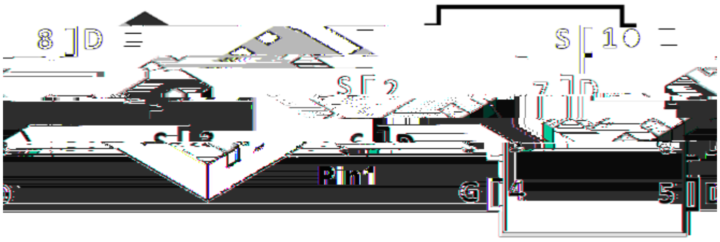
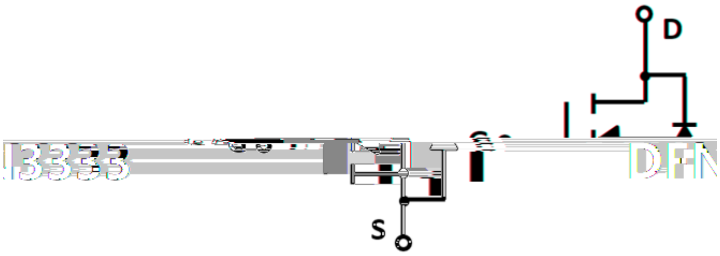
N-Channel Enhancement Mode Field Effect Transistor





Product Summary

● V_{DS}	30 V
● I_D	60 A
● $R_{DS(ON)}$(at V_{GS}=10V)	3.2 mohm
● $R_{DS(ON)}$(at V_{GS}=4.5V)	4.0 mohm
● 100% UIS Tested	
● 100% VDS Tested	

General Description

- Trench Power LV MOSFET technology
- Excellent package for heat dissipation
- High density cell design for low $R_{DS(ON)}$

Applications

- DC-DC Converters
- Power management functions
- Backlighting

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

Parameter		Symbol	Limit	Unit
Drain-source Voltage		V_{DS}	30	V
Gate-source Voltage		V_{GS}	±20	V
Drain Current	T_C=25	I_D	60	A
	T_C=100		38	
Pulsed Drain Current [A]		I_{DM}	240	A
Total Power Dissipation @ T_C=25 [B]		P_D	75	W
Total Power Dissipation @ T_C=100 [B]		P_D	30	W
Total Power Dissipation @ T_A=25 [C]		P_D	6.2	W
Single Pulse Avalanche Energy [D]		E_{AS}	400	mJ
Thermal Resistance Junction-to-Case		$R_{\theta JC}$	1.67	/ W
Thermal Resistance Junction-to-Ambient		$R_{\theta JA}$	20	/ W
Junction and Storage Temperature Range		T_J ,T_{STG}	-55 +150	

■ Ordering Infor.Õ M M

					OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJQ60N03A	F1	Q60N03A	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	30			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=30V,V_{GS}=0V			1	μA
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				

[redacted]

[redacted]

