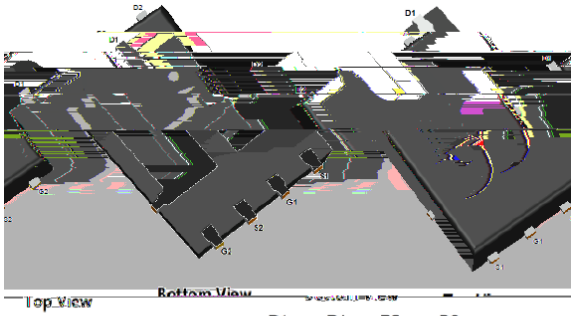
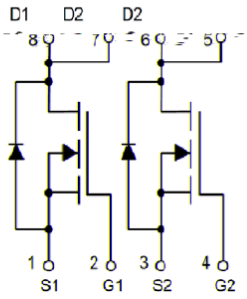
RoHS
COMPLIANT

YJGD30N04AQ

N-Channel Enhancement Mode Field Effect Transistor



PDFN5060-8L



Product Summary

- V_{DS} 40V
- I_D 30A
- $R_{DS(ON)}$(at V_{GS}=10V) 15mΩ
- $R_{DS(ON)}$(at V_{GS}=4.5V) 23mΩ
- 100% EAS Tested
- 100% V_{DS} Tested

General Description

- Excellent package for heat dissipation
- High density cell design for low $R_{DS(ON)}$
- Moisture Sensitivity Level 1
- Part no. with suffix "Q" means AEC-Q101 qualified

Applications

- Power switching application
- Uninterruptible power supply
- DC-DC convertor
- 12V Automotive systems

■ Absolute Maximum Ratings (T_A=25 unless otherwise noted)

Parameter		Symbol	Limit	Unit
Drain-source Voltage		V_{DS}	40	V
Gate-source Voltage		V_{GS}	±20	V
Drain Current	T_A=25	I_D	8	A
	T_A =100		5	
	T_C=25		30	
	T_C =100		21	
Pulsed Drain Current [A]		I_{DM}	90	A
Avalanche energy [B]		EAS	42	mJ
Total Power Dissipation [C]	T_A=25	P_D	2.5	W
	T_A =100		1	
	T_C=25		35	
	T_C =100		14	
Thermal Resistance Junction-to-Ambient [D]		$R_{\theta JA}$	50	/W
Thermal Resistance Junction-to-Case		$R_{\theta JC}$	3.5	
Junction and Storage Temperature Range		T_J ,T_{STG}	-55 +150	

■ Ordering Information (Example)

				QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJGD30N04AQ	F1	YJGD30N04A	5000	10000	100000	13" reel

