



N-Channel and P-Channel Complementary MOSFET

Product Summary

NMOS

V_{DS}	100V
I_D	40A
$R_{DS(ON)}$ (at $V_{GS}=10V$)	24m
$R_{DS(ON)}$ (at $V_{GS}=4.5V$)	30m
100% EAS O	
100% V_{DS} TeO	

PMOS

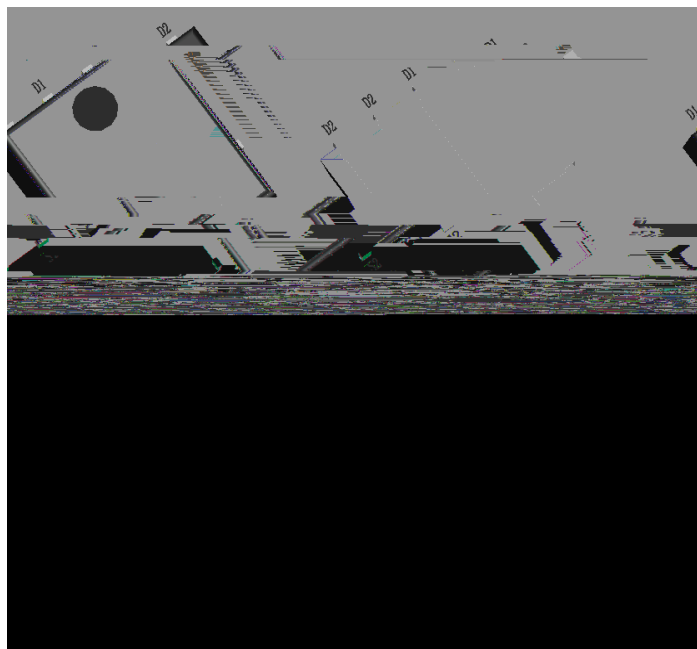
V_{DS}	-100V
I_D	-12A
$R_{DS(ON)}$ (at $V_{GS}=-10V$)	115m
$R_{DS(ON)}$ (at $V_{GS}=-4.5V$)	138m
100% EAS Tested	
100% V_{DS} Tested	

General Description

- Excellent package for heat dissipation
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free

Applications

- Load switching
- Hard switched and high frequency circuits
- Uninterruptible power supply



Absolute Maximum Ratings ($T_A=25$ °C unless otherwise noted)

Parameter	Symbol	NMOS	PMOS	Unit
Drain-source Voltage	V_{DS}	100	-100	V
Gate-source Voltage	V_{GS}	±10	±10	V
Drain Current (continuous, $T_C=25$)	I_D	40	-12	A
Drain Current (pulsed, $T_C=25$)	I_{DM}	4.7	-2.0	A
Power Dissipation (continuous, $T_C=25$)	P_D	40	-12	W

Parameter	Symbol	NMOS		PMOS		Units
		Typ	Max	Typ	Max	
Thermal Resistance Junction-to-Ambient ^D	R_{JA}	40	50	40	50	°C/W
Thermal Resistance Junction-to-Case	R_{JC}	1	1.2	1.5	1.8	
Junction and Storage Temperature Range	T_J, T_{STG}	-55 +150		-55 +150		

Thermal resistance

Parameter	Symbol	NMOS		PMOS		Units
		Typ	Max	Typ	Max	
Thermal Resistance Junction-to-Ambient ^D	R_{JA}	40	50	40	50	°C/W
Thermal Resistance Junction-to-Case	R_{JC}	1	1.2	1.5	1.8	
Junction and Storage Temperature Range	T_J, T_{STG}	-55 +150		-55 +150		

10BQ

Quantity (pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
	10000	100000	13" reel

(otherwise noted)

Dimensions	Min	Typ	Max	Units
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M



