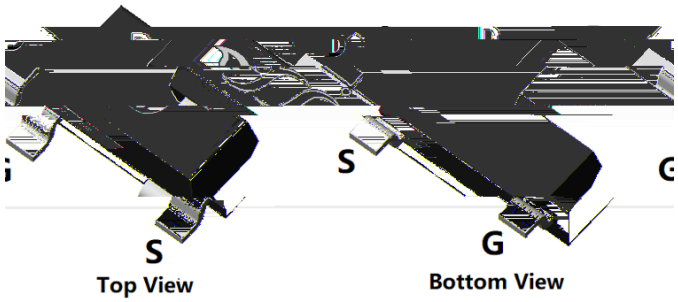
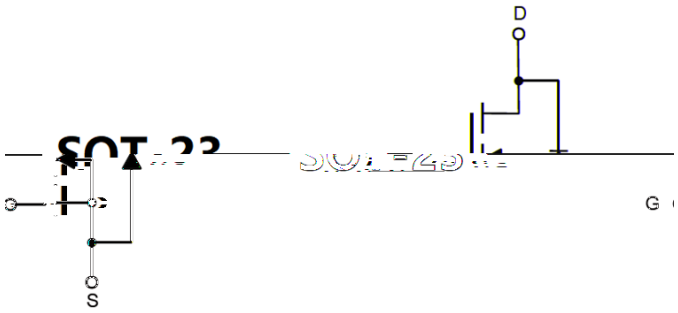
N-Channel Enhancement Mode Field Effect Transistor





Product Summary

V_{DS}	20V
I_D	3.0A
$R_{DS(ON)}$(at V_{GS}=4.5V)	50 mohm
$R_{DS(ON)}$(at V_{GS}=2.5V)	70 mohm

General Description

Trench Power LV MOSFET technology
High Power and current handing capability

Epoxy Meets UL 94 V-0 Flammability Rating
Halogen Free

Applications

PWM application
Load switch

Absolute Maximum Ratings (T_A=25 unless otherwise noted)

Parameter		Symbol	Limit	Unit
Drain-source Voltage		V_{DS}	20	V
Gate-source Voltage		V_{GS}	10	V
Drain Current	T_A=25 @ Steady State	I_D	3.0	A
	T_A=70 @ Steady State		2.4	
Pulsed Drain Current [A]		I_{DM}	14	A
Total Power Dissipation @ T_A=25		P_D	0.7	W
Thermal Resistance Junction-to-Ambient @ Steady State [B]		R_{JA}	178	/W
Junction and Storage Temperature Range		T_J ,T_{STG}	-55 +150	

Ordering Information (Example)

PREFERED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJL2302B	F2	2302B.	3000	30000	120000	reel

Electrical Characteristics (T_J=25 unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV					

