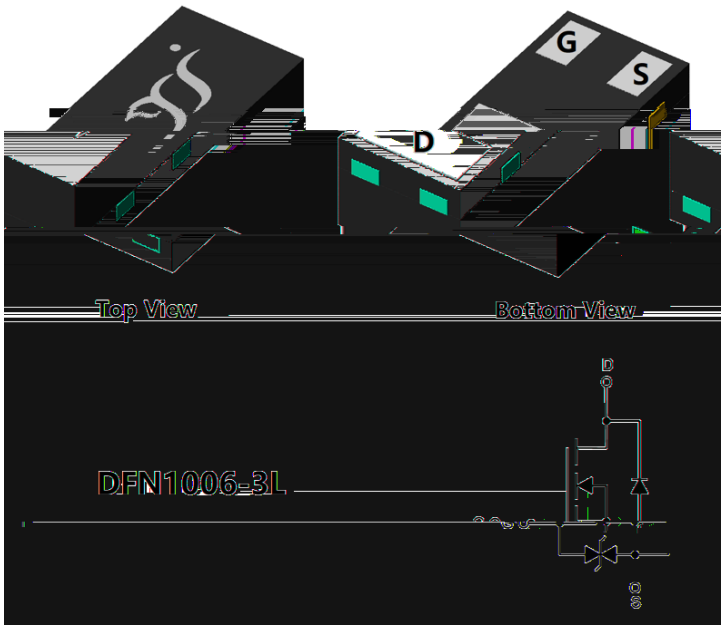
N-Channel Enhancement Mode Field Effect Transistor



Product Summary

V_{DS}	20 V
I_D	0.7 A
$R_{DS(ON)}$(at V_{GS}=4.5V)	300 mohm
$R_{DS(ON)}$(at V_{GS}=2.5V)	350 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
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}	±12	V
Drain Current	T_A=25℃	I_D	0.7	A
	T_A=100℃		0.44	
Pulsed Drain Current [A]		I_{DM}	3	A
Total Power Dissipation [B]	T_A=25℃	P_D	0.9	W
	T_A=100℃		0.36	
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	110	138	℃/W

Ordering Information

PREFERED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJA3134KB	F1	4A	10000	100000	400000	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=250	20			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=20V,V_{GS}=0V			1	
		V_{DS}=20V,V_{GS}=0V, Tj=150℃			100	
Gate-Body Leakage Current	I_{GSS}	V_{GS}= 10V, V_{DS}=0V			10	
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}= $V_{Gat=VV}$				

