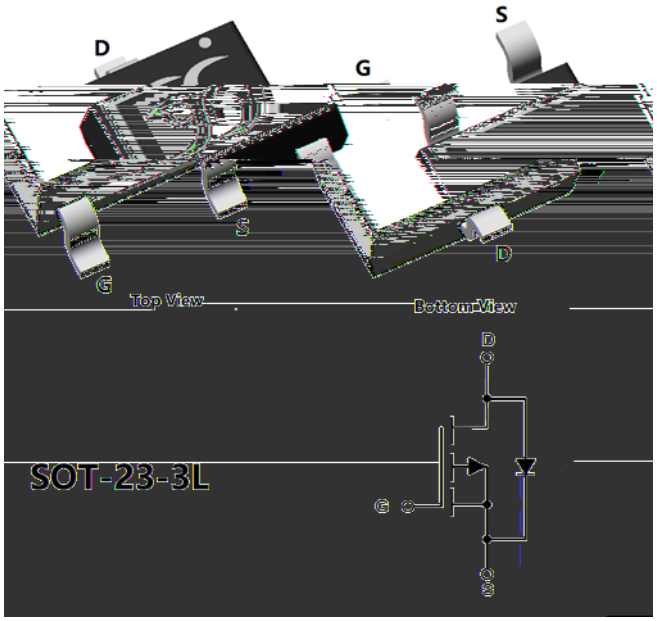
P-Channel Enhancement Mode Field Effect Transistor



Product Summary

V_{DS}	-30 V
I_D	-4.1 A
$R_{DS(ON)}$(at V_{GS}=-10V)	46 m
$R_{DS(ON)}$(at V_{GS}=-4.5V)	65 m

General Description

Trench Power LV MOSFET technology
High density cell design for Low RDS(ON)
High Speed switching
F hlb rmk L gl bbobn E o e
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}	±20	V
Drain Current	T_A=25	I_D	-4.1	A
	T_A=100		-2.6	
Pulsed Drain Current [A]		I_{DM}	-30	A
Total Power Dissipation [B]	T_A=25	P_D	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
Thermal Resistance Junction-to-Ambient [C]	Steady-State	R c	80	100	/W

Ordering Information (Example)

PREFERED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJL3407BL	F2	3407B.	3000	30000	120000	0 reel

Electrical Characteristics (T_J=25 unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}= 0V, I_D=-+.) :	-30	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-30V, V_{GS}=0V	-	-	-1	:
		V_{DS}=-30V, V_{GS}=0V, Tj=150	-	-	-100	
Gate-Body Leakage Current	I_{GSS}	V_{GS}= ±20V, V_{DS}=0V	-	-	±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}= V_{GS}, I_D=-+.) :	-1	-1.5	-2.4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=				