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

Parameter	Symbol	Conditions	Min

■Typical Electrical and Thermal Characteristics Diagrams

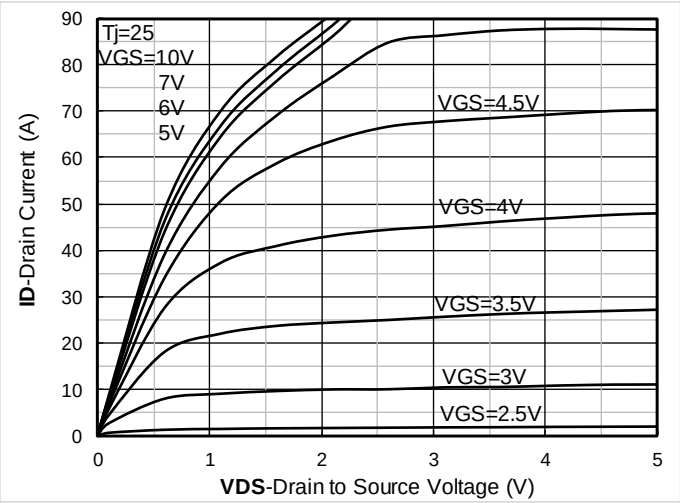


Figure 1. Output Characteristics

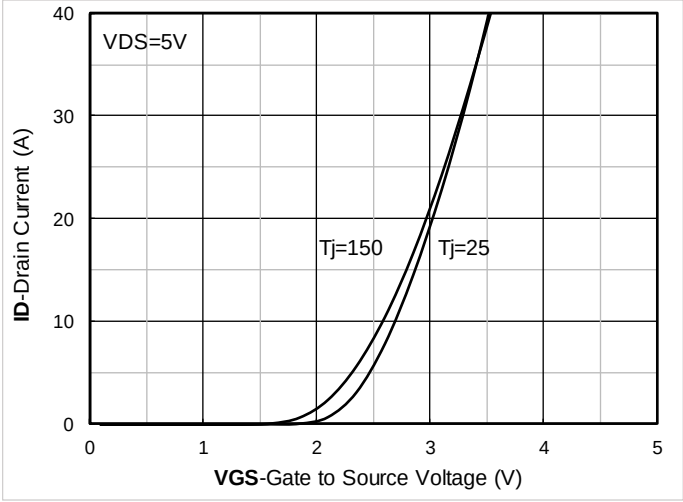


Figure 2. Transfer Characteristics

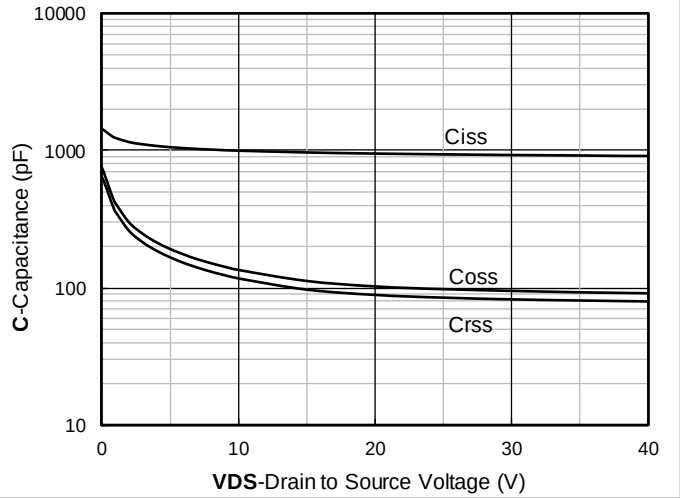


Figure 3. Capacitance Characteristics