Typical Performance Characteristics

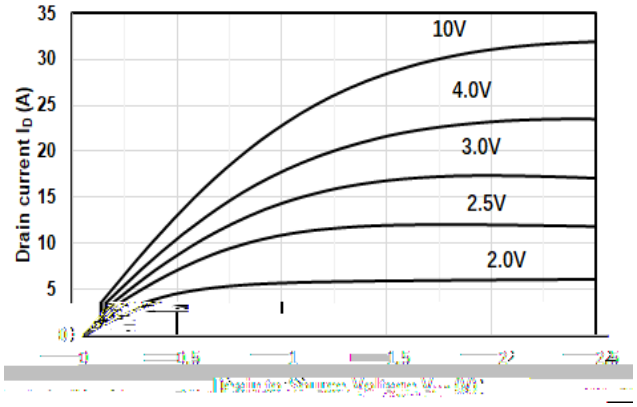


Figure1. Output Characteristics

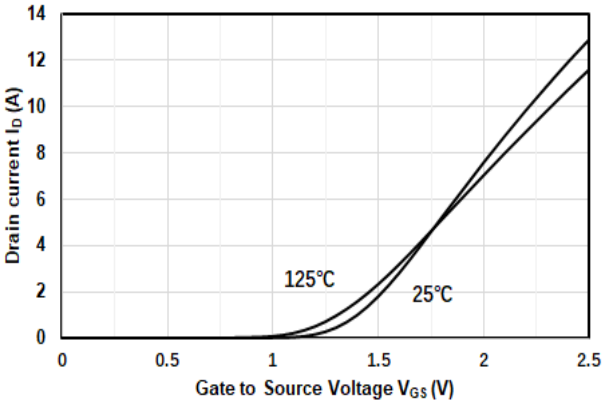


Figure2. Transfer Characteristics

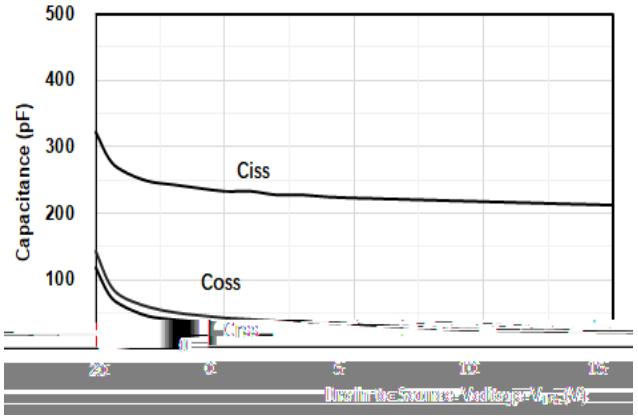


Figure3. Capacitance Characteristics

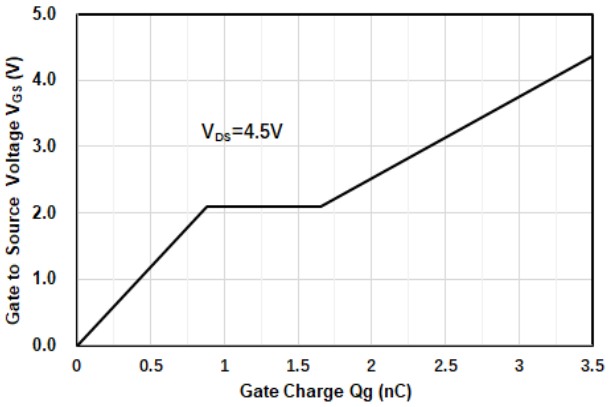


Figure4. Gate Charge