Typical Performance Characteristics

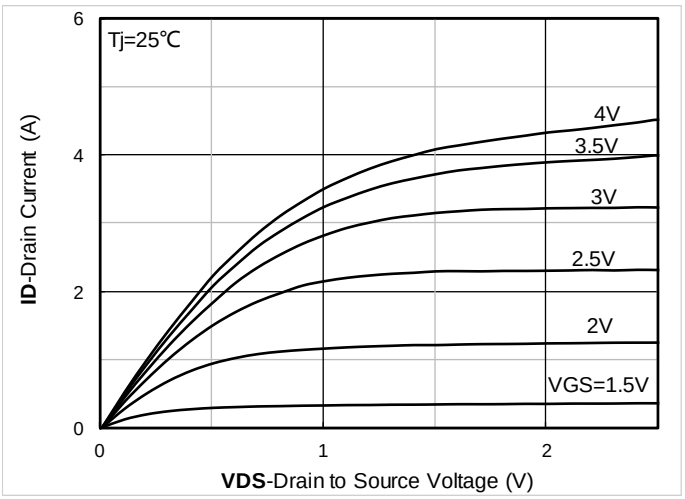


Figure 1. Output Characteristics

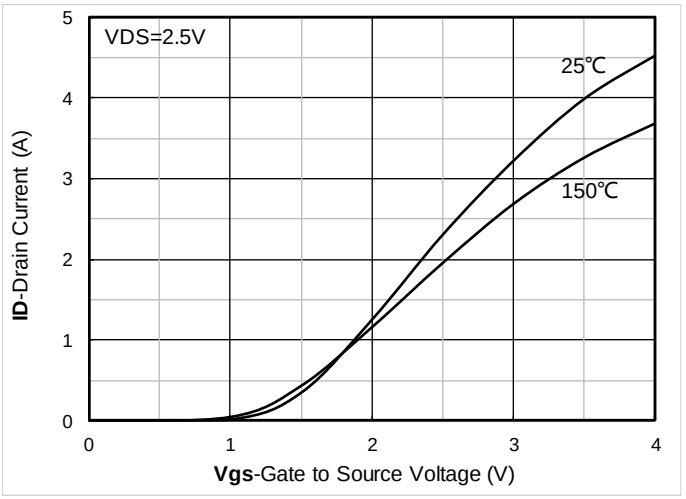


Figure 2. Transfer Characteristics

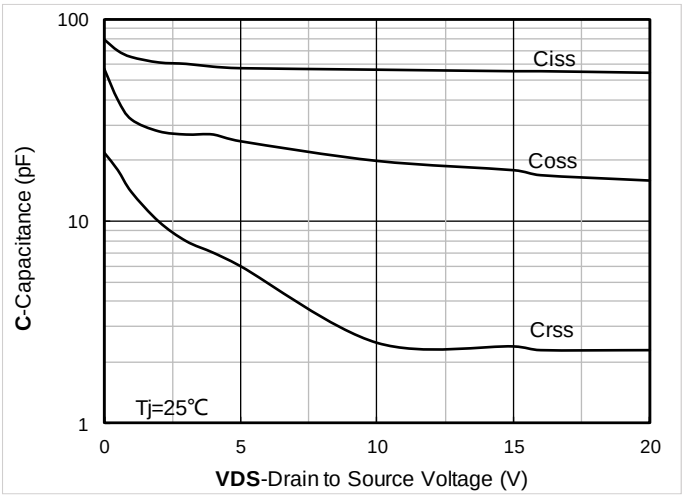


Figure 3. Capacitance Characteristics

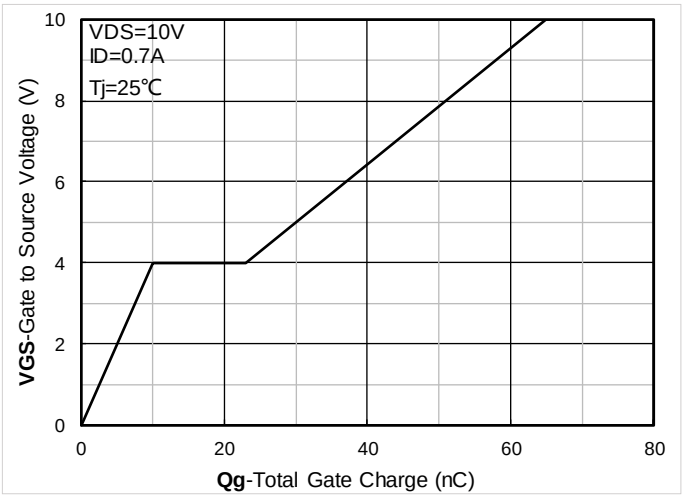


