



# YJL3407C

## P-Channel Enhancement Mode Field Effect Transistor

### Product Summary

$V_{DS}$	-30 V
$I_D$	-4.1 A
$R_{DS(ON)}$ ( at $V_{GS}=-10V$ )	43 m
$R_{DS(ON)}$ ( at $V_{GS}=-4.5V$ )	65 m

### General Description

Trench Power LV MOSFET technology  
High density cell design for Low  $R_{DS(ON)}$   
High Speed switching

Epoxy Meets UL 94 V-0 Flammability Rating  
Halogen Free

### Applications

Battery protection  
Load switch  
Power management

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

Parameter	Symbol	Limit	Unit	
Drain-source Voltage	$V_{DS}$	-30	V	
Gate-source Voltage	$V_{GS}$	$\pm 20$	V	
Drain Current	$I_D$	$T_A=25$	-4.1	A
		$T_A=100$	-2.6	
Pulsed Drain Current <sup>A</sup>	$I_{DM}$	-30	A	
Total Power Dissipation <sup>B</sup>	$P_D$	$T_A=25$	1.25	W
		$T_A=100$	0.5	
Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 +150		

### Thermal resistance

Parameter	Symbol	Typ	Max	Units
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Thermal Resistance Junction-to-Ambient



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

Parameter	Symbol	Conditions	Min	Typ	Max	Units
<b>Static Parameter</b>						
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS}=0V, I_D=-$	-30	-	-	V

