



## N-Channel and P-Channel Complementary MOSFET

### Product Summary

#### NMOS

|                                   |      |
|-----------------------------------|------|
| $V_{DS}$                          | 100V |
| $I_D$                             | 1A   |
| $R_{DS(ON)}$ ( at $V_{GS}=10V$ )  | 270m |
| $R_{DS(ON)}$ ( at $V_{GS}=4.5V$ ) | 344m |

#### PMOS

|                                    |       |
|------------------------------------|-------|
| $V_{DS}$                           | -100V |
| $I_D$                              | -0.9A |
| $R_{DS(ON)}$ ( at $V_{GS}=-10V$ )  | 565m  |
| $R_{DS(ON)}$ ( at $V_{GS}=-4.5V$ ) | 640m  |

### General Description

Voltage controlled small signal switch  
Fast Switching Speed  
Moisture Sensitivity Level 1  
Epoxy Meets UL 94 V-0 Flammability Rating  
Halogen Free

### Applications

Power Management Functions  
Motor Control  
DC-DC convertor

**Absolute Maximum Ratings** ( $T_J=25^\circ\text{C}$  unless otherwise noted)





# YJUA320NP10AJ

## NMOS Electrical Characteristics (T<sub>j</sub>=25 unless otherwise noted)

| Parameter |  |
|-----------|--|
|-----------|--|





## ■ NMOS Typical Electrical and Thermal Characteristics Diagrams

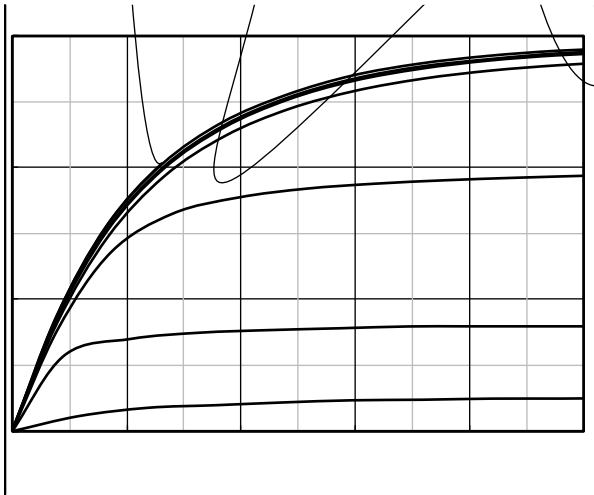


Figure 1. Output Characteristics

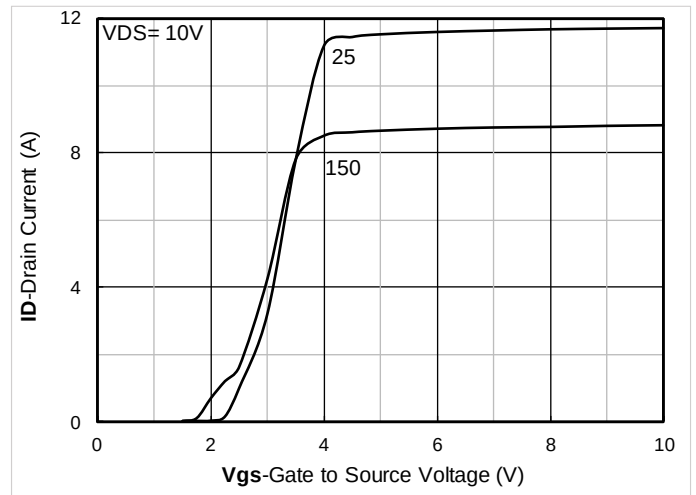


Figure 2. Transfer Characteristics

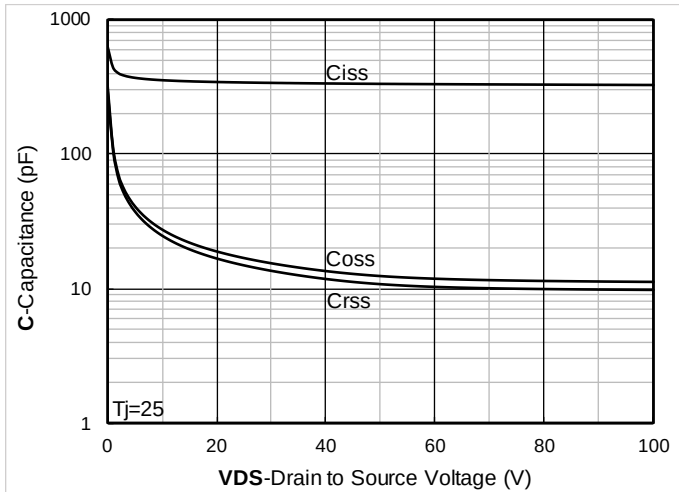


Figure 3. Capacitance Characteristics

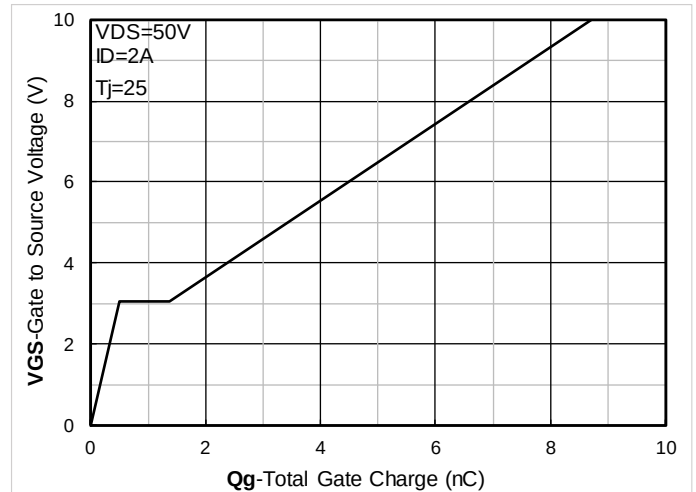


Figure 4. Gate Charge

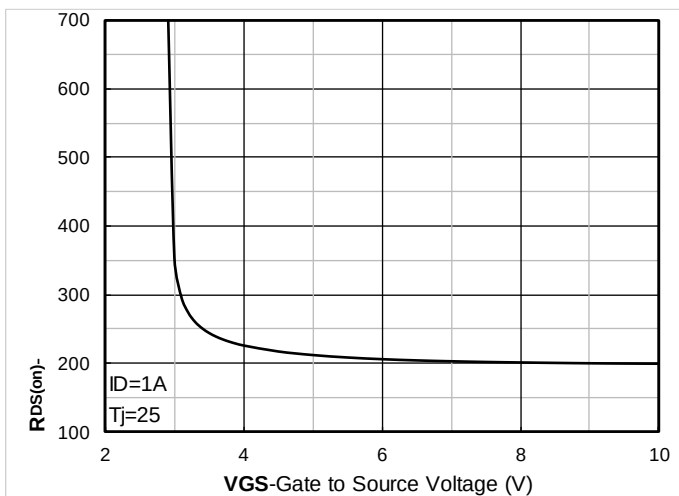


Figure 5(r)-3(ge)] TJ ET Q q 0.000008882 0 596.04 842.04 re W\* n BT /F5 9.96 Tf 1 0 00 3iS