Figure 4. Gate Charge

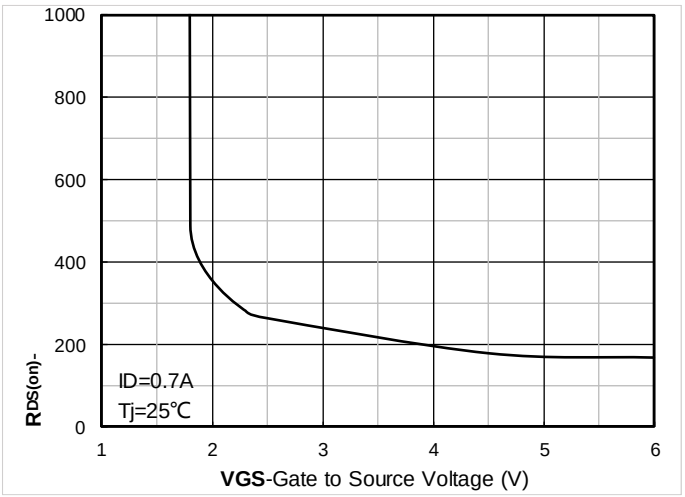


Figure 5. On-Resistance vs Gate to Source Voltage

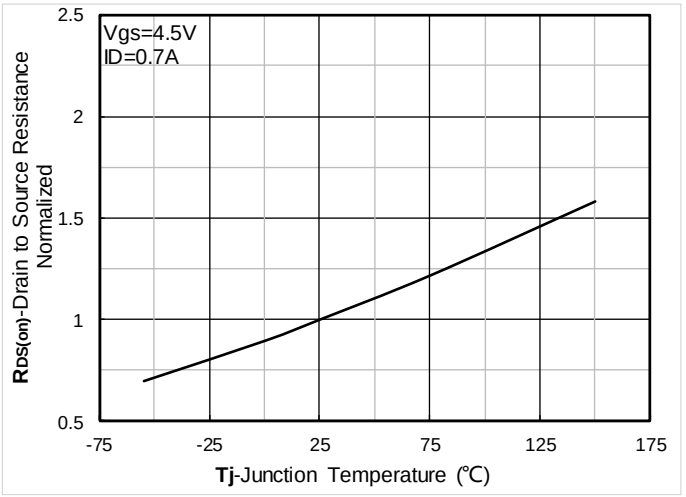


Figure 6. Normalized On-Resistance

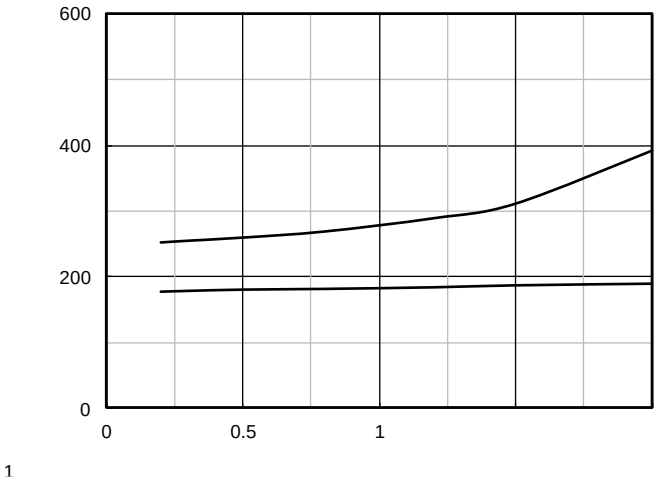


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Figure 7. $R_{DS(on)}$ VS Drain Current