■ Typical Performance Characteristics

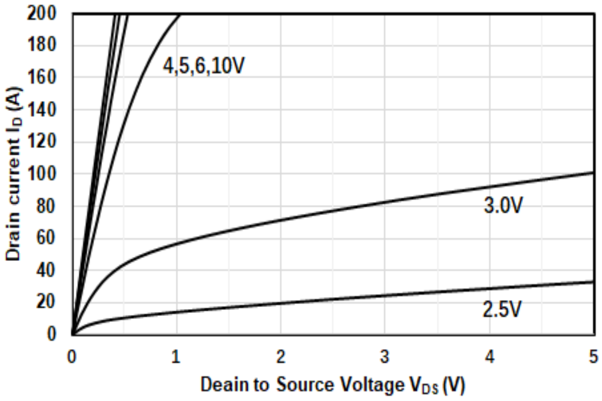


Figure1. Output Characteristics

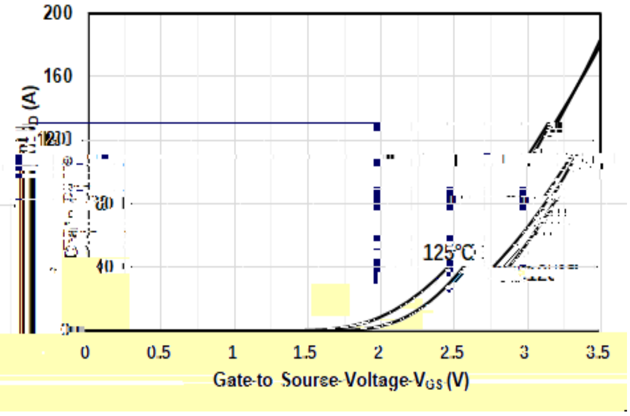


Figure2. Transfer Characteristics

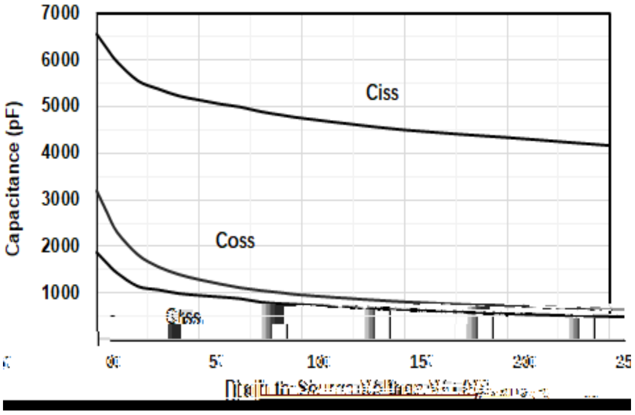


Figure3. Capacitance Characteristics

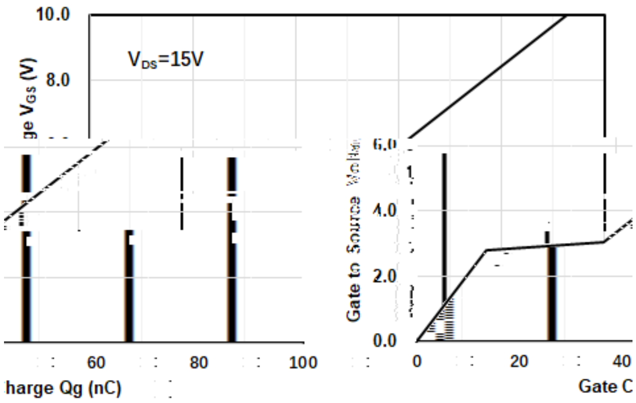


Figure4. Gate Charge

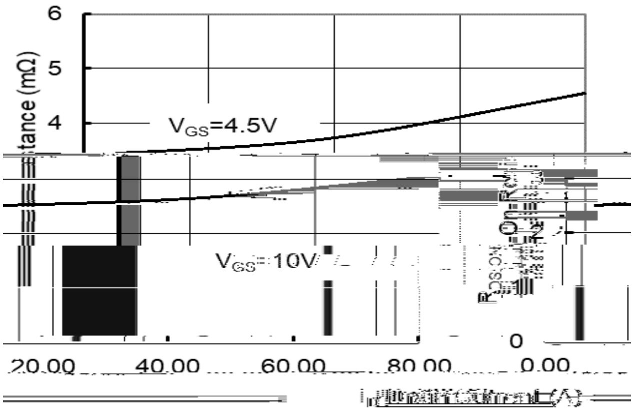


Figure5. Drain-Source on Resistance

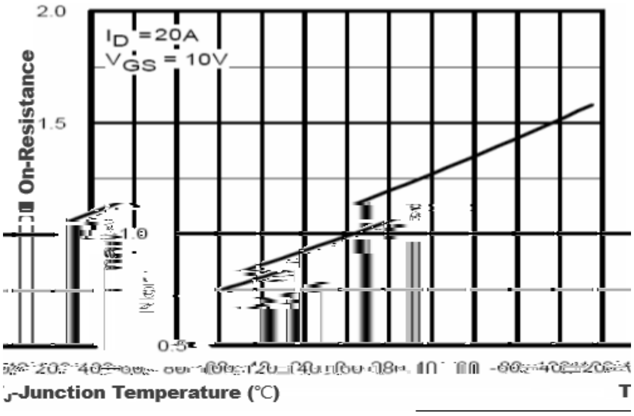


Figure6. Drain-Source on Resistance

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Disclaimer

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