Zero Gate Voltage Drain Current                      I



Typical Electrical and Thermal Characteristics Diagrams

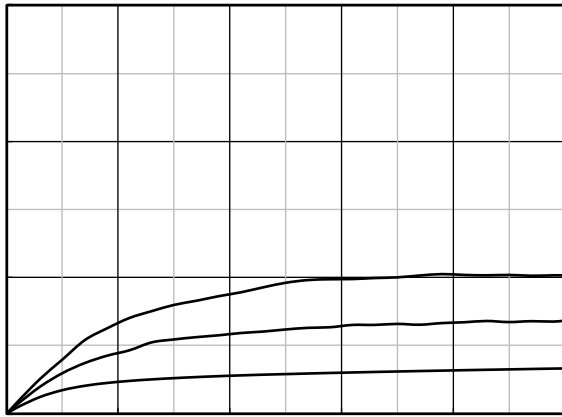


Figure 1. Output Characteristics

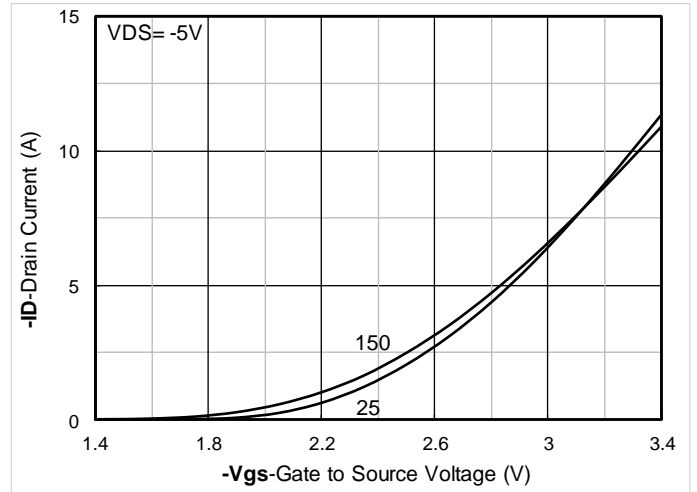


Figure 2. Transfer Characteristics

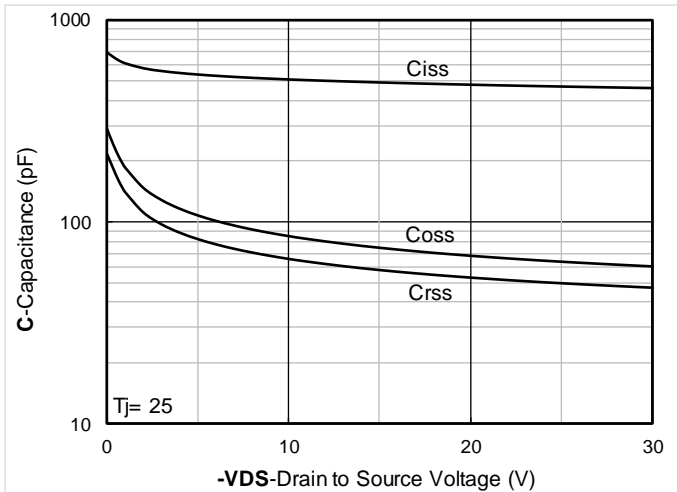


Figure 3. Capacitance Characteristics

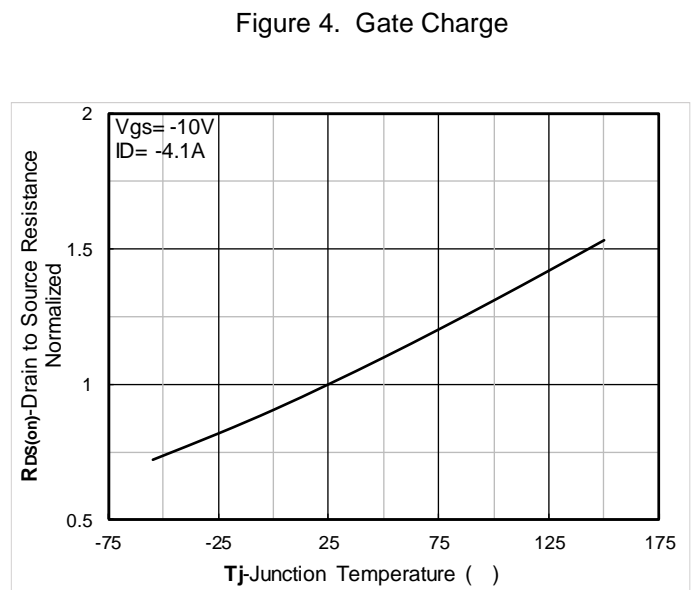


Figure 4. Gate Charge

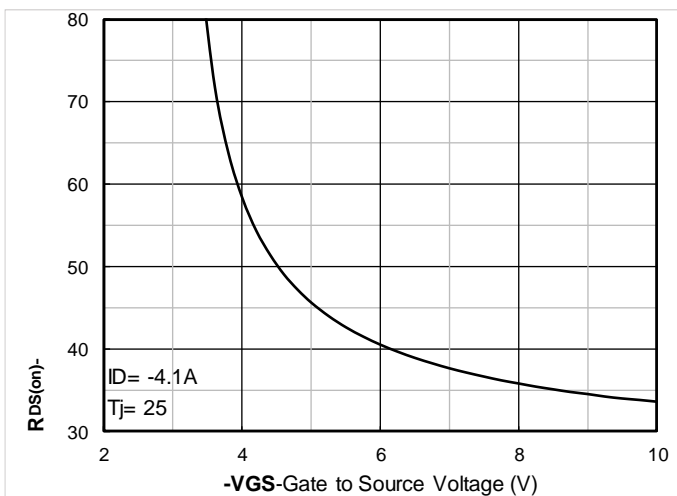


Figure 5. On-Resistance vs Gate to Source Voltage

