



## P-Channel Enhancement Mode Field Effect Transistor

### Product Summary

$V_{DS}$	-40 V
$I_D$	-20 A
$R_{DS(ON)}$ ( at $V_{GS}=-10V$ )	30 m
$R_{DS(ON)}$ ( at $V_{GS}=-4.5V$ )	45 m
100% EAS Tested	
100% $V_{DS}$ Tested	

### General Description

Trench Power LV MOSFET technology  
Low  $R_{DS(on)}$  & FOM  
Extremely low switching loss  
Excellent stability and uniformity  
High density cell design for low  $R_{DS(ON)}$   
Moisture Sensitivity Level 1  
Epoxy Meets UL 94 V-0 Flammability Rating  
Halogen Free

### Applications

Power management  
Porm  $\hat{I}$   $\ddot{A}$





# YJG20P04A

## Typical Electrical and Thermal Characteristics Diagrams

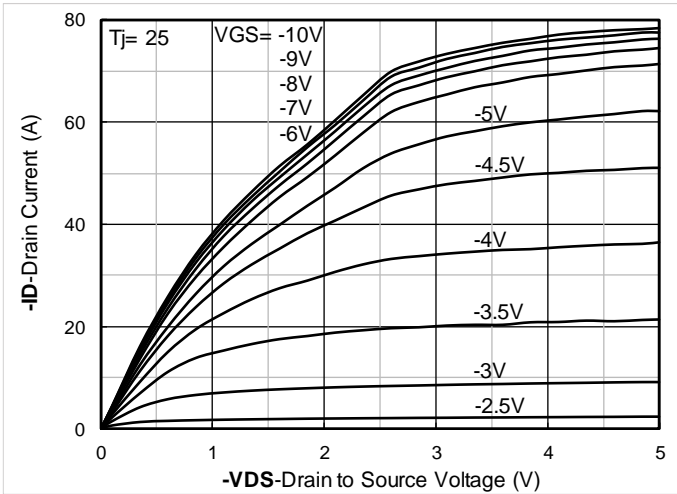


Figure 1. Output Characteristics

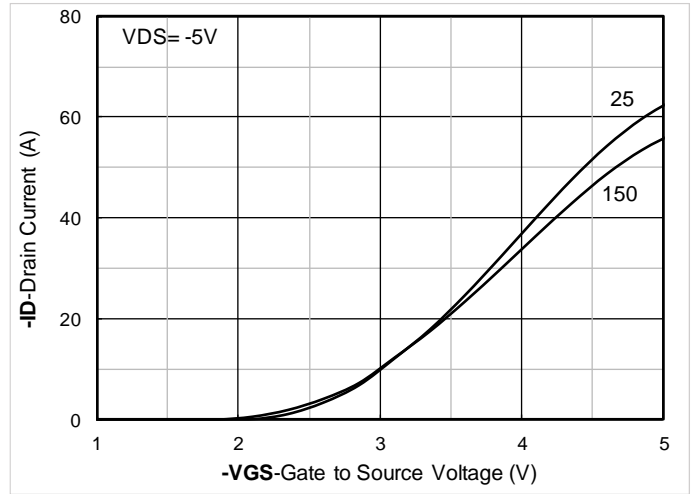


Figure 2. Transfer Characteristics

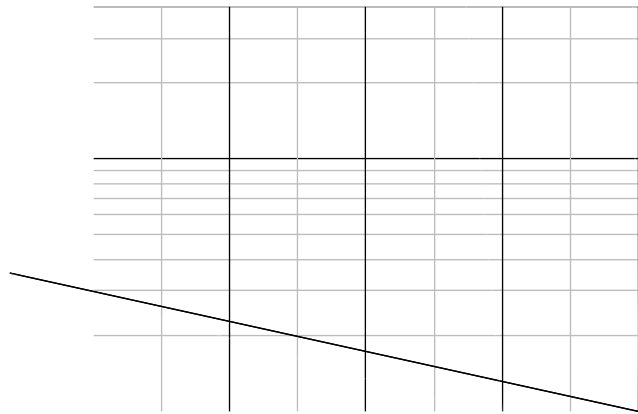


Figure 3. Capacitance Characteristics

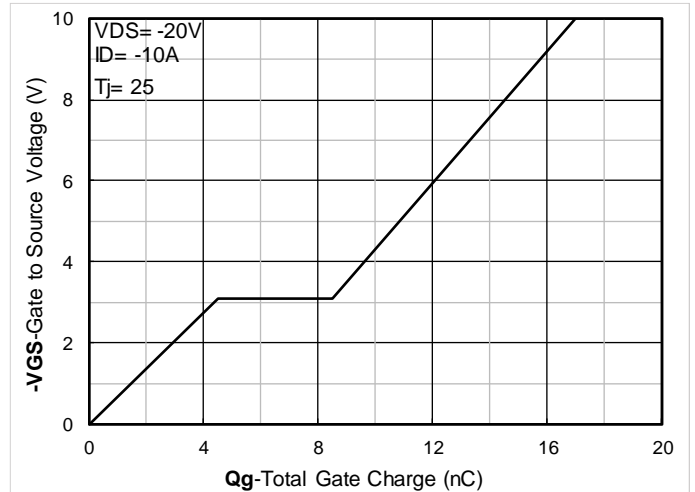


Figure 4. Gate Charge

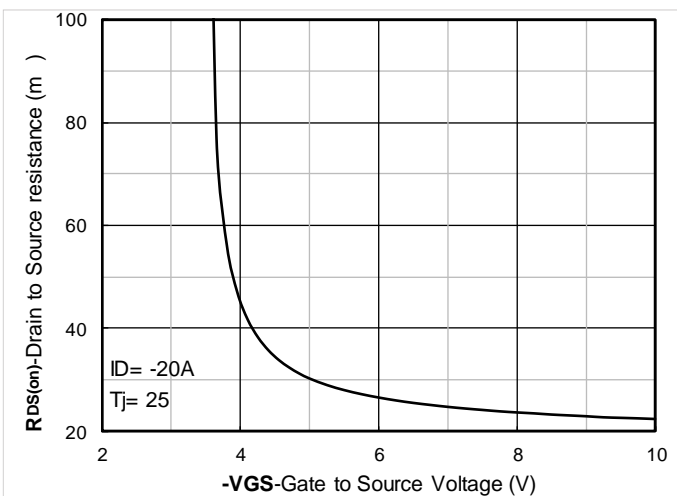


Figure 5. On-Resistance vs Gate to Source Voltage

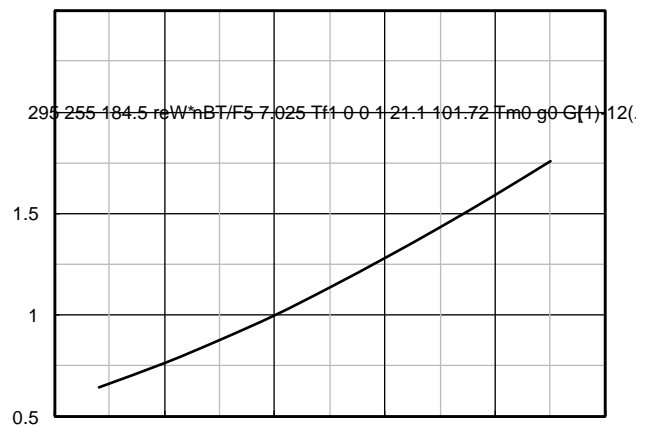


Figure 6. Normalized On-Resistance



# YJG20P04A

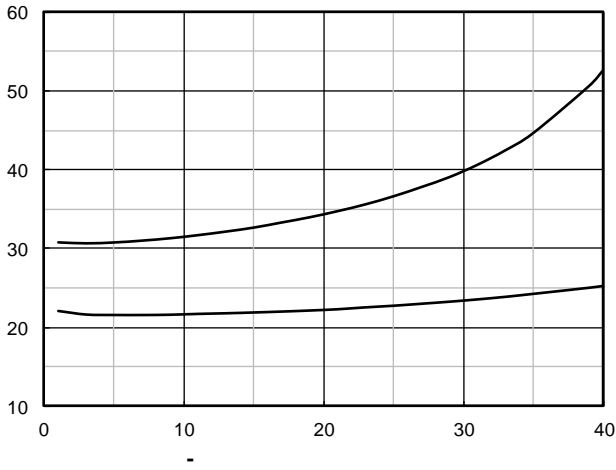