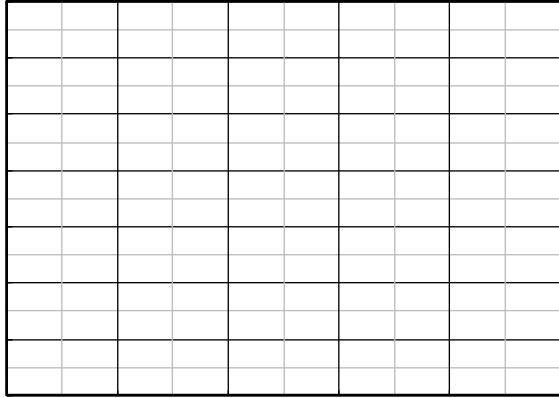


Figure 7.  $R_{DS(on)}$  VS Drain Current

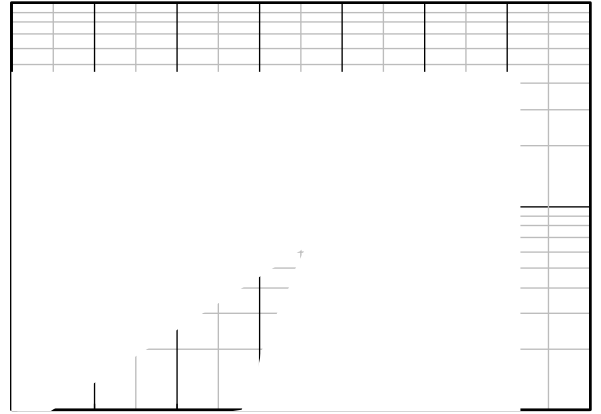


Figure 8. Forward characteristics of reverse diode

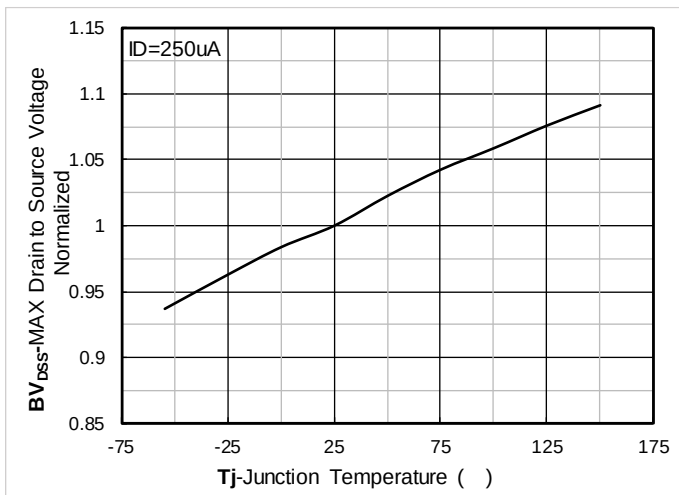


Figure 9. Normalized breakdown voltage

Figure 10. Normalized Threshold voltage

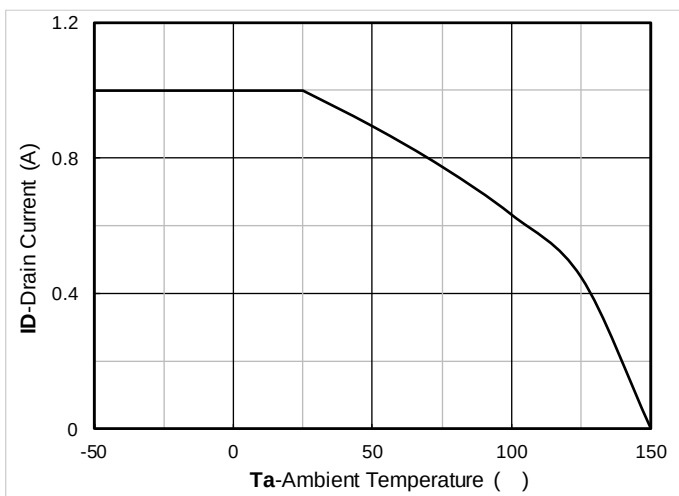


Figure 11. Current dissipation

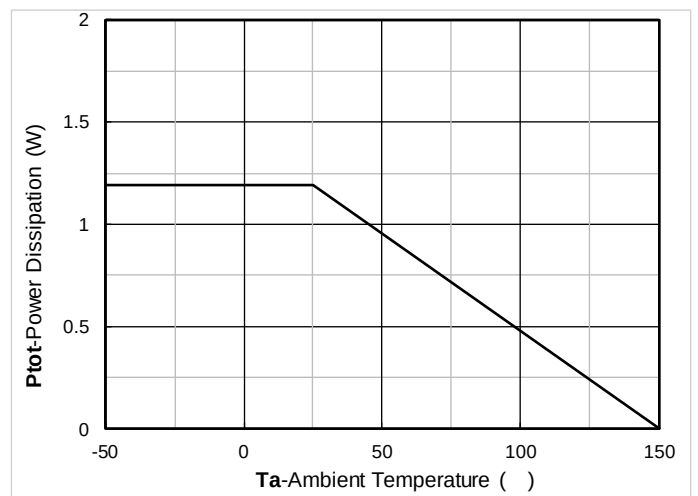