NMOS Typical Electrical and Thermal Characteristics Diagrams

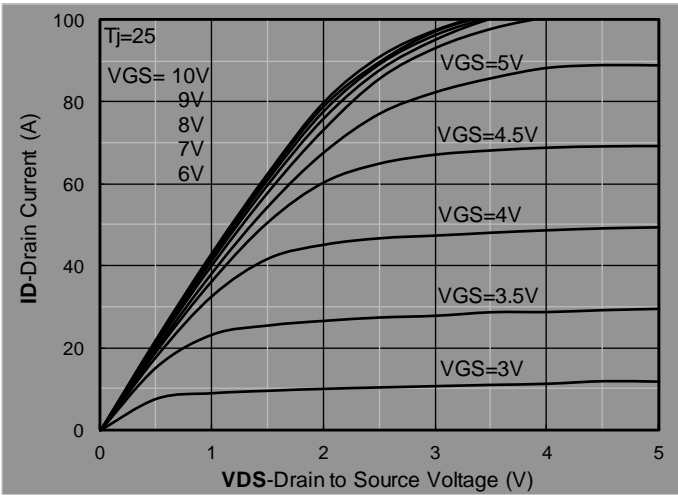


Figure 1. Output Characteristics

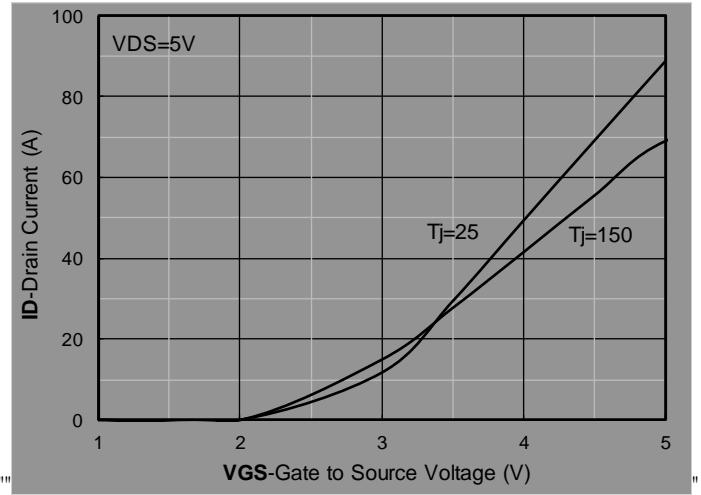
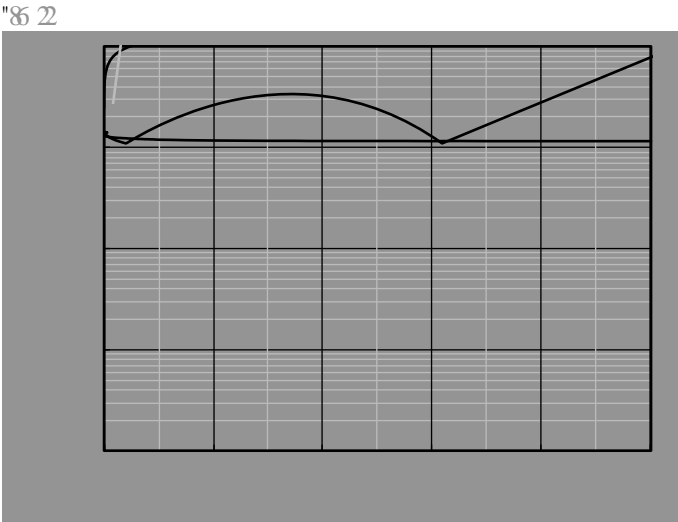


