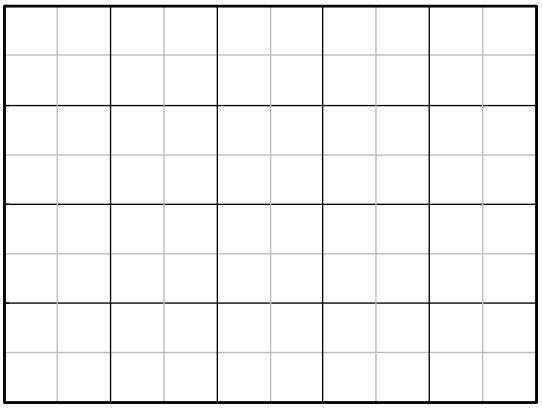
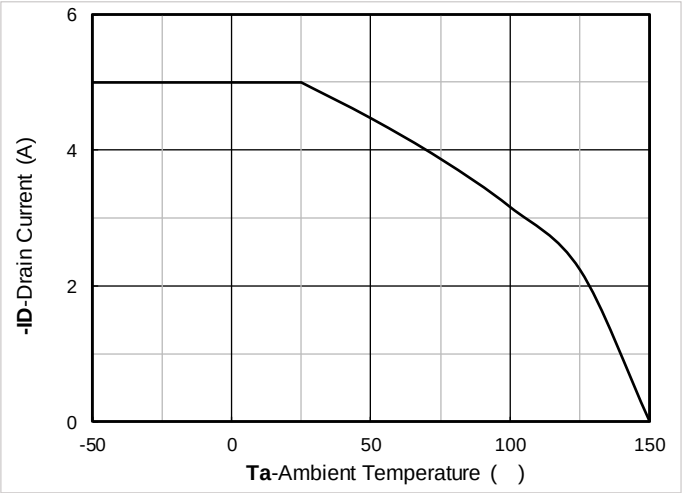
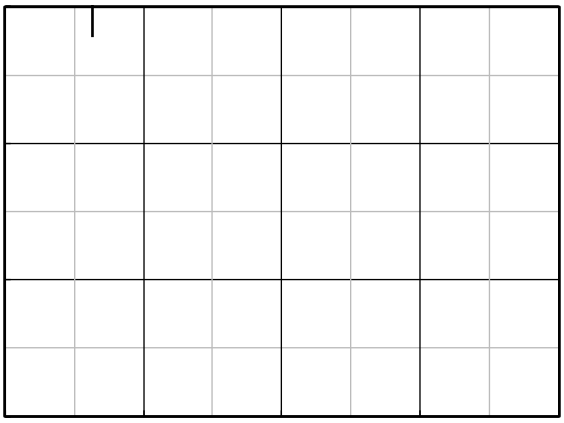


Figure 8. Forward characteristics of reverse diode




6
4
2
0
-50
0
50
100
150
-ID-Drain Current (A)
Ta-Ambient Temperature ( )



■ PDFN3030-8L Package information

DIMENSIONS

SYMBOL	INCHES MIN.	INCHES M	Millimeter

TOP VIEW

SIDE VIEW

BOTTOM VIEW

UNIT mm

NOTE:
1.PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
2.TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
3.THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.

SUGGESTED SOLDER PAD LAYOUT

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