Figure 12. Power dissipation

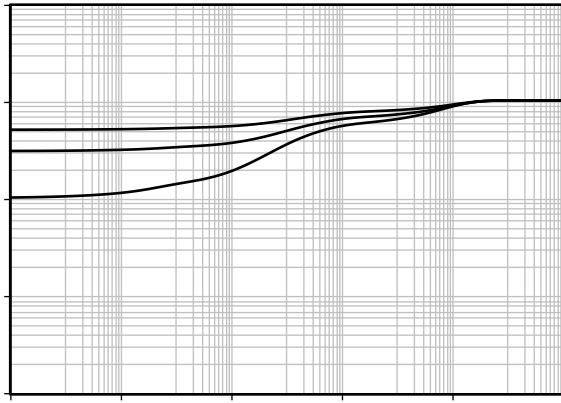


Figure 13. Maximum Transient Thermal Impedance

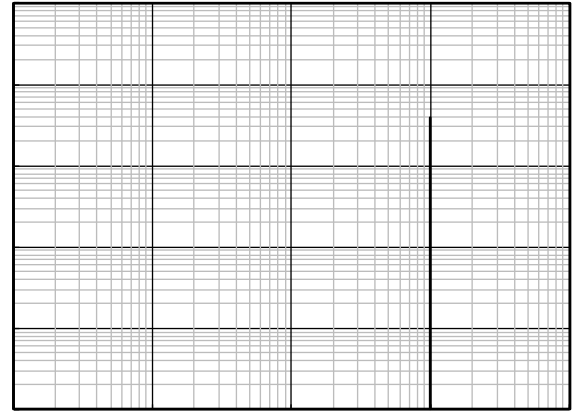


Figure 14. Safe Operation Area

### ■ PMOS Typical Electrical and Thermal Characteristics Diagrams

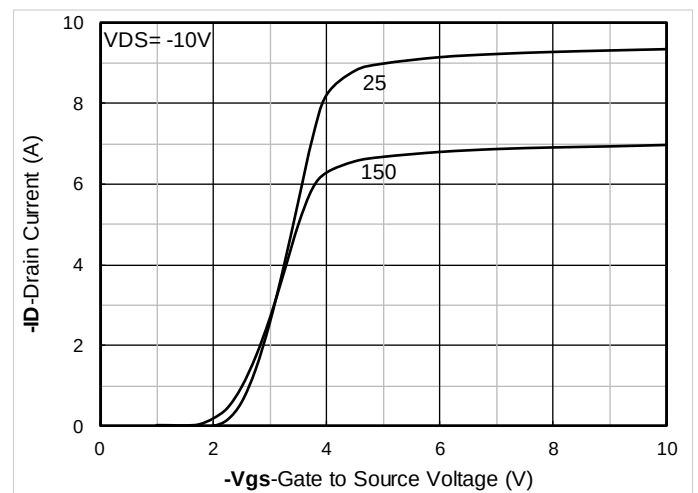


Figure 2. Transfer Characteristics

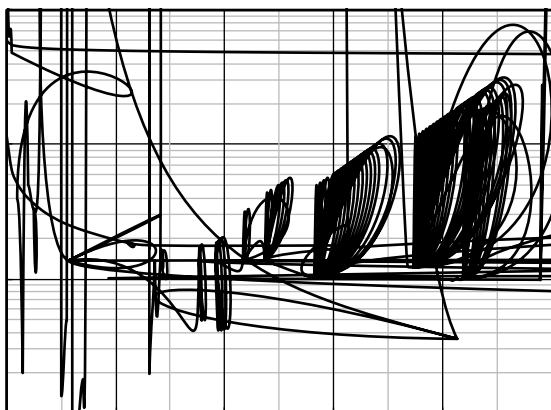
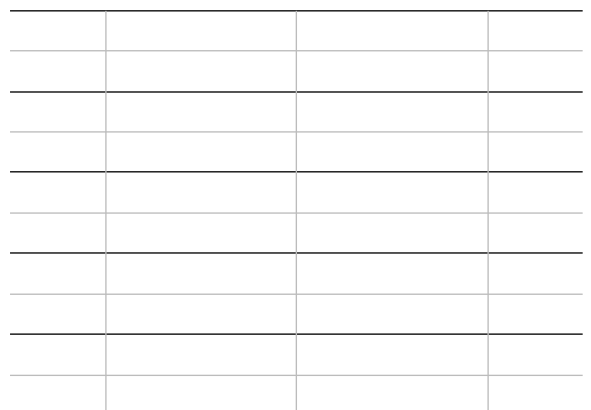


