



## N-Channel Enhancement Mode Field Effect Transistor

### Product Summary

$V_{DS}$	100V
$I_D$	74A
$R_{DS(ON)}$ ( at $V_{GS}=10V$ )	6.5m
$R_{DS(ON)}$ ( at $V_{GS}=4.5V$ )	8.5m
100% EAS Tested	
100% $V_{DS}$ Tested	

### General Description

Split gate trench MOSFET technology  
Excellent package for heat dissipation  
High density cell design for low  $R_{DS(ON)}$   
Moisture Sensitivity Level 1  
Epoxy Meets UL 94 V-



# YJG74G10A

## Electrical Characteristics ( $T_J=25$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
<b>Static Parameter</b>						
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS}=0V, I_D=250\mu A$	100	-	-	V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=100V, V_{GS}=0V$	-	-	1	$\mu A$
		$V_{DS}=100V, V_{GS}=0V, T_J=150$	-	-	100	
Gate-Body Leakage Current	$I_{GSS}$	$V_{GS}=\pm 20V, V_{DS}=0V$	-	-	$\pm 100$	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	1.1	1.7	2.5	V
		$V_{GS}=10V, I_D=37A$	-	5	6.5	
Static Drain-Source On-Resistance	$R_{DS(on)}$					m



# YJG74G10A

## Typical Electrical and Thermal Characteristics Diagrams

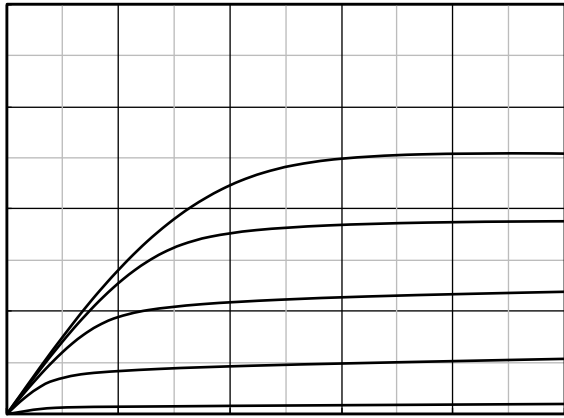


Figure 1. Output Characteristics

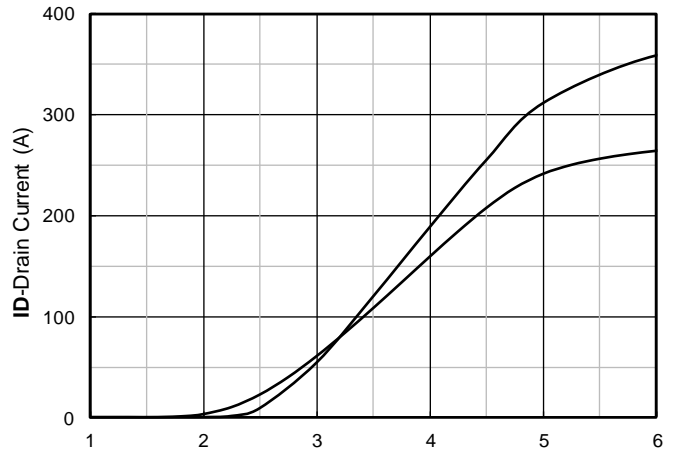


Figure 2. Transfer Characteristics

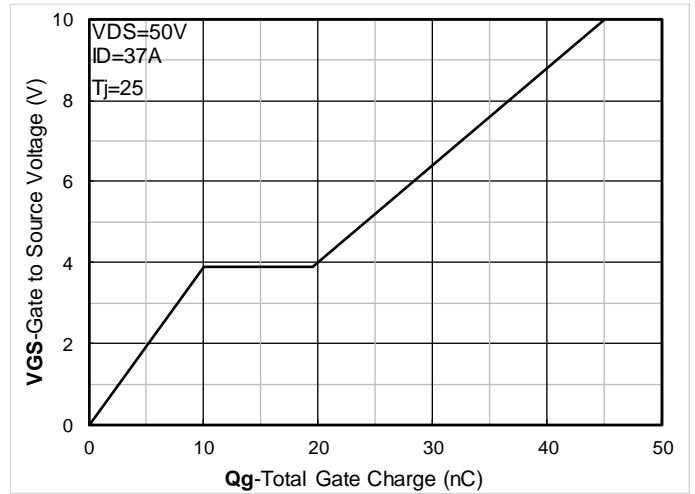


Figure 3. Capacitance Characteristics

Figure 4. Gate Charge

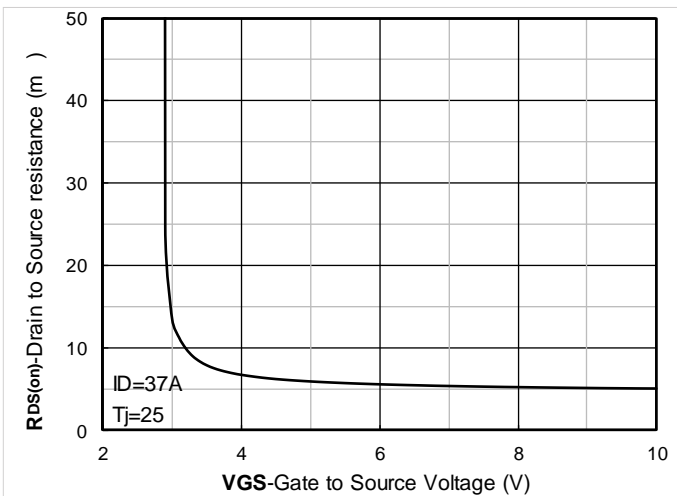


Figure 5. On-Resistance vs Gate to Source Voltage

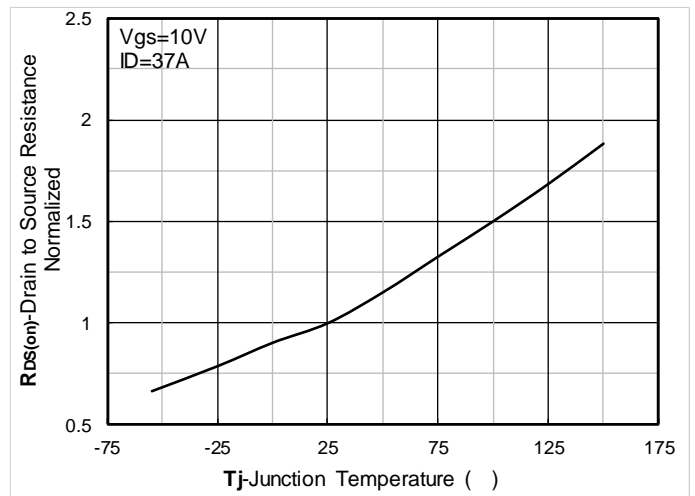
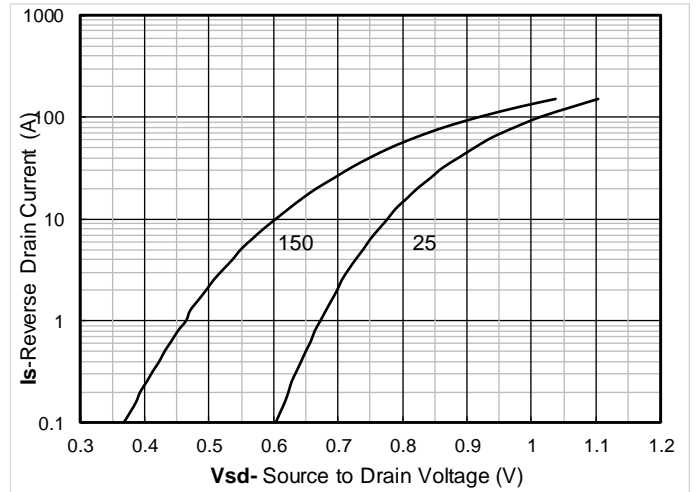
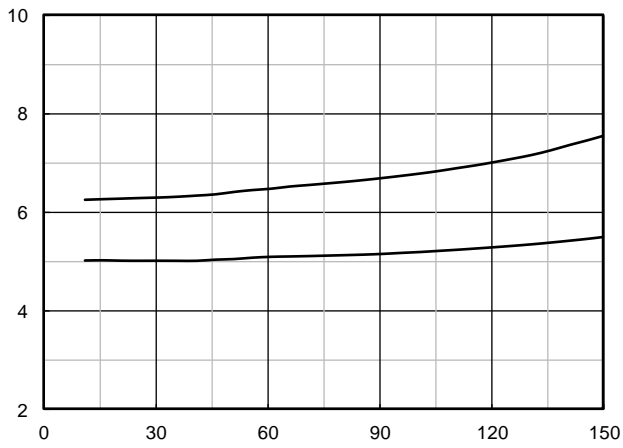