Typical Electrical and Thermal Characteristics Diagrams

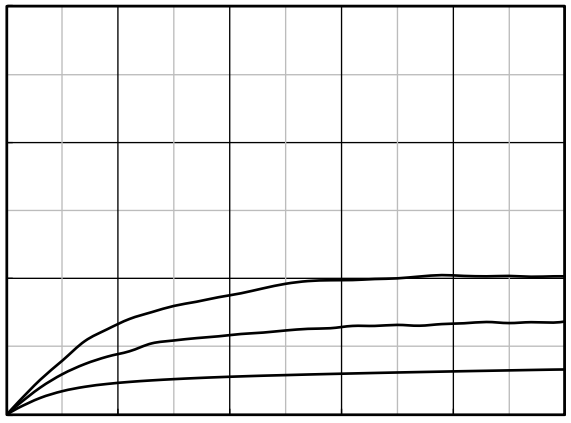


Figure 1. Output Characteristics

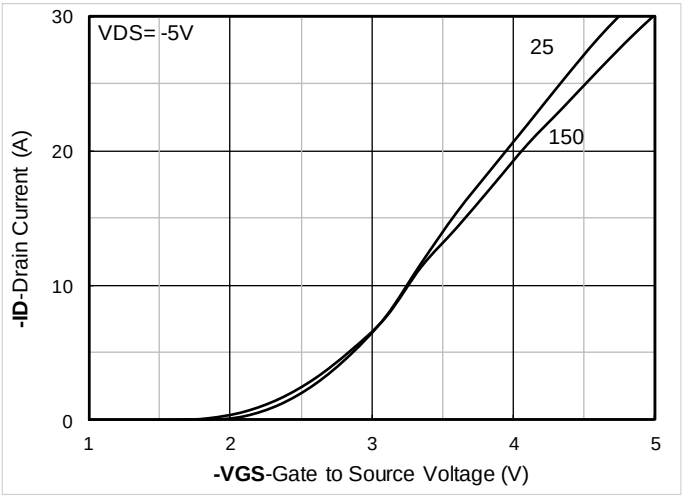


Figure 2. Transfer Characteristics

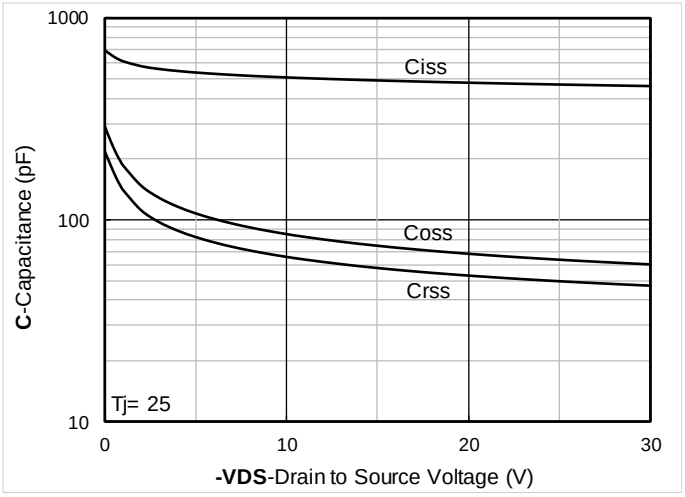


Figure 3. Capacitance Characteristics

Figure 4. Gate Charge

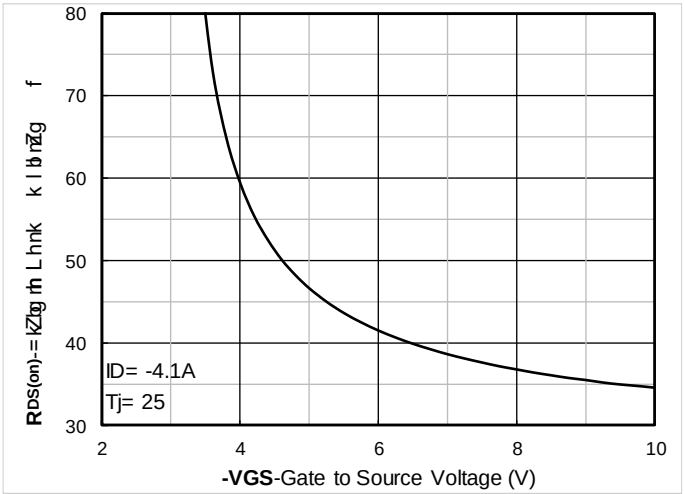


Figure 5. On-Resistance vs Gate to Source Voltage

