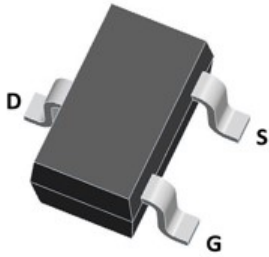
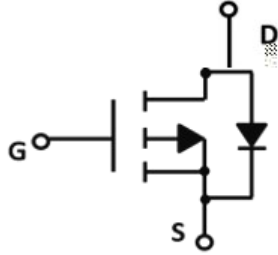
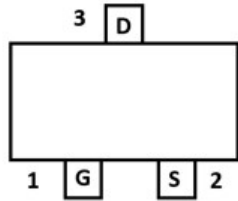


P-Channel Enhancement Mode Field Effect Transistor



SOT-323



Product Summary

• V_{DS}	-19V
• I_D	-1.5A
• $R_{DS(ON)}$ (at $V_{GS}=-4.5V$)	108 mohm
• $R_{DS(ON)}$ (at $V_{GS}=-2.5V$)	130 mohm
• $R_{DS(ON)}$ (at $V_{GS}=-1.8V$)	230 mohm

General Description

- Trench Power LV MOSFET technology
- Low $R_{DS(ON)}$
- Low Gate Charge

Applications

- Video monitor
- Power management

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

Parameter	Symbol	Maximum	Unit
Drain-source Voltage	V_{DS}	-19	V
Gate-source Voltage	V_{GS}	10	V
Drain Current	I_D	$T_A=25$ @ Steady State	-1.5
		$T_A=70$ @ Steady State	-1.2
Pulsed Drain Current ^A	I_{DM}	-8	A
Total Power Dissipation @ $T_A=25$	P_D	0.25	W
Thermal Resistance Junction-to-Ambient ^B	$R_{\theta JA}$	500	W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 +150	

■ Ordering Information

PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJL2301G	F2	2301 _G	3000	30000	120000	7" reel



YJL2301GW

■ 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 =-250μA	-19			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-19V, V _{GS} =0V, T _C =25			-1	μA
Gate-Body Leakage Current	I _{GSS}	V _{GS} = 10V, V _{DS} =0V			100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D =-250μA	-0.4	-0.62	-1.0	V
Static Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} = -4.5V, I _D =-1.5A		90	108	mΩ
		V _{GS} = -2.5V, I _D =-1.5A		105	130	
		V _{GS} = -1.8V, I _D =-1.5A		140	230	
Diode Forward Voltage	V _{SD}	I _S =-1.5A, V _{GS} =0V		-0.8	-1.2	V
Dynamic Parameters						
Input Capacitance	C _{iss}	V _{DS} =-10V, V _{GS} =0V, f=1MHZ		327		pF
Output Capacitance	C _{oss}			62		
Reverse Transfer Capacitance	C _{rss}			55		
Switching Parameters						
Total Gate Charge	Q _g	V _{GS} =-4.5V, V _{DS} =-10V, I _D =-1.5A		3.9		nC
Gate Source Charge	Q _{gs}			0.7		
Gate Drain Charge	Q _{gd}			0.9		
Reverse Recovery Charge	Q _{rr}	I _F =-1.5A, di/dt=100A/us		2.3		ns
Reverse Recovery Time	t _{rr}			27		
Turn-on Delay Time	t _{D(on)}	V _{GS} =-4.5V, V _{DD} =-10V, I _D =-1A, R _{GEN} =2.5Ω		6		ns
Turn-on Rise Time	t _r			30		
Turn-off Delay Time	t _{D(off)}			45		
Turn-off Fall Time	t _f			46		

A. Pulse Test: Pulse Width 300us, Duty cycle 2%.

B. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch.