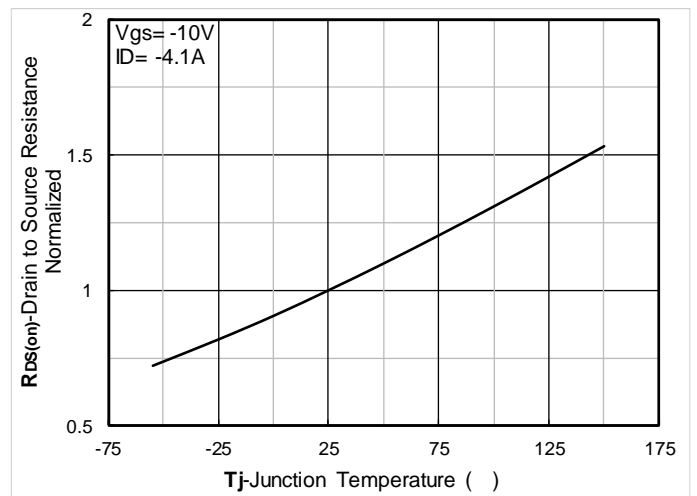


Figure 6. Normalized On-Resistance

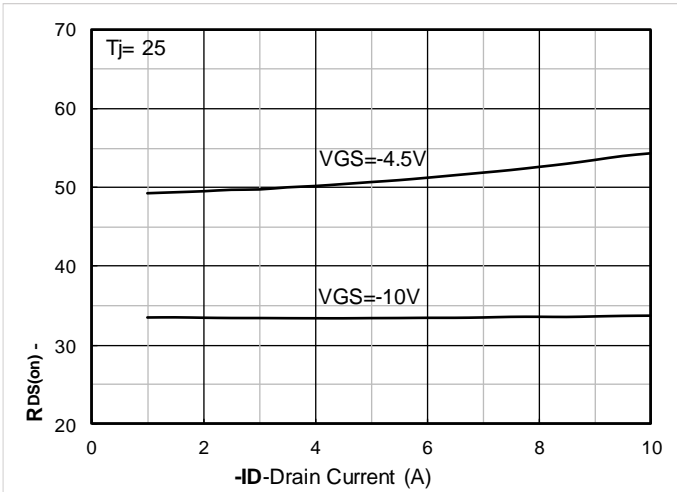


Figure 7. RDS(on) VS Drain Current

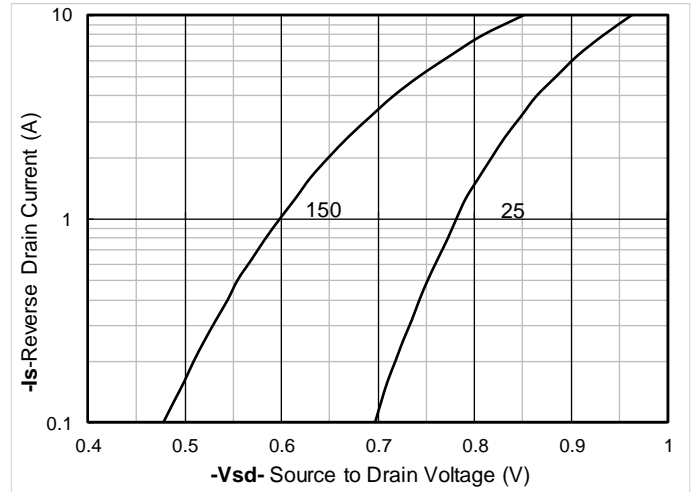


Figure 8. Forward characteristics of reverse diode

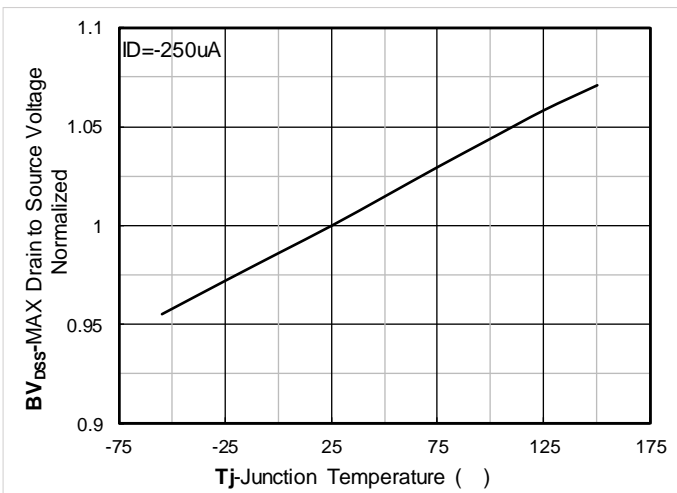


Figure 9. Normalized breakdown voltage

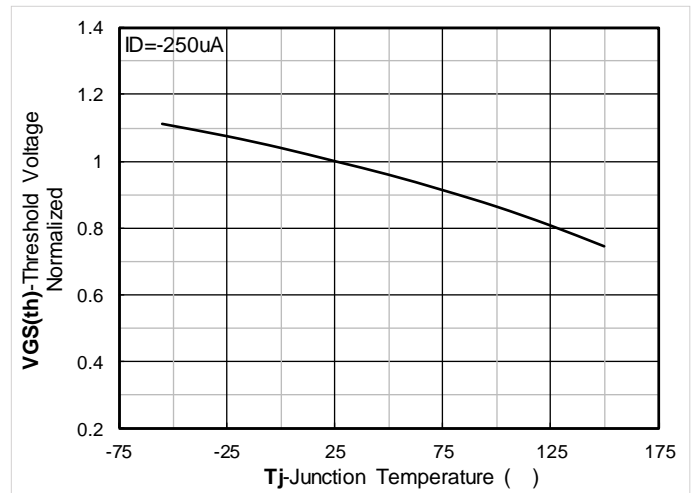


Figure 10. Normalized Threshold voltage

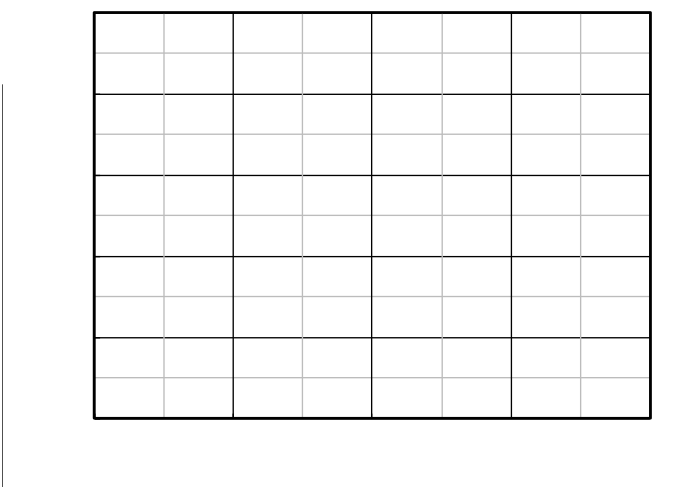


Figure 11. Current dissipation

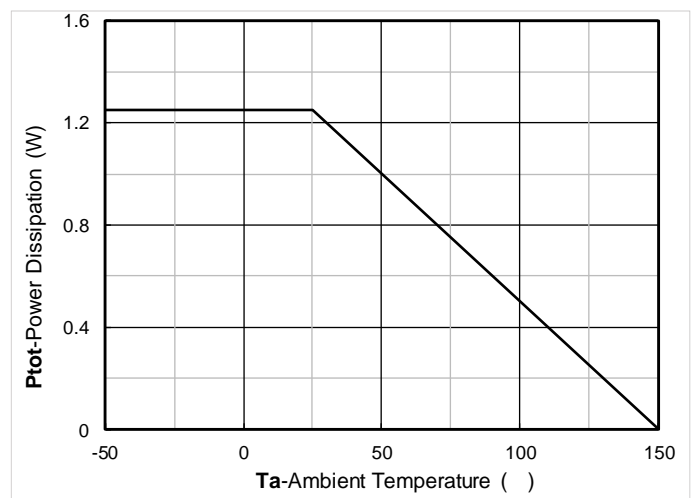