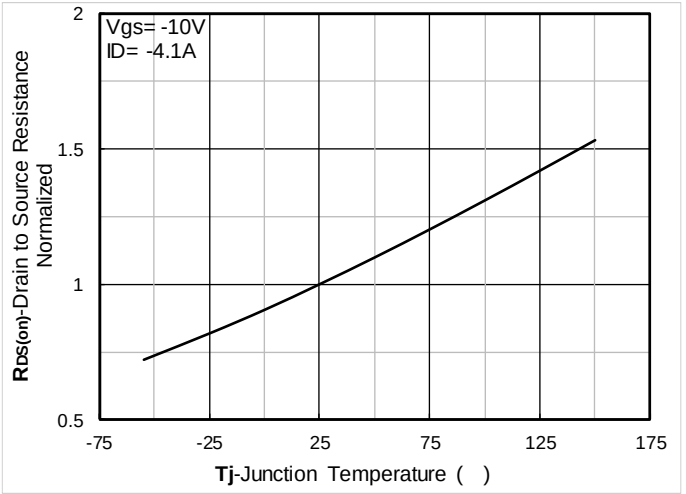


Figure 6. Normalized On-Resistance

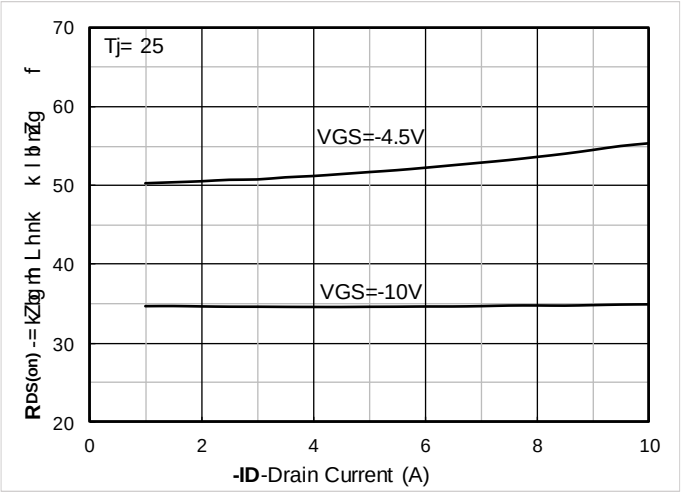


Figure 7. $R_{DS(on)}$ VS Drain Current

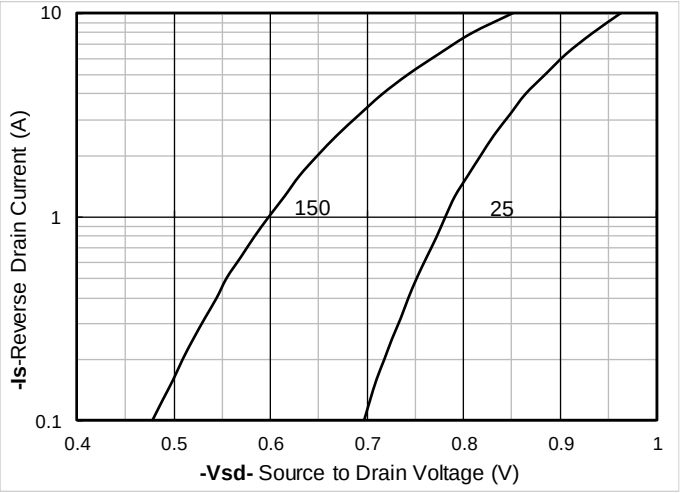


Figure 8. Forward characteristics of reverse diode

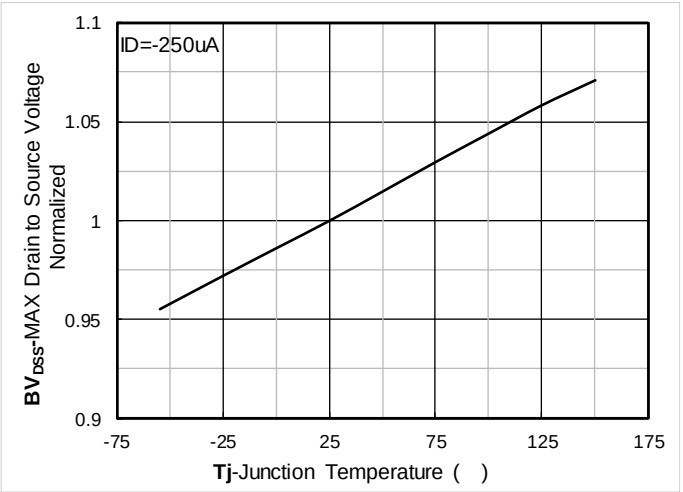


Figure 9. Normalized breakdown voltage

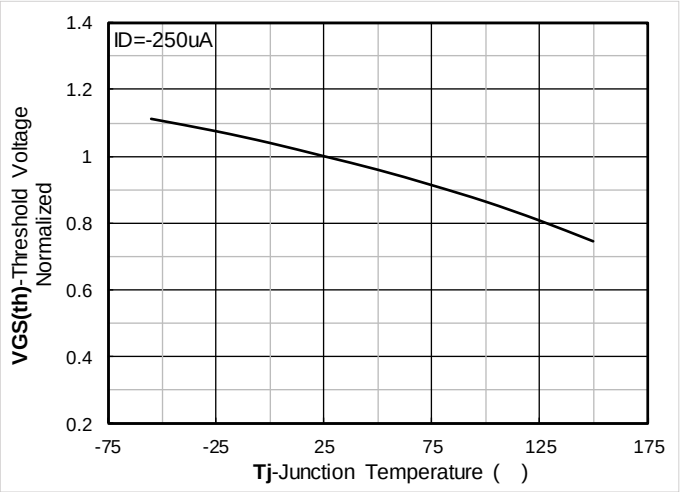