Typical Performance Characteristics

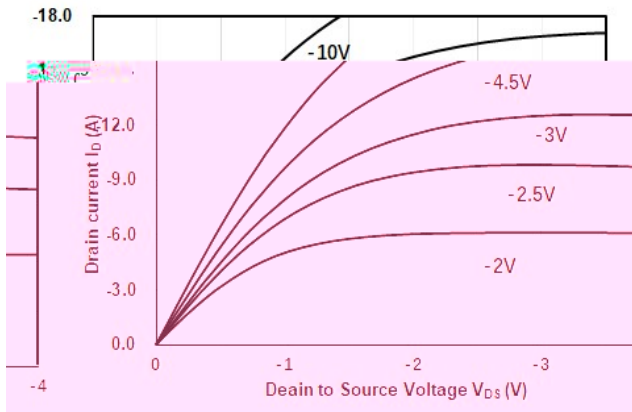


Figure1. Output Characteristics

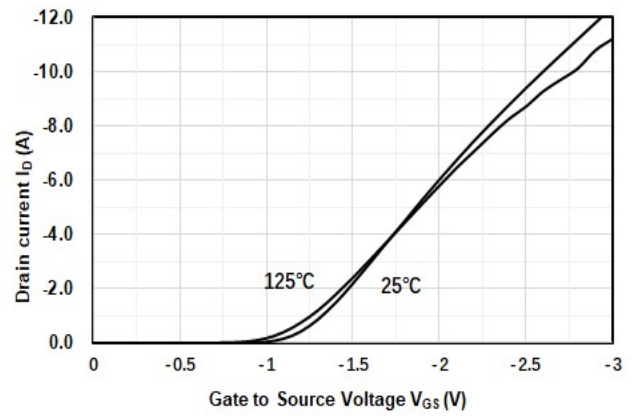


Figure2. Transfer Characteristics

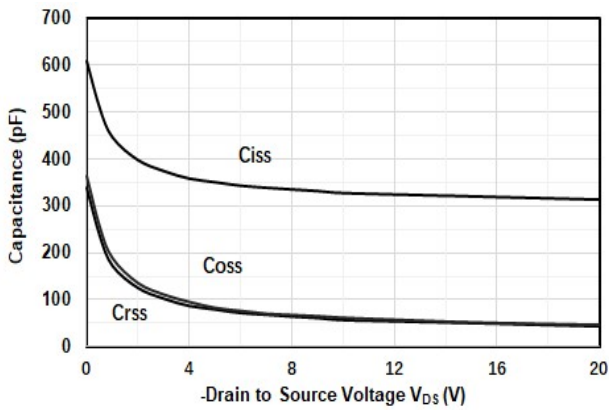


Figure3. Capacitance Characteristics

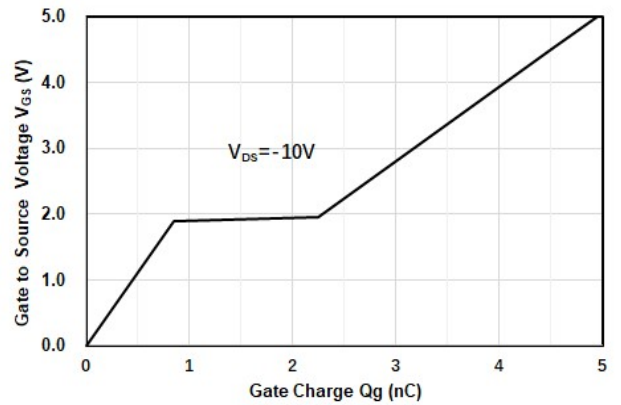


Figure4. Gate Charge

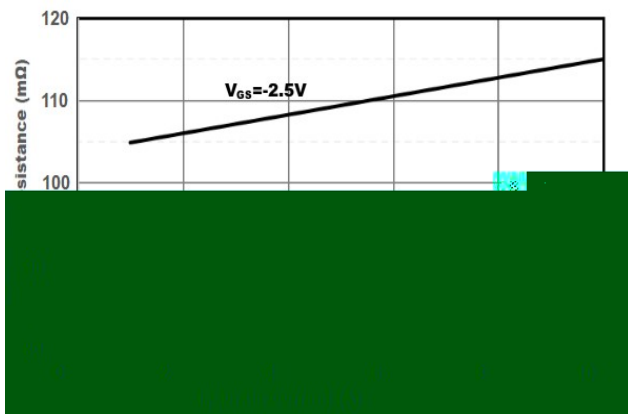


Figure5. Drain-Source on Resistance

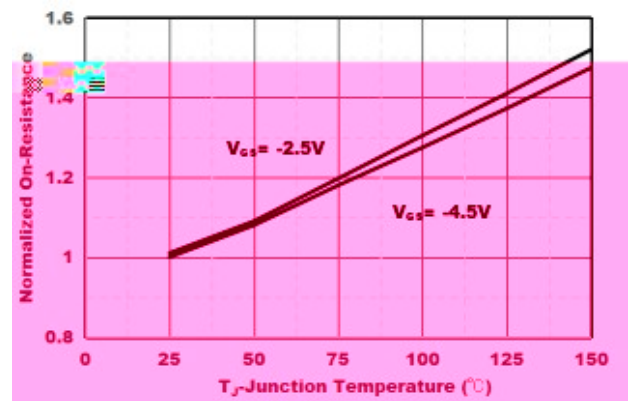


Figure6. Drain-Source on Resistance

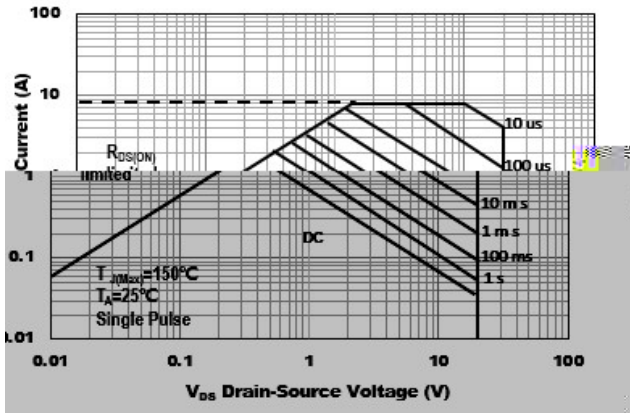


Figure7. Safe Operation Area

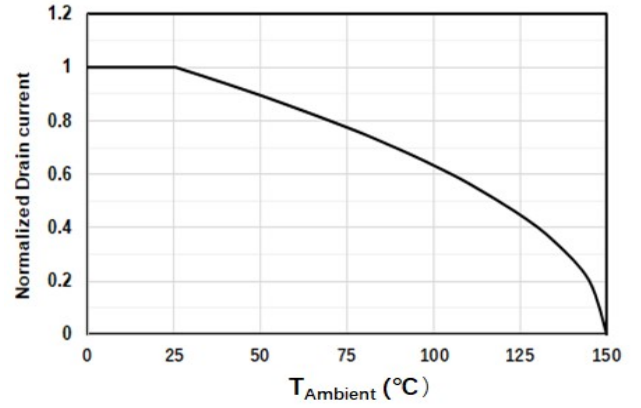