Figure 7.  $R_{DS(on)}$  VS Drain Current

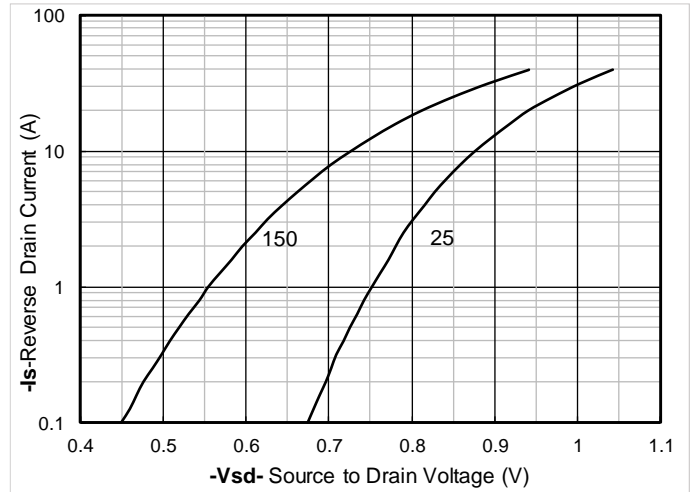


Figure 8. Forward characteristics of reverse diode

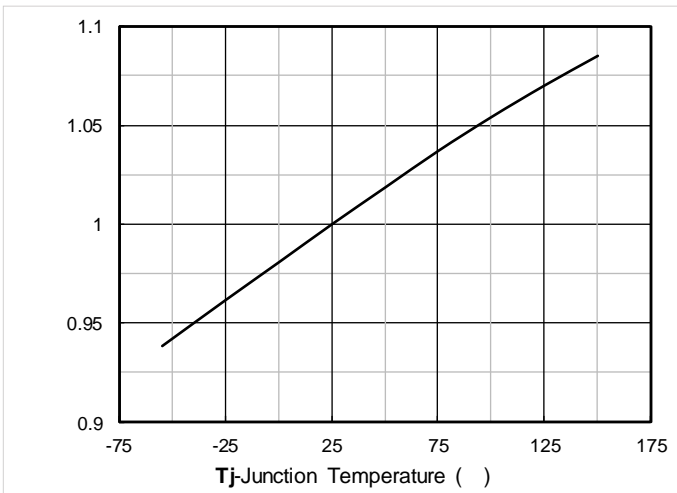


Figure 9. Normalized breakdown voltage

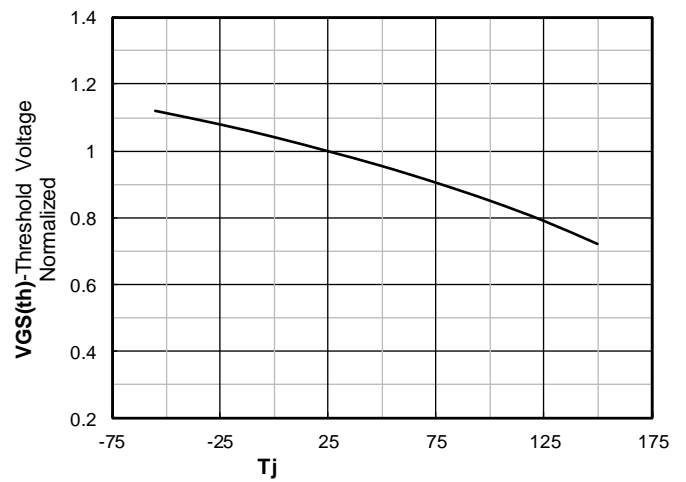


Figure 10. Normalized Threshold voltage

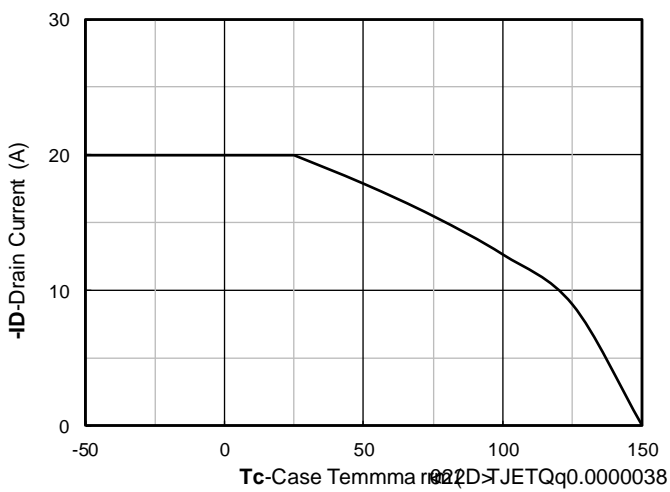


Figure 11. Current dissipation

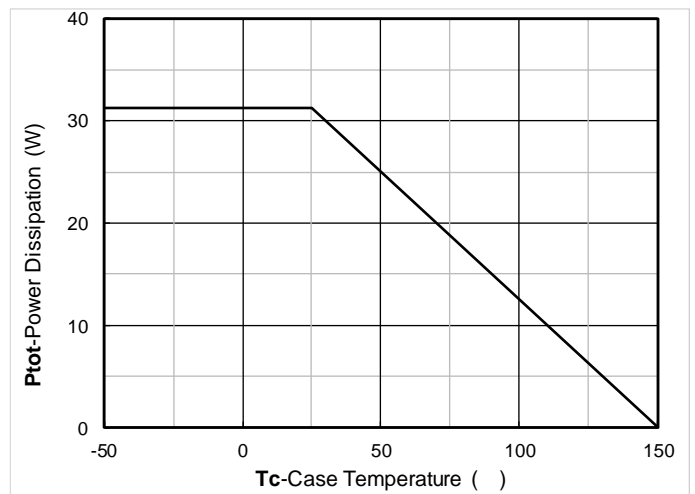


Figure 12. Power dissipation



# YJG20P04A

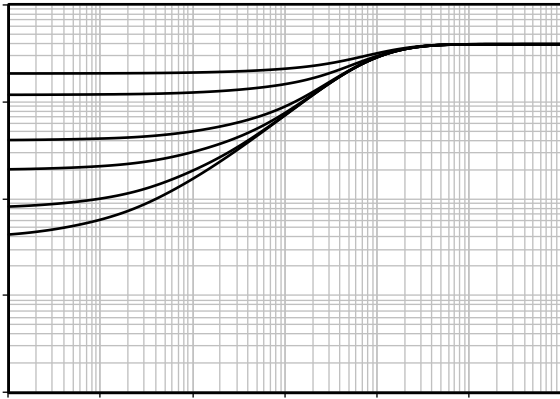


Figure 13. Maximum Transient Thermal Impedance

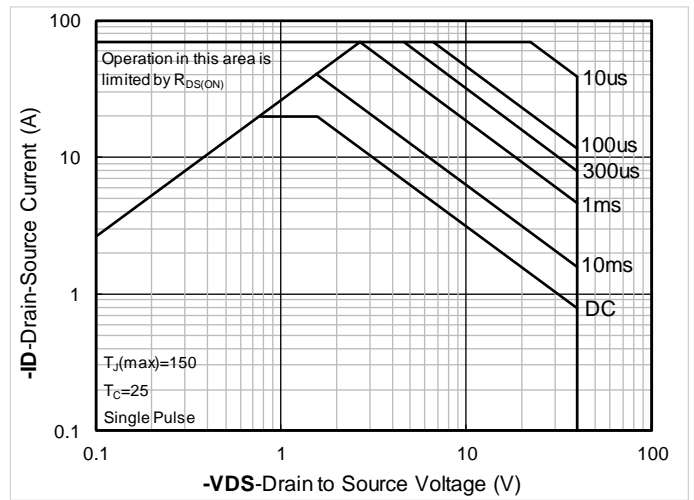
