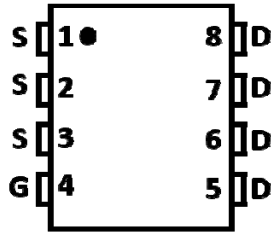
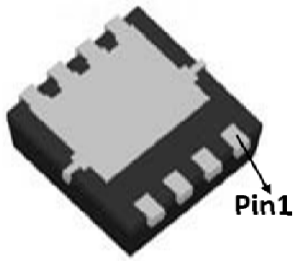
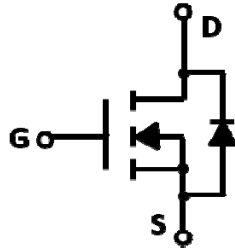


N-Channel Enhancement Mode Field Effect Transistor



DFN3.3X3.3



Product Summary

- V_{DS} 100 V
- I_D 35 A
- $R_{DS(ON)}$ (at $V_{GS}=10V$) <20 mohm
- $R_{DS(ON)}$ (at $V_{GS}=4.5V$) <26 mohm
- 100% UIS Tested
- 100% ∇V_{DS} Tested

General Description

- Low $R_{DS(on)}$ & FOM
- Extremely low switching loss
- Excellent stability and uniformity
- Fast switching and soft recovery

Applications

- Consumer electronic power supply
- Motor control
- Synchronous-rectification
- Isolated DC/DC convertor
- Invertors

■ Absolute Maximum Ratings ($T_A=25^\circ C$ unless otherwise noted)

Parameter		Symbol	Limit	Unit
Drain-source Voltage		V_{DS}	100	V
Gate-source Voltage		V_{GS}	± 20	V
Drain Current ^A	$T_C=25^\circ C$	I_D	35	A
Pulsed Drain Current ^B	$T_C=25^\circ C$	I_{DM}	120	A
Avalanche energy ^C		EAS	72	mJ
Total Power Dissipation ^D	$T_C=25^\circ C$	P_D	54	W
Thermal Resistance Junction-to-Case		$R_{\theta JC}$	2.3	$^\circ C/W$
Thermal Resistance Junction-to-Ambient ^E		$R_{\theta JA}$	62	$^\circ C/W$
Junction and Storage Temperature Range		T_J, T_{STG}	-55~+150	$^\circ C$

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJQ35N10A	F1	Q35N10	5000	10000	100000	13" reel



YJQ35G10A

■ Electrical Characteristics (T_J=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} = 0V, I _D =250μA	100			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =100V, 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 =250μA	1.0	1.8	2.5	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} = 10V, I _D =10A		17	20	mΩ
		V _{GS} = 4.5V, I _D =10A		20	26	
Diode Forward Voltage	V _{SD}	I _S =10A, V _{GS} =0V		0.85	1.3	V
Maximum Body-Diode Continuous Current	I _S				35	A
Dynamic Parameters						
Input Capacitance	C _{iss}	V _{DS} =50V, V _{GS} =0V, f=1MHZ		1190		pF
Output Capacitance	C _{oss}			195		
Reverse Transfer Capacitance	C _{rss}			4.1		
Switching Parameters						
Total Gate Charge	Q _g	V _{GS} =10V, V _{DS} =50V, I _D =10A		20		nC
Gate-Source Charge	Q _{gs}			2.4		
Gate-Drain Charge	Q _{gd}			5.3		
Reverse Recovery Charge	Q _{rr}	I _F =10A, di/dt=100A/us		95		
Reverse Recovery Time	t _{rr}			50		
Turn-on Delay Time	t _{D(on)}	V _{GS} =10V, V _{DD} =50V, I _D =10A R _{GEN} =2.2Ω		17.5		ns
Turn-on Rise Time	t _r			3.9		
Turn-off Delay Time	t _{D(off)}			33.5		
Turn-off fall Time	t _f			3.2		

- A. Calculated continuous current based on maximum allowable junction temperature.
 B. Repetitive rating; pulse width limited by max. junction temperature.
 C. V_{DS}=90V, V_{DD}=50V, V_{GS}=10V, L=1mH.
 D. P_D is based on max. junction temperature, using junction-case thermal resistance.
 E. The value of R_{θJA} is measured with the device mounted on 1 in 2 FR-4 board with 2oz. Copper, in a still air environment with T_A=25 °C.