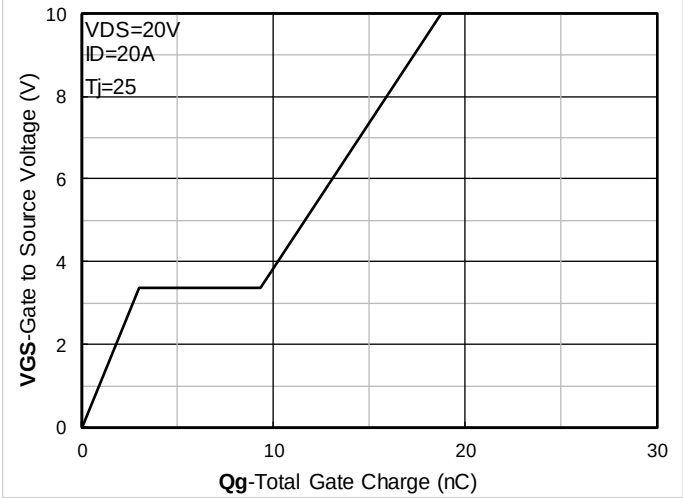


Figure 4. Gate Charge

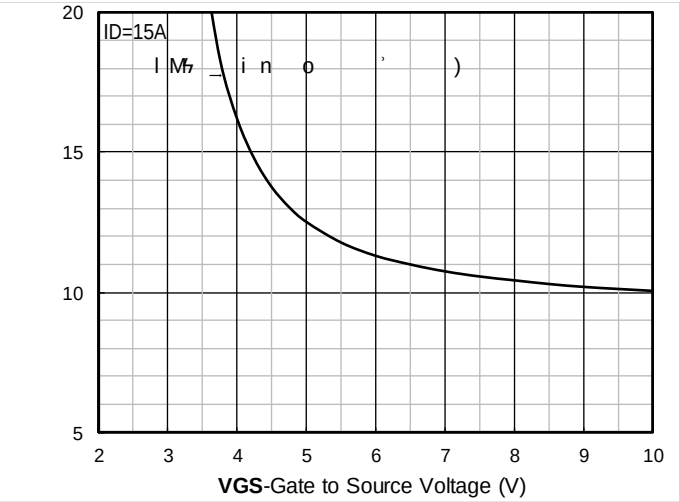


Figure 5. On-Resistance vs Gate to Source Voltage

Figure 6. Normalized On-Resistance

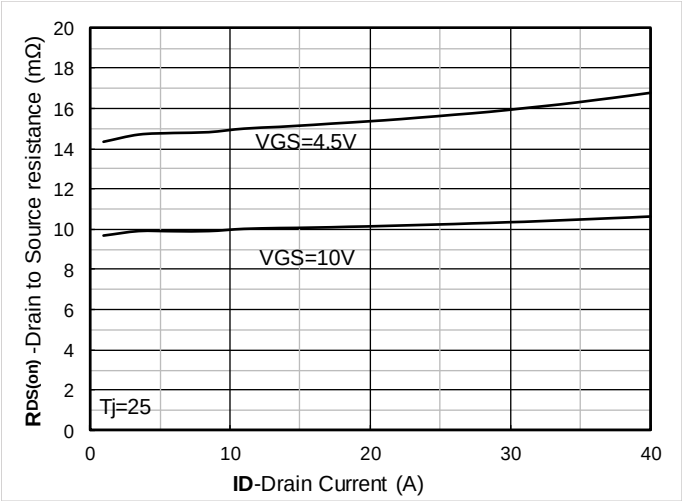


Figure 7. $R_{DS(on)}$ VS Drain Current

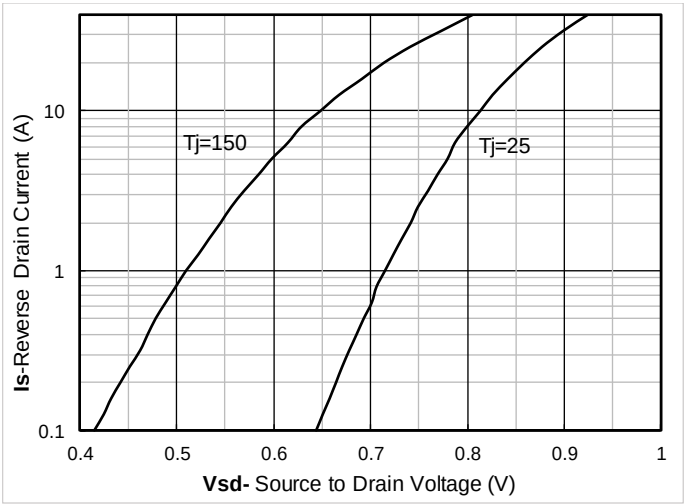


Figure 8. Forward characteristics of reverse diode

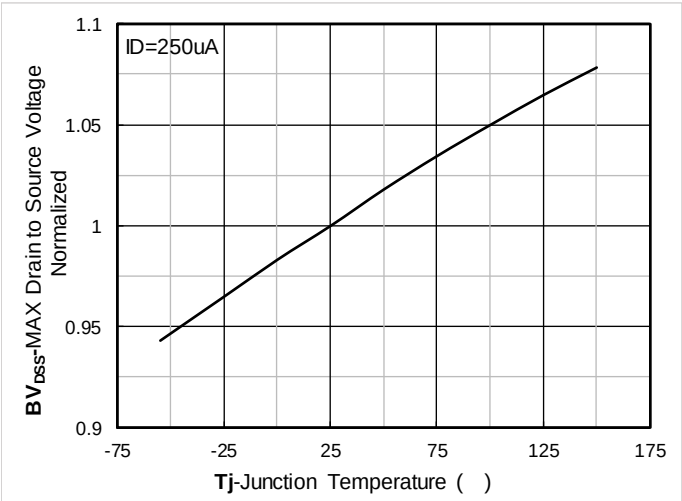