Figure 1. Output Characteristics



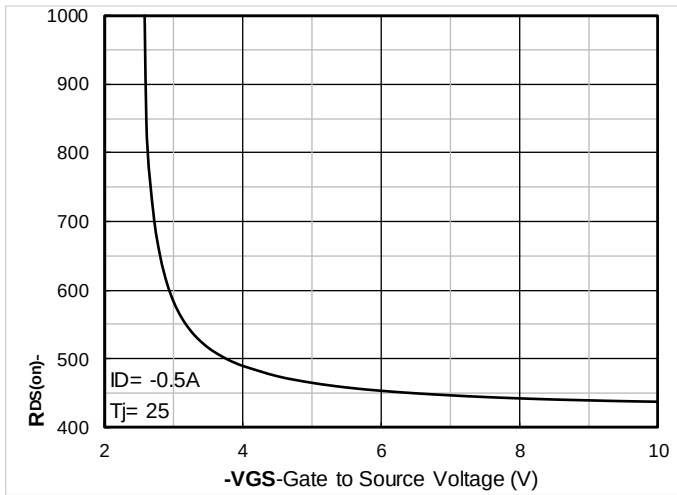


Figure 5. On-Resistance vs Gate to Source Voltage

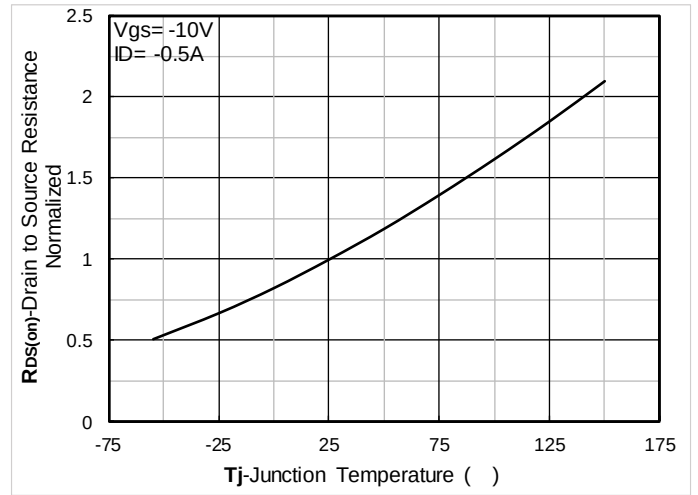


Figure 6. Normalized On-Resistance

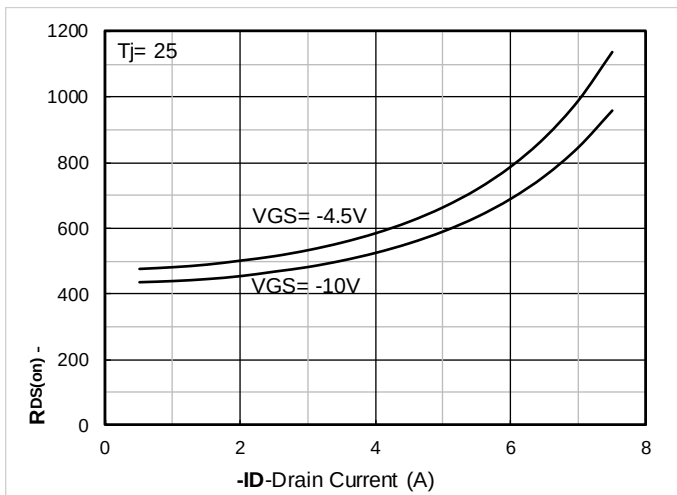


Figure 7. RDS(on) VS Drain Current

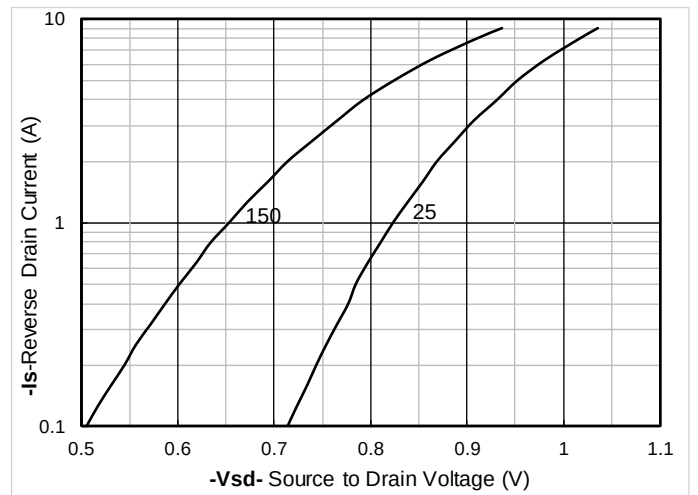


Figure 8. Forward characteristics of reverse diode