Figure 2. Transfer Characteristics



YJG12NP10BQ



YJG12NP10BQ

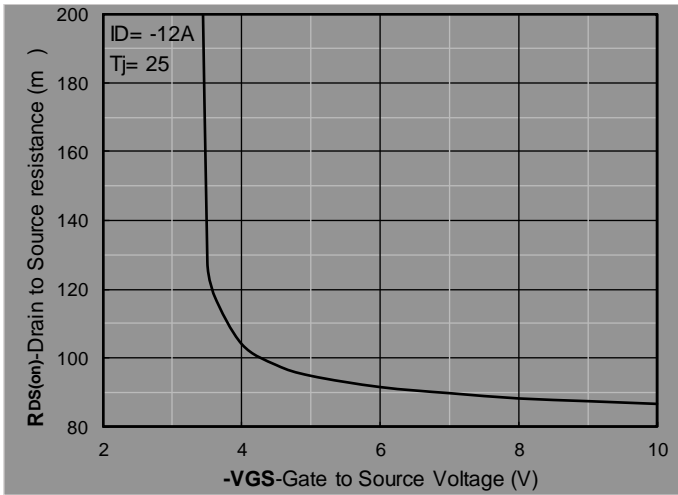


Figure 5. On-Resistance vs Gate to Source Voltage

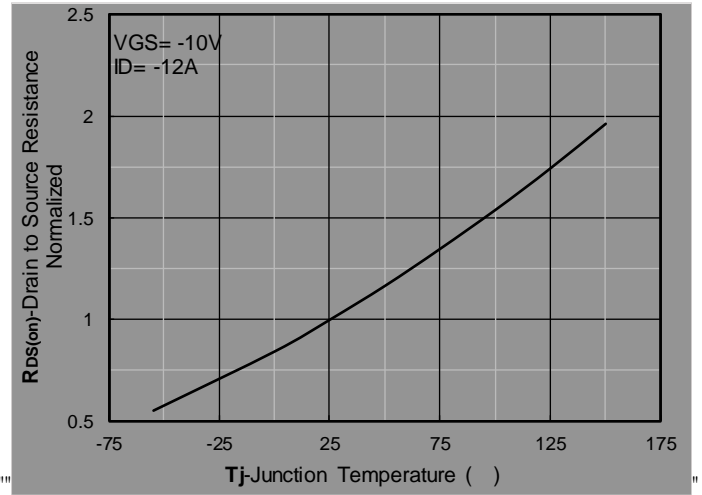
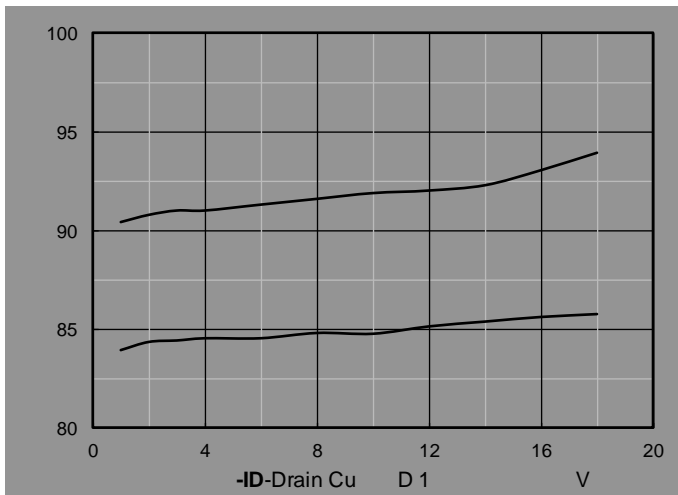
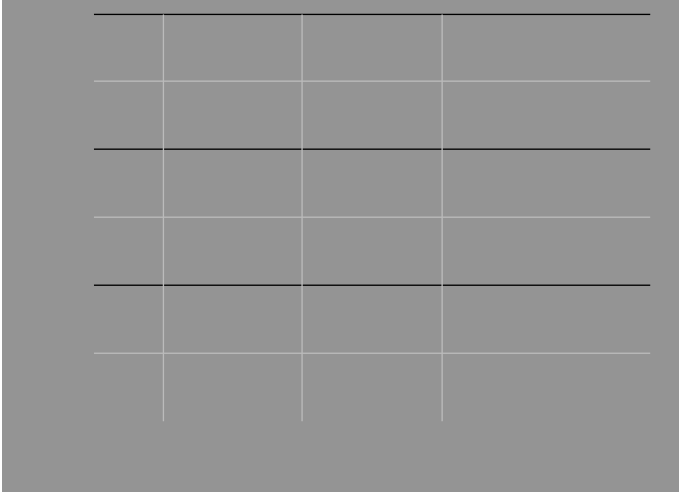