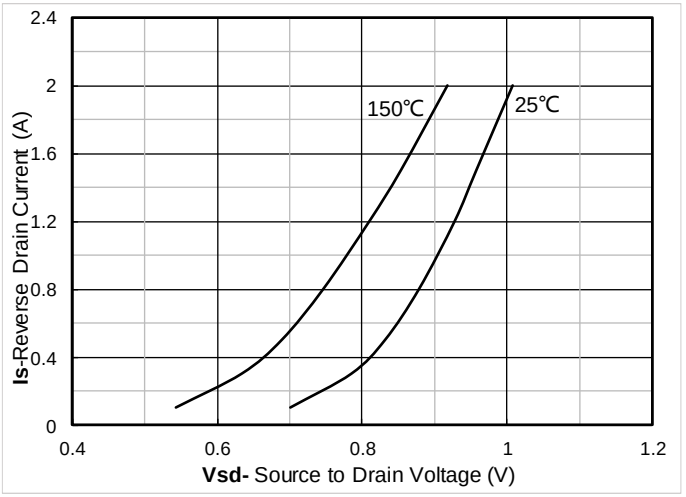


Figure 8. Forward characteristics of reverse diode

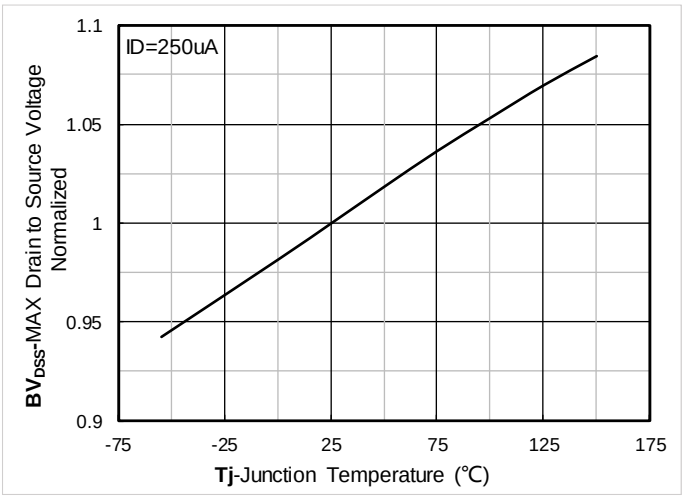


Figure 9. Normalized breakdown voltage

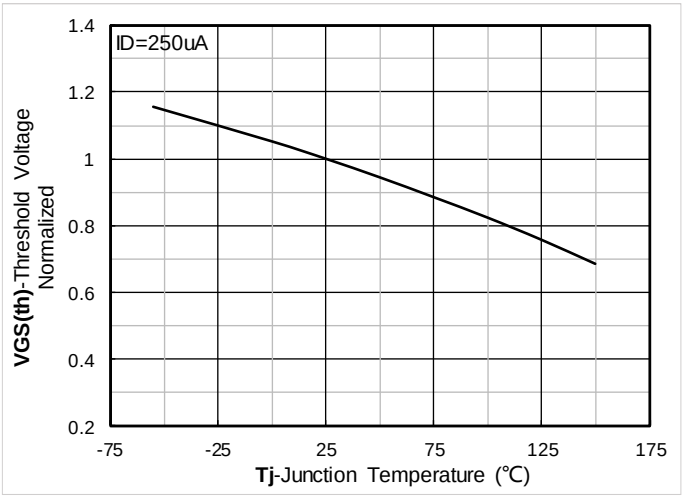


Figure 10. Normalized Threshold voltage

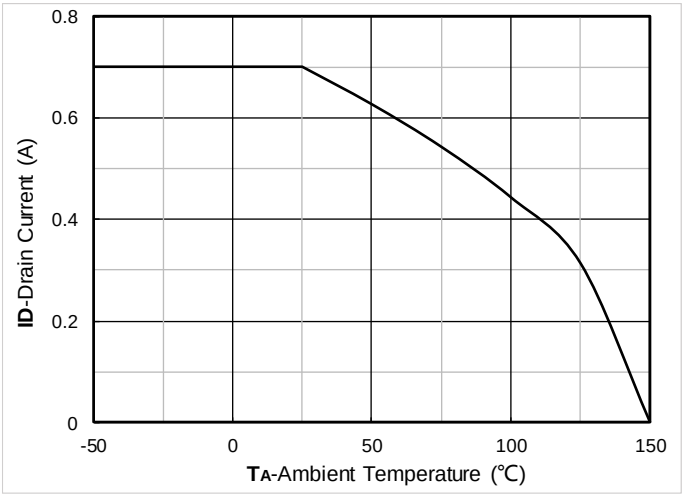


Figure 11. Current dissipation

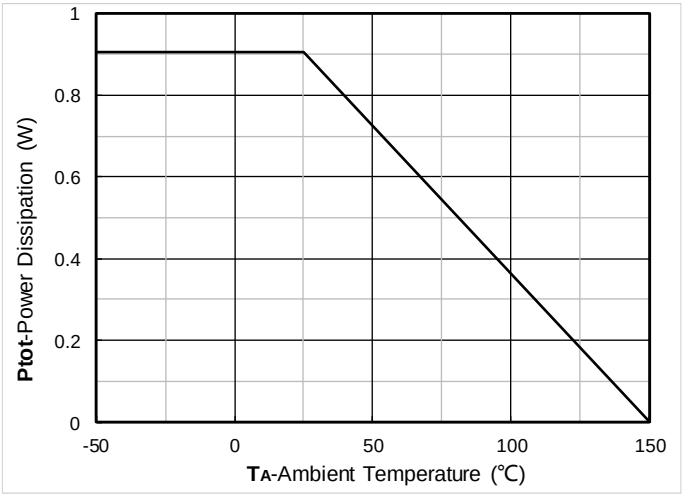


Figure 12. Power dissipation