Figure 6. Normalized On-Resistance



# YJG74G10A



8

Figure 7. RDS(



# YJG74G10A

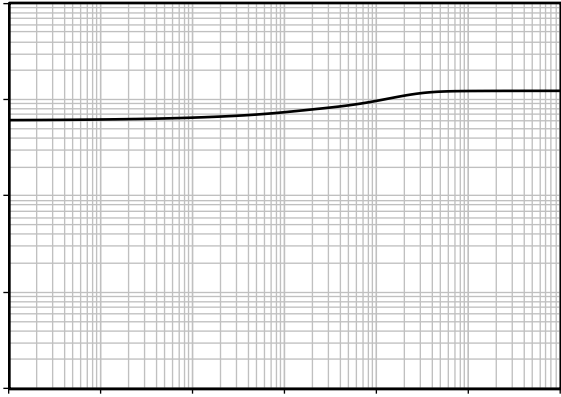


Figure 13. Maximum Transient Thermal Impedance

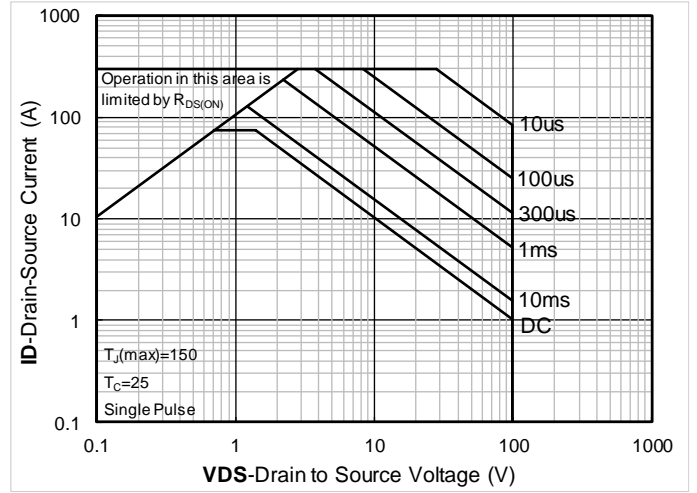


Figure 14

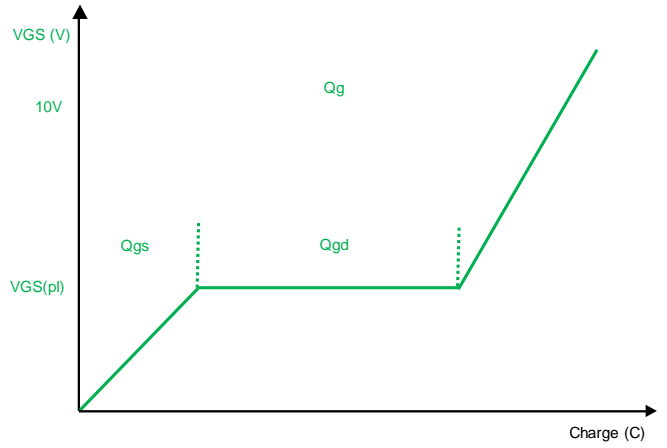
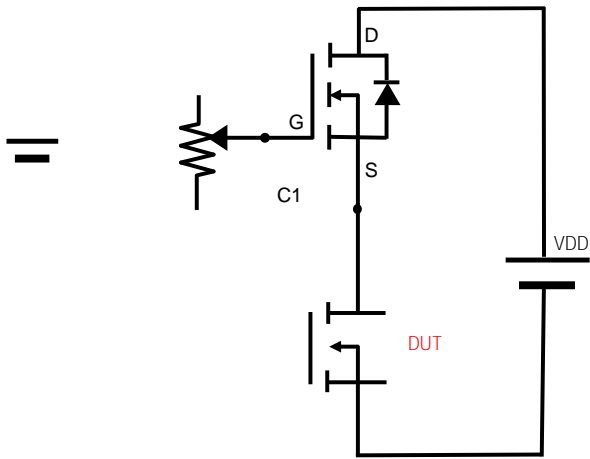