Figure 12.



# YJL3407C



Figure 13. Maximum Transient Thermal Impedance

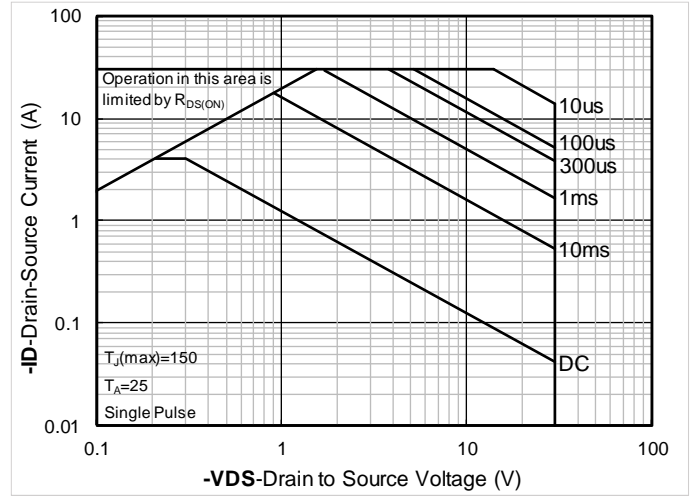
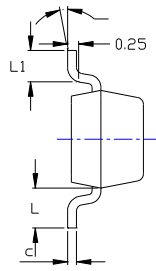
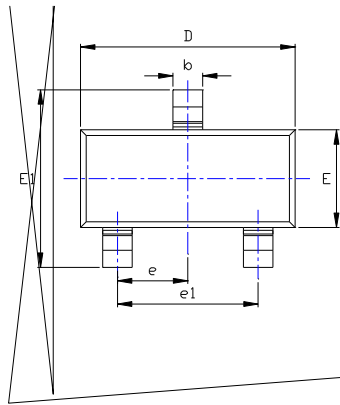


Figure 14. Safe Operation Area

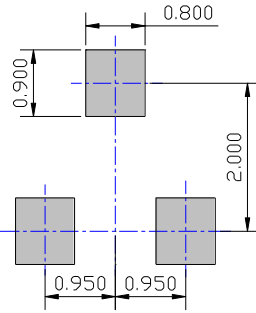
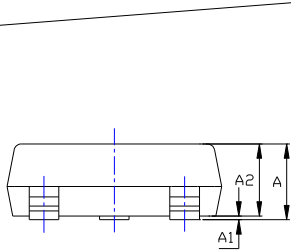


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## SOT-23 Package information



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L				



UNIT mm



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