Figure 9. Normalized breakdown voltage

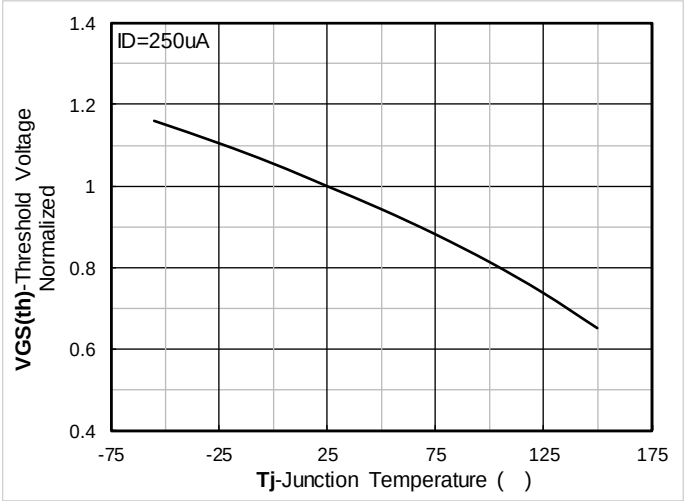


Figure 10. Normalized Threshold voltage

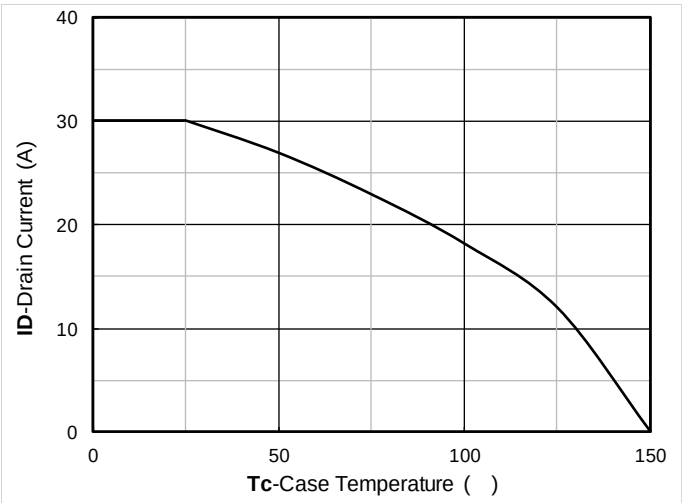


Figure 11. Current dissipation

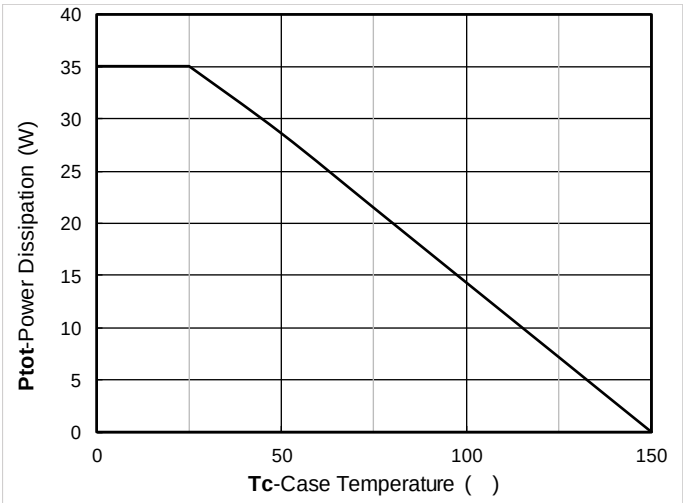


Figure 12. Power dissipation

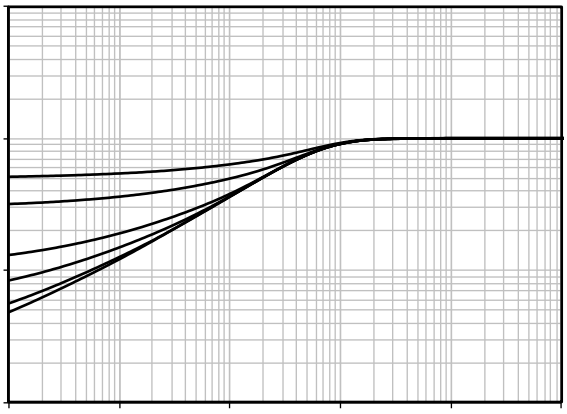
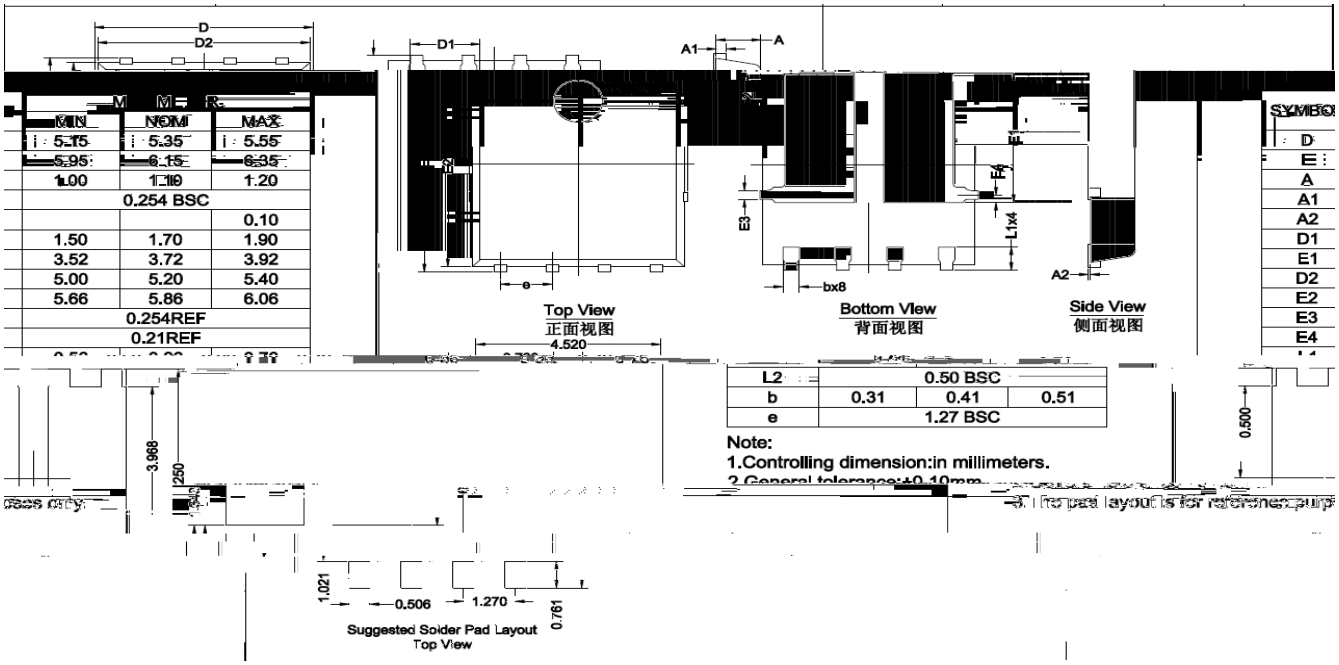


Figure 13. Maximum Transient Thermal Impedance

Figure 14. Safe Operation Area

■ PDFN5060-8L-E-1.1MM Package information



SYMBOL	MIN	NOM	MAX
D	5.15	5.35	5.55
E	5.95	6.15	6.35
A	1.00	1.10	1.20
A1		0.254 BSC	
A2			0.10
D1	1.50	1.70	1.90
E1	3.52	3.72	3.92
D2	5.00	5.20	5.40
E2	5.66	5.86	6.06
E3		0.254REF	
E4		0.21REF	

L2		0.50 BSC	
b	0.31	0.41	0.51
e		1.27 BSC	

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