Figure B. Gate Charge Test Circuit & Waveform

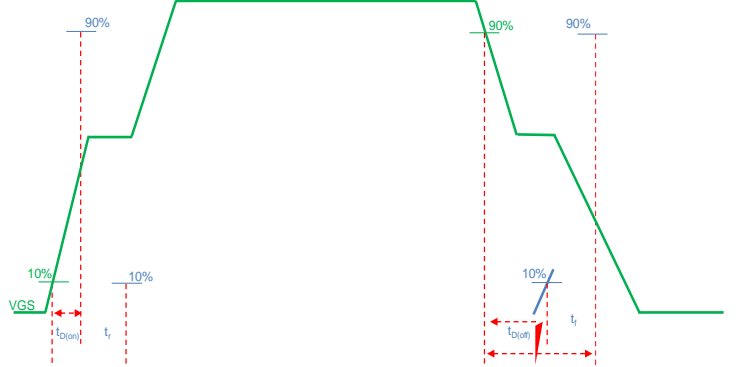
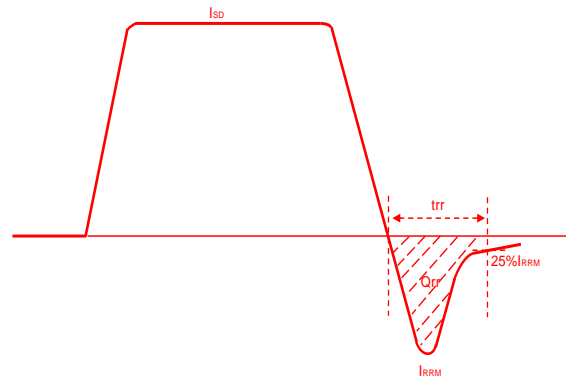
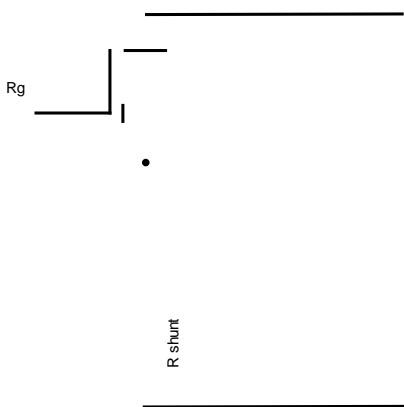


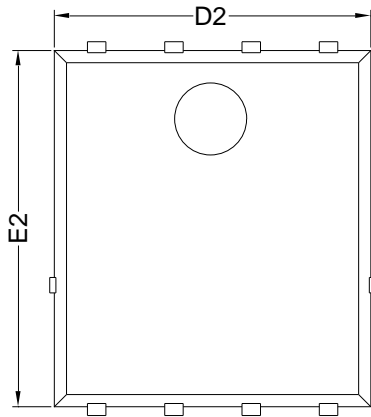
Figure C. Resistive Switching Test Circuit & Waveform



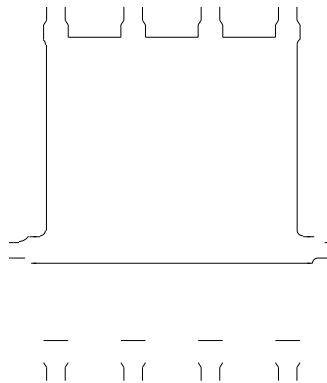


# YJG74G10A

## 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.



# YJG74G10A

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