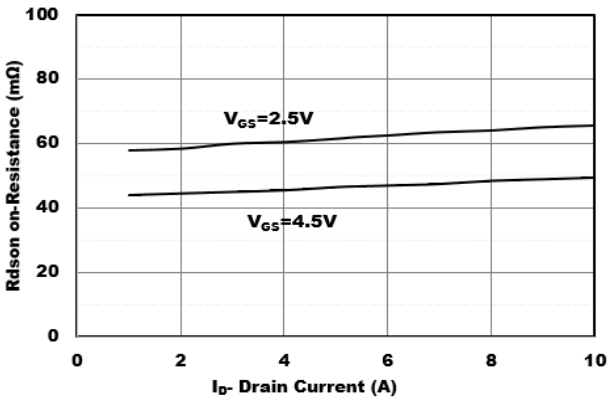


Figure5. Drain-Source on Resistance

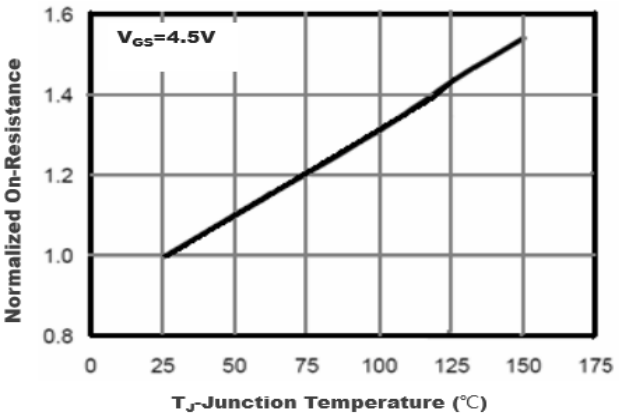


Figure6. Drain-Source on Resistance

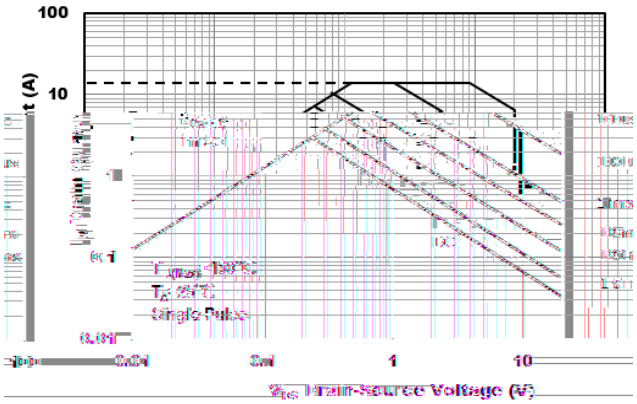


Figure7. Safe Operation Area

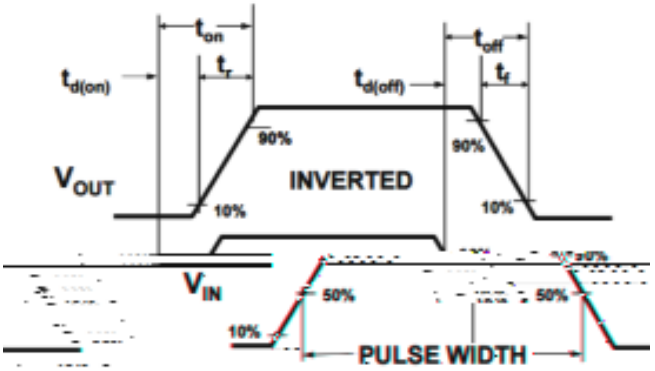


Figure8. Switching wave

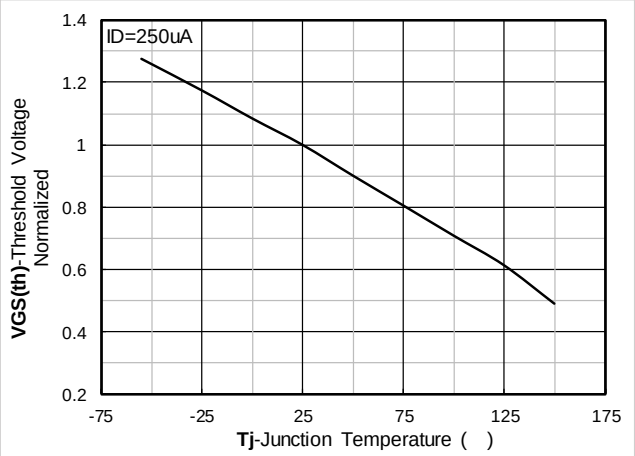