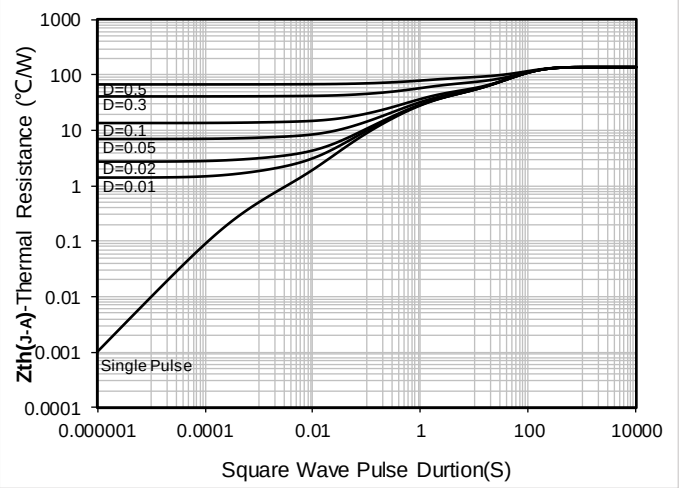


Figure 13. Maximum Transient Thermal Impedance

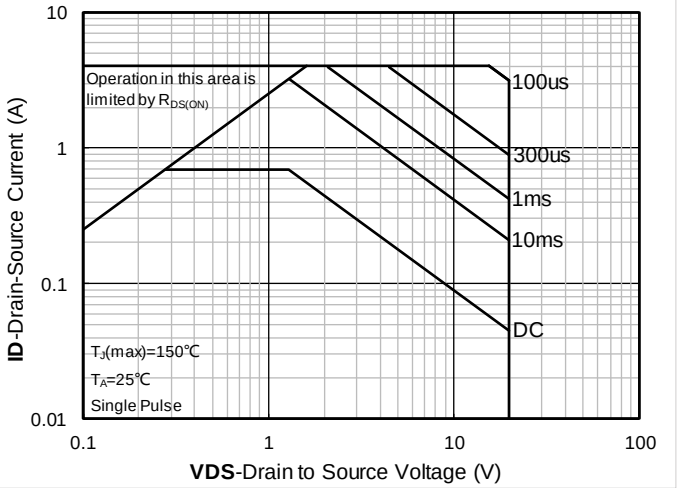
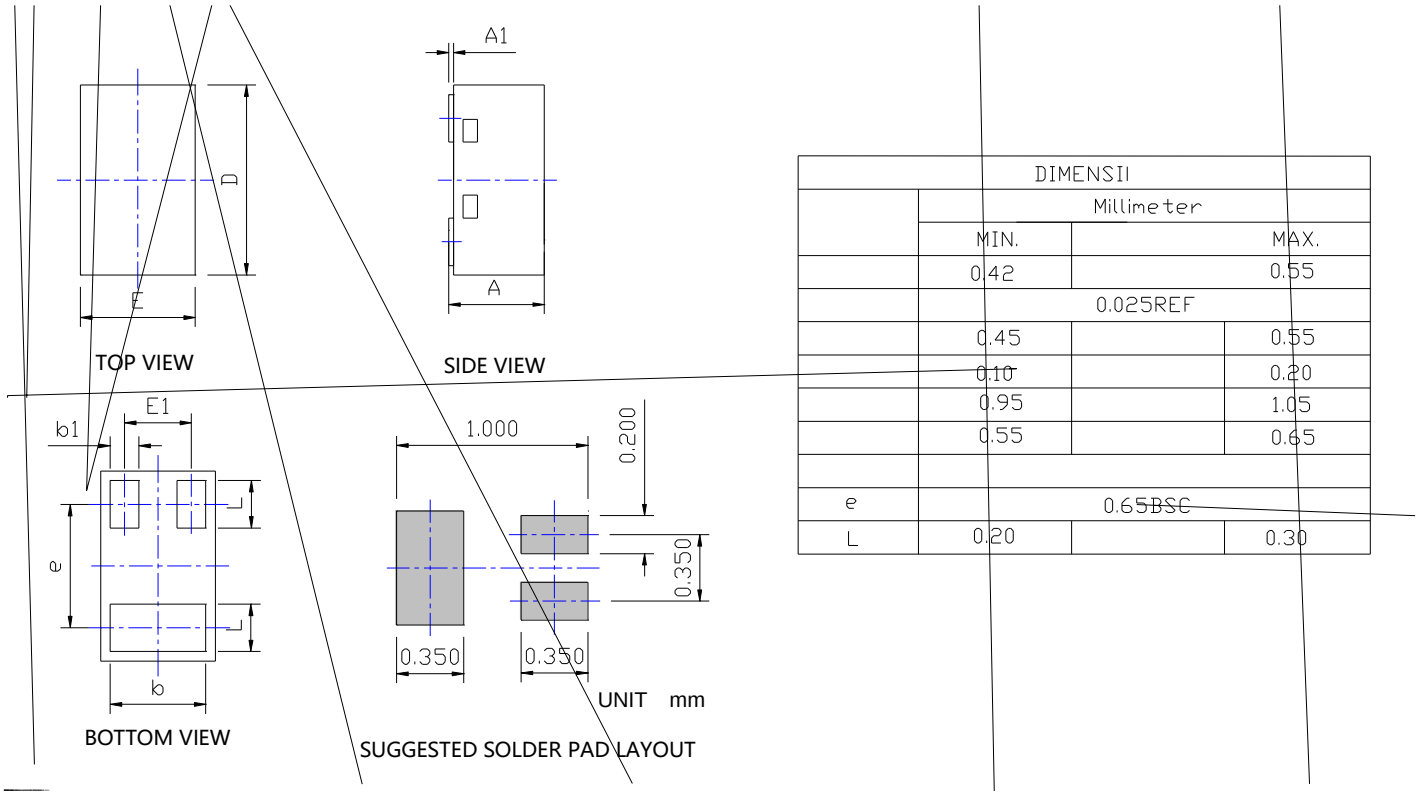


Figure 14. Safe Operation Area

DFN1006-3L Package information



DIMENSII			
	Millimeter		
	MIN.		MAX.
	0.42		0.55
	0.025REF		
	0.45		0.55
	0.10		0.20
	0.95		1.05
	0.55		0.65
e	0.65BSC		
L	0.20		0.30

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