N-Channel Enhancement Mode Field Effect Transistor

Product Summary

V_{DS}	20 V
I_D	0.5 A
$R_{DS(ON)}$(at V_{GS}=4.5V)	300 mohm
$R_{DS(ON)}$(at V_{GS}=2.5V)	400 mohm
$R_{DS(ON)}$(at V_{GS}=1.8V)	700 mohm

ESD Protected Up to 2.0KV (HBM)

General Description

Trench Power LV MOSFET technology
High Power and current handing capability

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}	12	V
Drain Current	T_A=25	I_D	0.5	A
	T_A=100		0.3	
Pulsed Drain Current [A]		I_{DM}	4	A
Total Power Dissipation [B]	T_A=25	P_D	0.25	W
	T_A=100		0.1	
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	420	500	/W

Ordering Information (Example)

PREFERED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJL3134KAT	F2	4A	8000	80000	320000	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	20	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=20V, V_{GS}=0V V_{DS}=20	-	-	1	

Typical Electr-

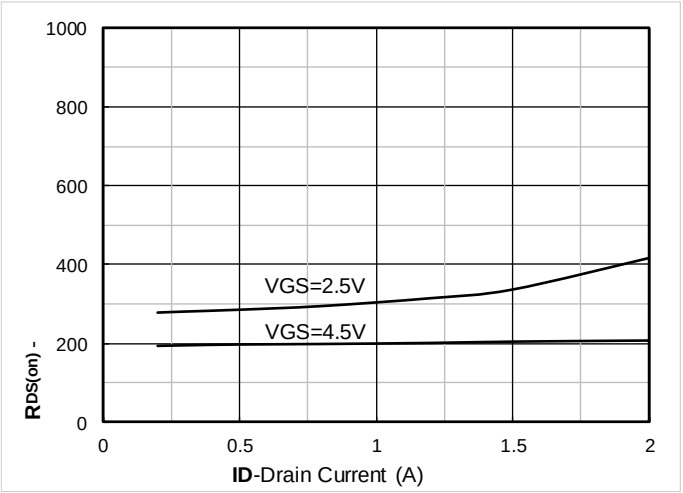

Figure7. $R_{DS(on)}$ VS Drain Current

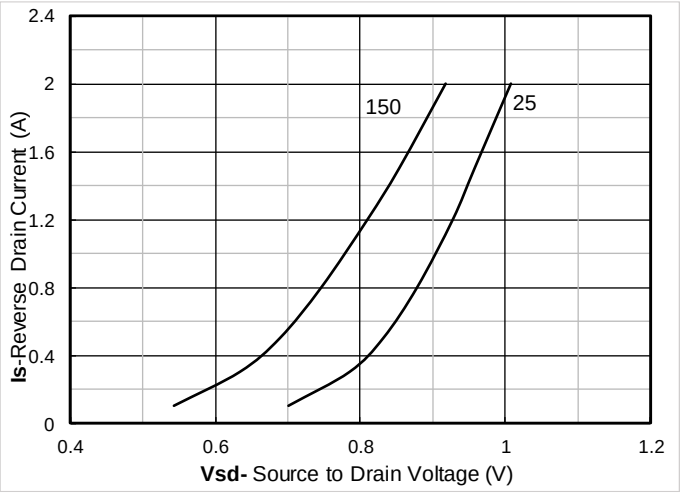

Figure8. Forward characteristics of reverse diode

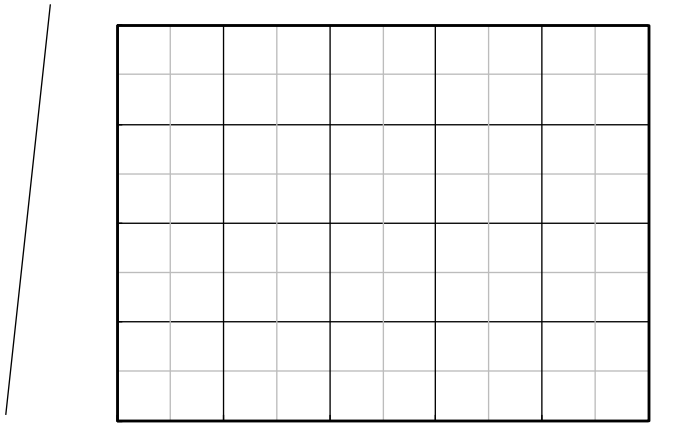

Figure9. Normalized breakdown voltage

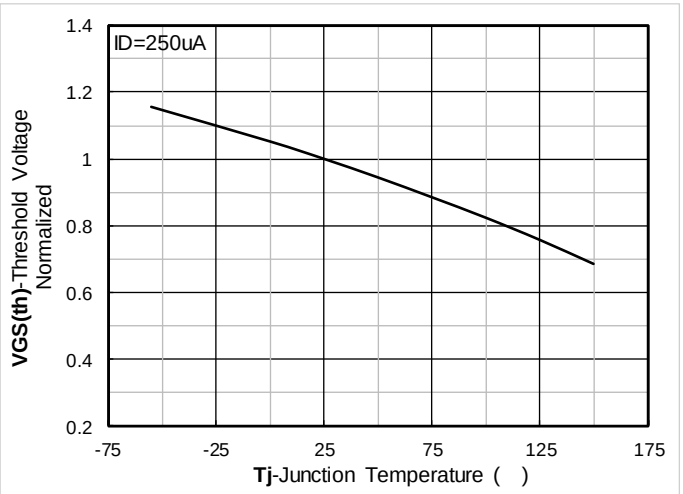

Figure10. Normalized Threshold voltage

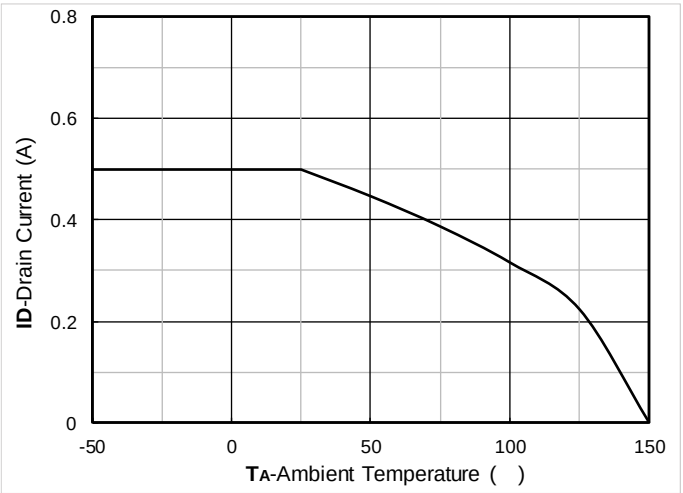

Figure11. Current dissipation

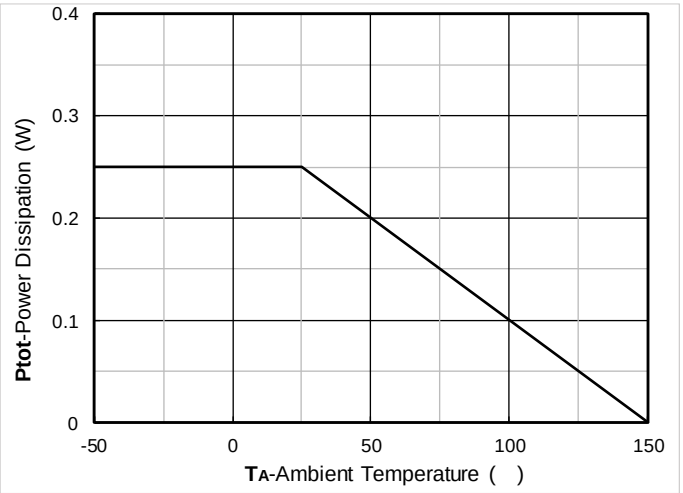

Figure12. Power dissipation

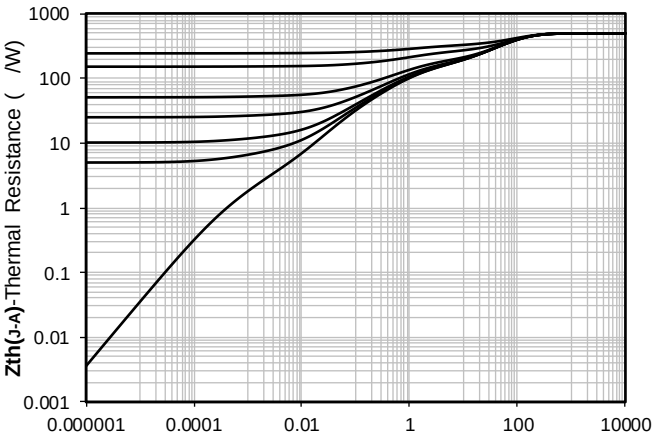

Figure 13. Maximum Transient Thermal Impedance

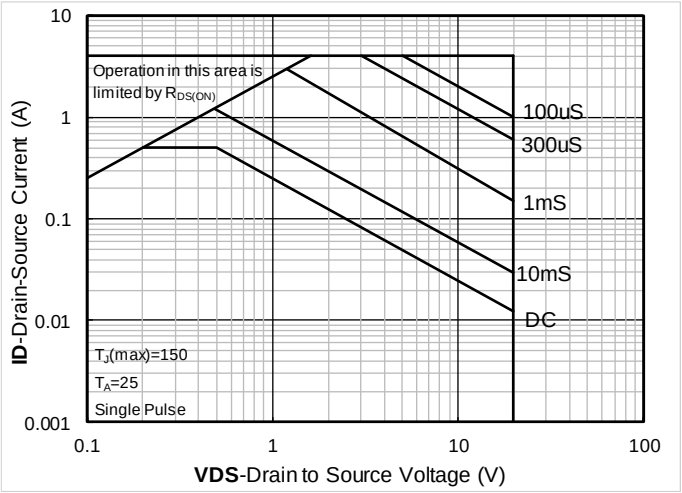

Figure14. Safe Operation Area

YJL3134KAT

Disclaimer

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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