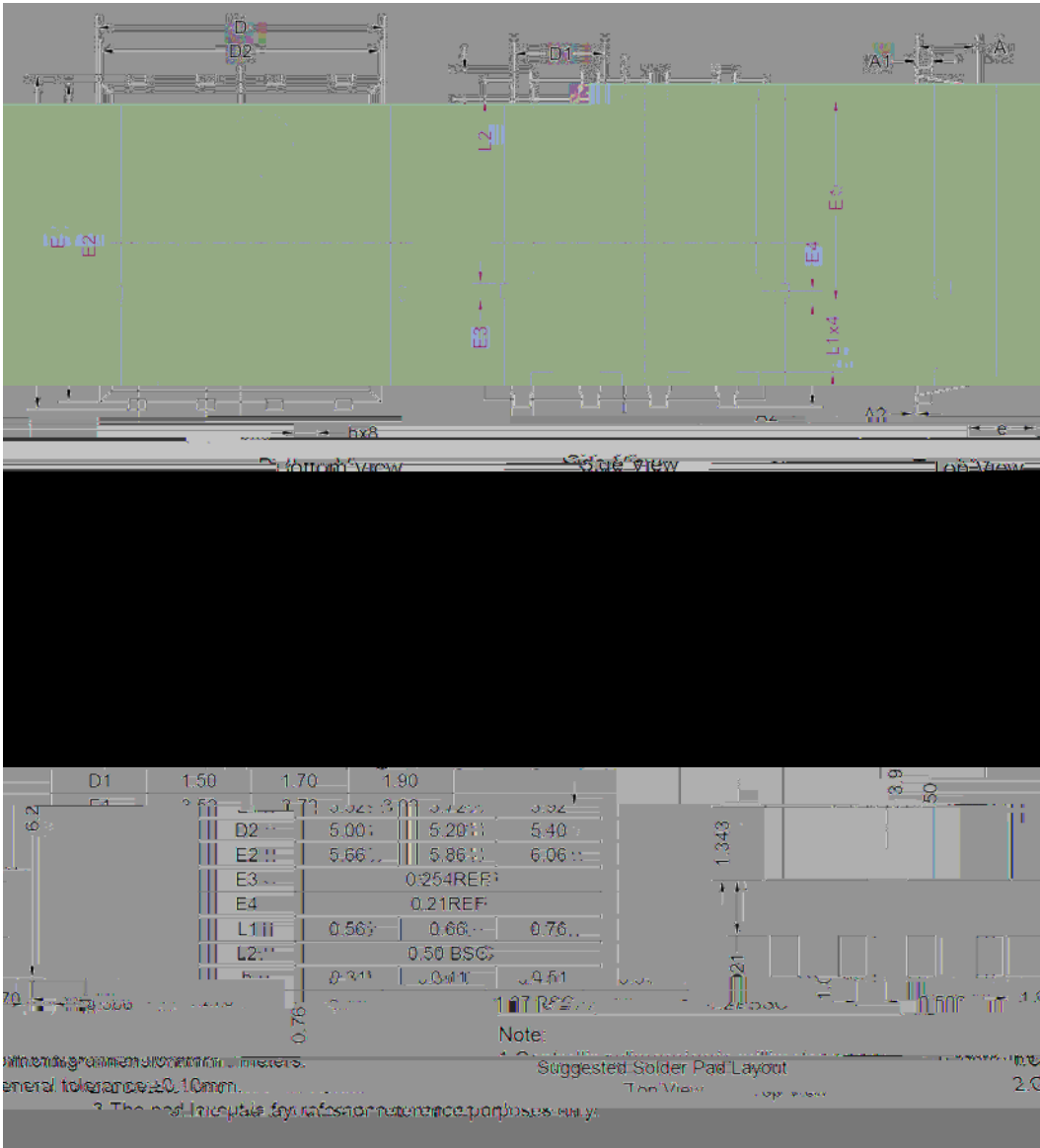
Figure 6. Normalized On-Resistance







PDFN5060-8L Package information





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