Figure 10. Normalized Threshold voltage

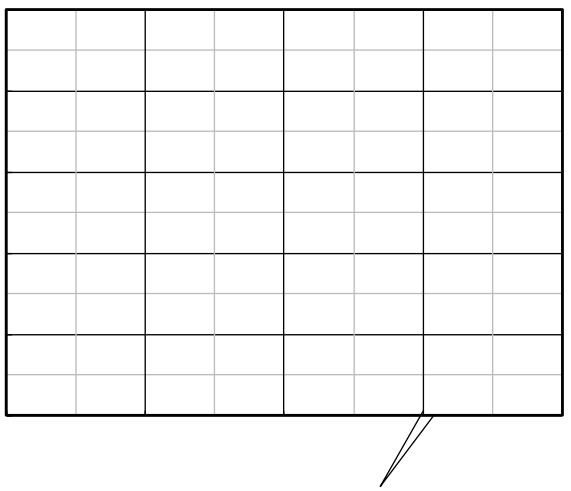


Figure 11. Current dissipation

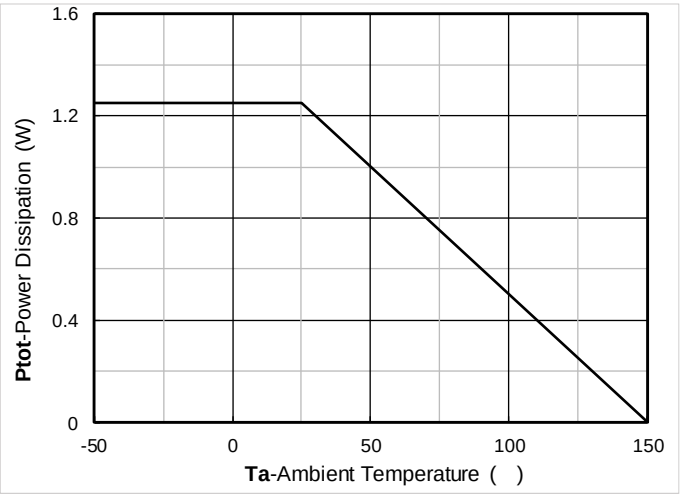


Figure 12. Power dissipation

Figure 13. Maximum Transient Thermal Impedance

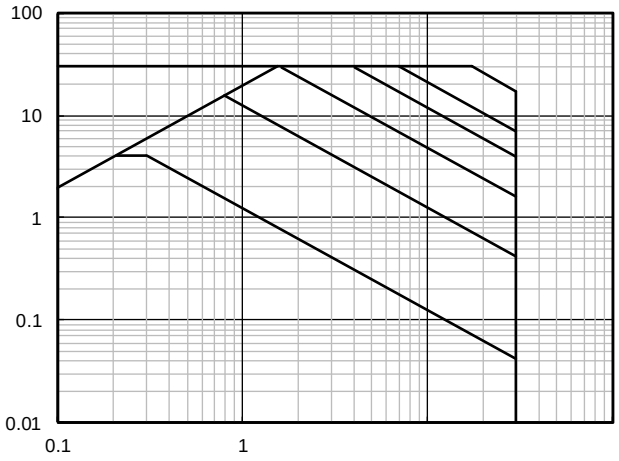
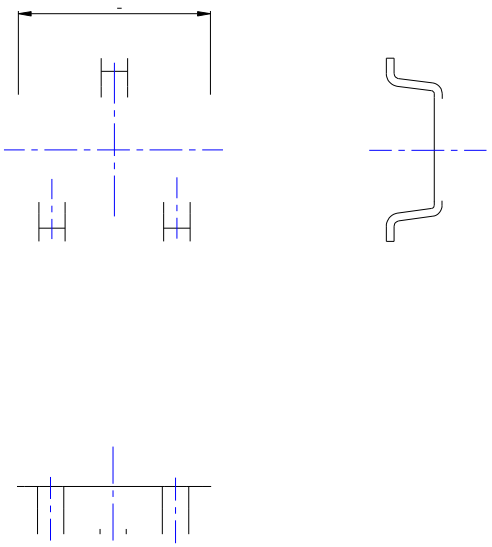


Figure 14. Safe Operation Area

SOT-23-3L Package information



UNIT mm

Disclaimer