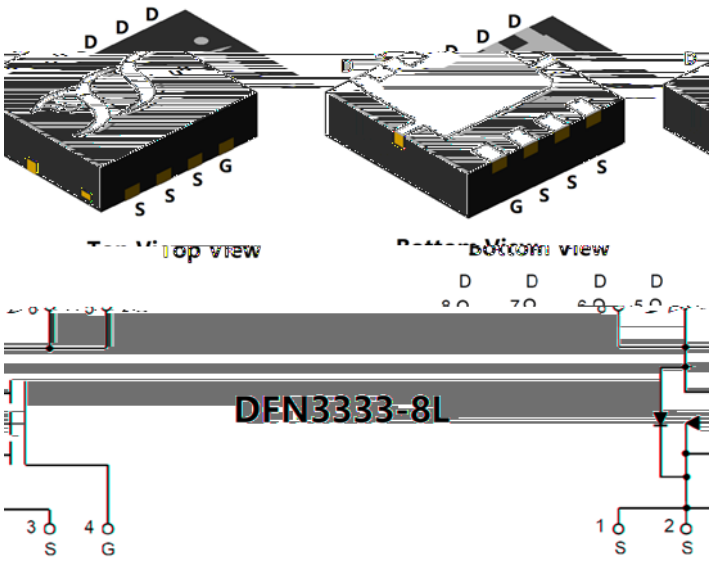
P-Channel Enhancement Mode Field Effect Transistor



Product Summary

- V_{DS} -60 V
- I_D -30 A
- $R_{DS(ON)}$(at V_{GS}=-10V) 24mΩ
- $R_{DS(ON)}$(at V_{GS}=-4.5V) 33mΩ
- 100% EAS Tested

General Description

- Trench Power LV MOSFET technology
- Low $R_{DS(on)}$ & FOM
- Extremely low switching loss
- Excellent stability and uniformity
- Moisture Sensitivity Level 3
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free

Applications

- Power management
- Portable equipment

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

Parameter		Symbol	Limit	Unit
Drain-source Voltage		V_{DS}	-60	V
Gate-source Voltage		V_{GS}	±20	V
Drain Current	T_A=25℃	I_D	-6	A
	T_A=100℃		-3.5	
	T_C=25℃		-30	
	T_C =100℃		-19	
Pulsed Drain Current [A]		I_{DM}	-120	A
Avalanche energy [B]		EAS	100	mJ
Total Power Dissipation [C]	T_A=25℃	P_D	2	W
	T_A=100℃		0.8	
	T_C=25℃		69	
	T_C =100℃		27	
Junction and Storage Temperature Range		T_J ,T_{STG}	-55 +150	℃

■Thermal resistance

Parameter		Symbol	Typ	Max	Units
Thermal Resistance Junction-to-Ambient [D]	Steady-State	$R_{\theta JA}$	50	60	℃/W
Thermal Resistance Junction-to-Case	Steady-State	$R_{\theta JC}$	1.4	1.8	

■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJQ30P06AJ	F1	Q30P06AJ	5000	10000	100000	13'' 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=-250μA	-60	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-60V, V_{GS}=0V	-	-	-1	μA
		V_{DS}=-60V, 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=-250μA		-2.0	-3.0	V

Static Drain-Source On-R

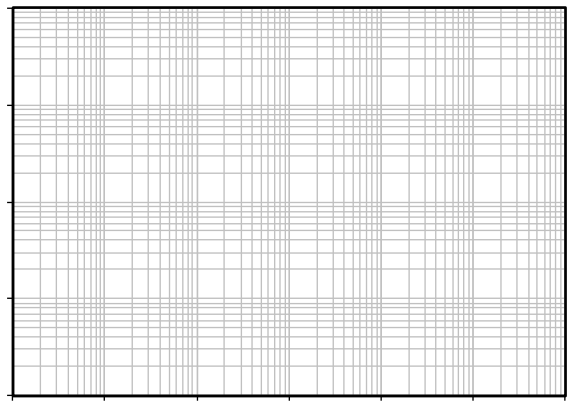


Figure 13. Maximum Transient Thermal Impedance

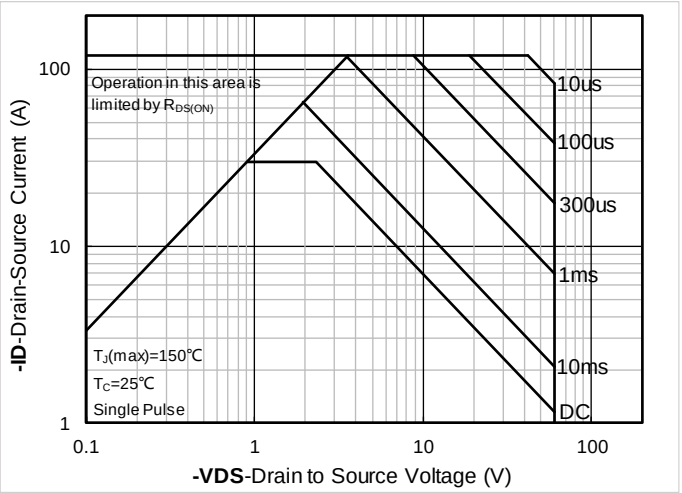


Figure 14. Safe Operation Area

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