Figure 9. Normalized Threshold voltage

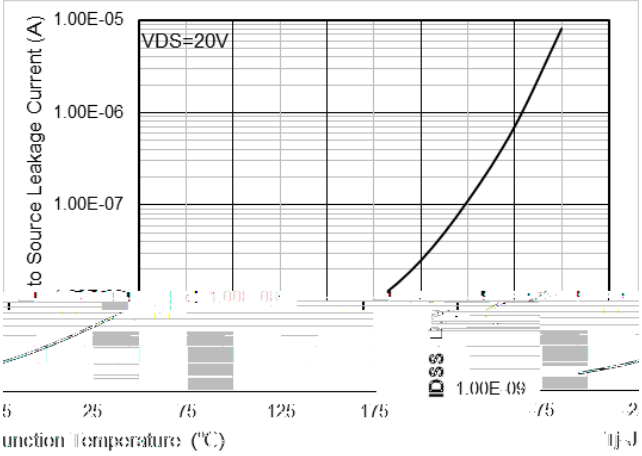
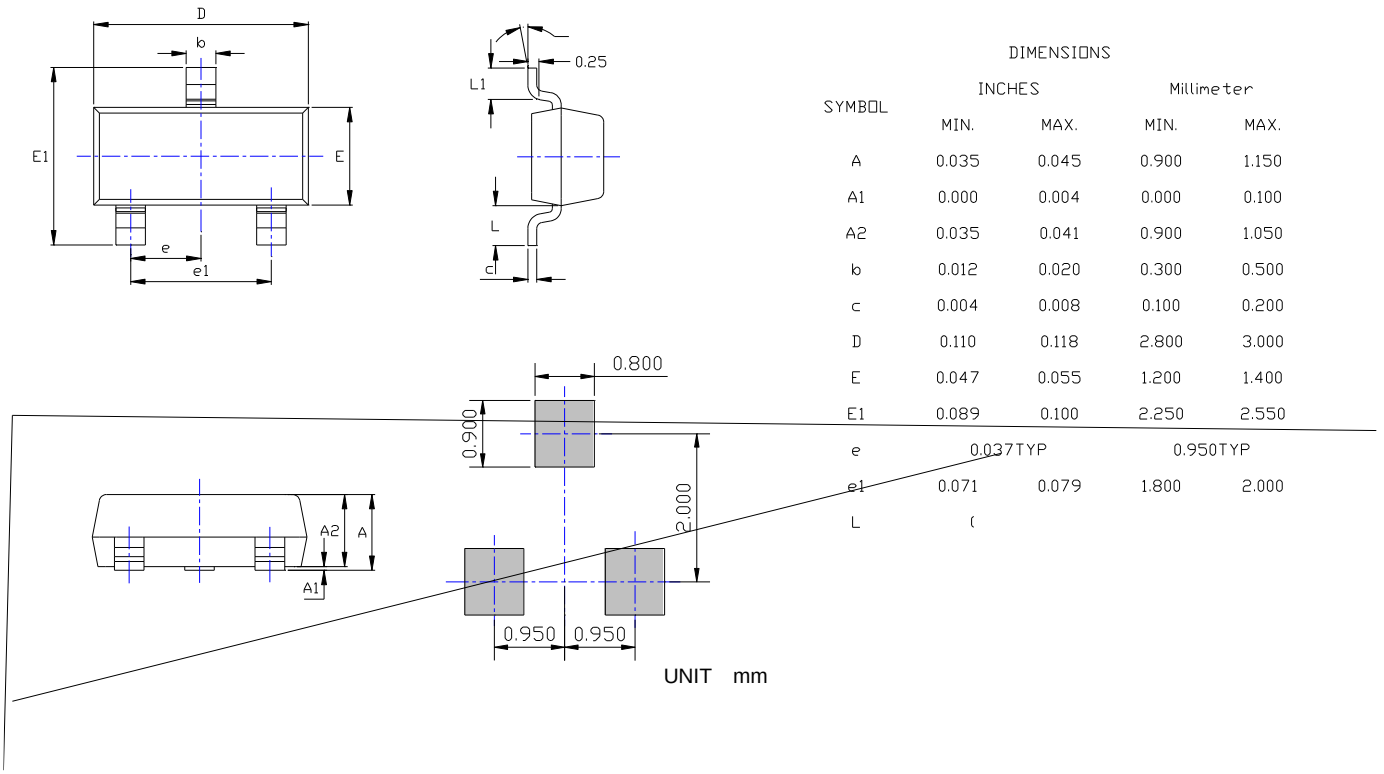


Figure 10. Drain to Source Leakage Current

SOT-23 Package information



SYMBOL	DIMENSIONS INCHES MIN.	INCHES MAX.	Millimeter MIN.	Millimeter 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	(			