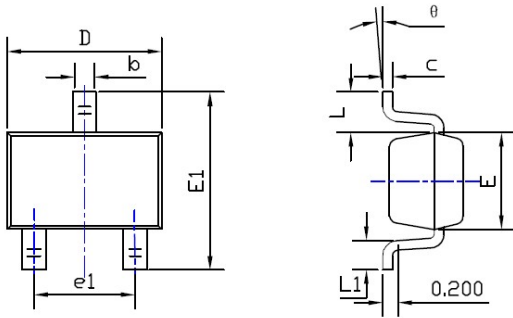


Figure8. Drain Current vs Ambient temperature



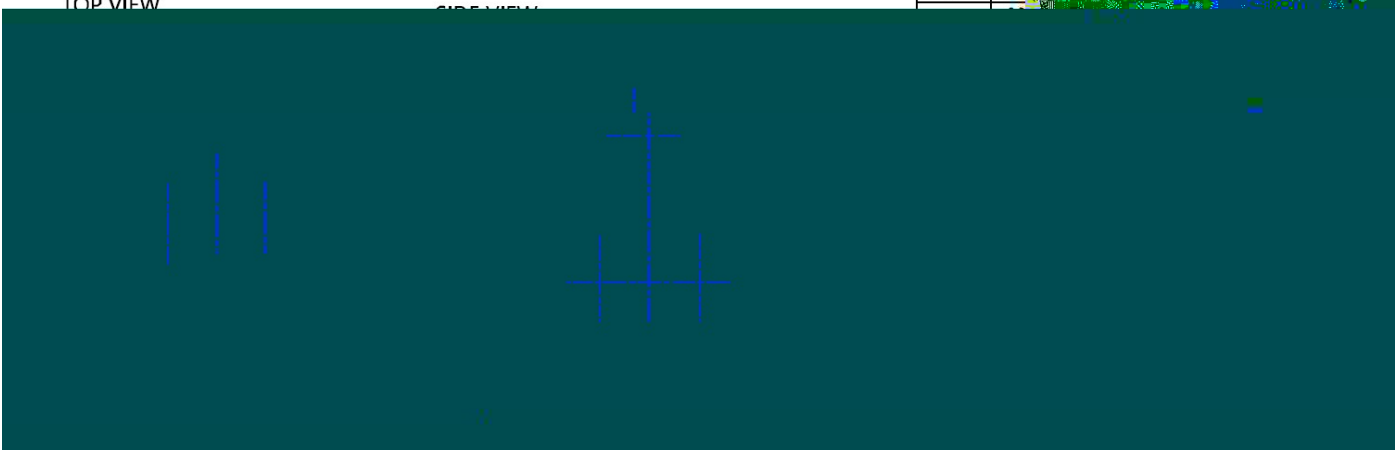
■ SOF-323 Package Information



SYMBOL	DIMENSIONS					
	INCHES			Millimeter		
	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.
A	0.035	---	0.043	0.900	---	1.100
A1	0.000	---	0.004	0.000	---	0.100
A2	0.035	0.037	0.039	0.900	0.950	1.000
b	0.006	0.012	0.016	0.150	0.300	0.400
c	0.004	---	0.010	0.100	---	0.250
D	0.071	0.079	0.087	1.800	2.000	2.200

TOP VIEW

SIDE VIEW





Disclaimer

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