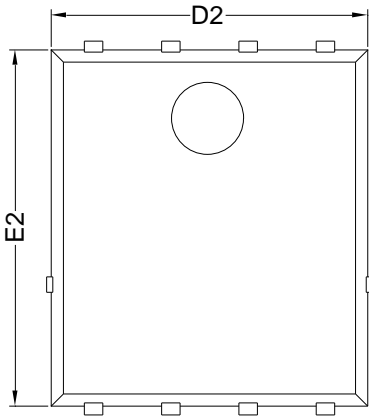


Figure 14. Safe Operation Area

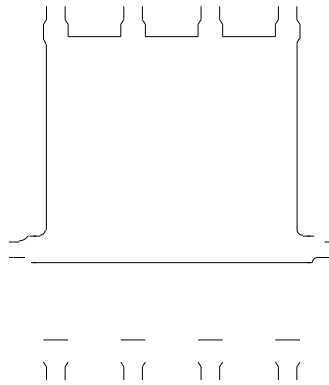


# YJG20P04A

## PDFN5060-8L-B-1.1MM Package information



Top View



Bottom View

Side View

SYMBOL	MILLIMETER		
	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	3.92	4.12	4.32
E1	3.52	3.72	3.92
D2	5.00	5.20	5.40
E2	5.66	5.86	6.06
E3	0.254 REF		
E4	0.21 REF		
L1	0.56	0.66	0.76
L2	0.50 BSC		
b	0.31	0.41	0.51
e	1.27 BSC		

Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.10$ mm.
3. The pad layout is for reference purposes only.



Disclaimer