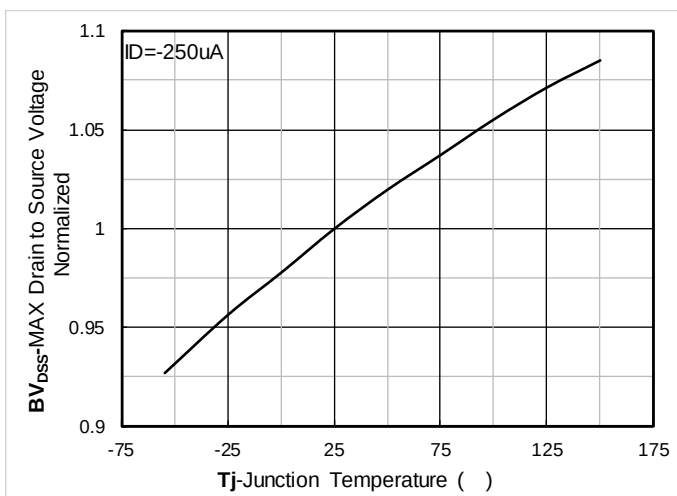


Figure 9. Normalized breakdown voltage

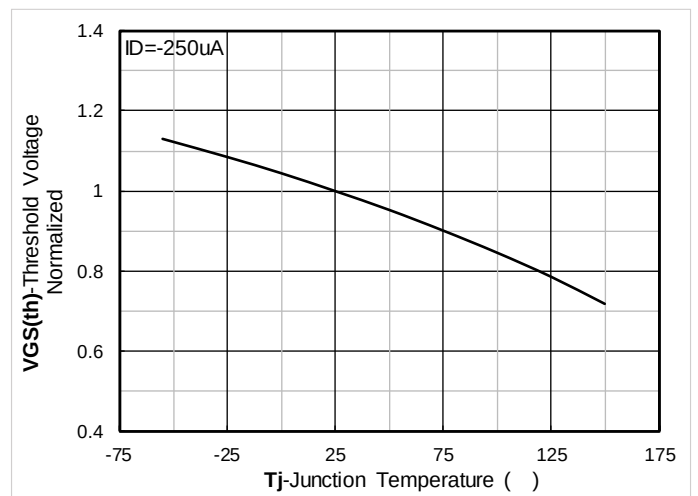


Figure 10. Normalized Threshold voltage







## PDFN3030-8L Package information

DIMENSIONS

SYM\_

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.



## YJUA320NP10AJ

---

### Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the