■ Typical Performance Characteristics

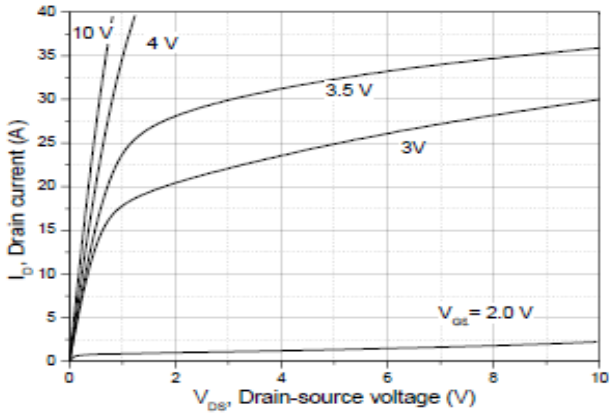


Figure1. Output Characteristics

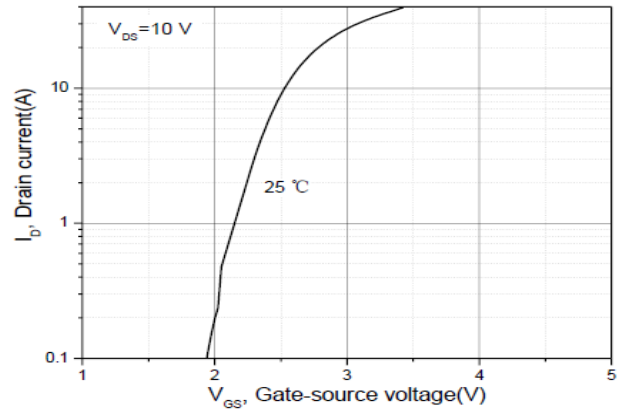


Figure2. Transfer Characteristics

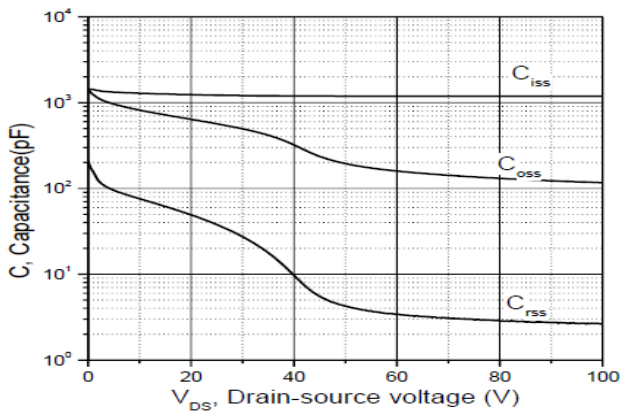


Figure3. Capacitance Characteristics

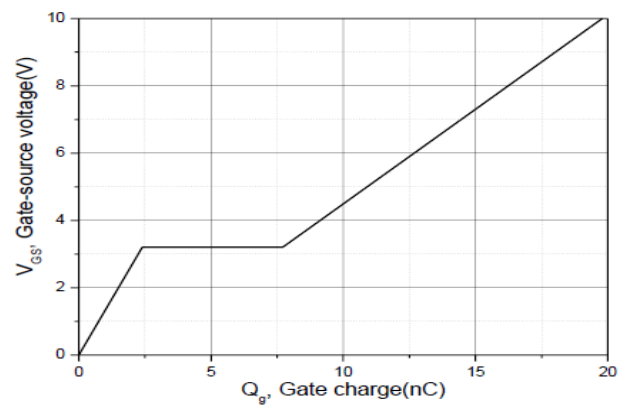


Figure4. Gate Charge

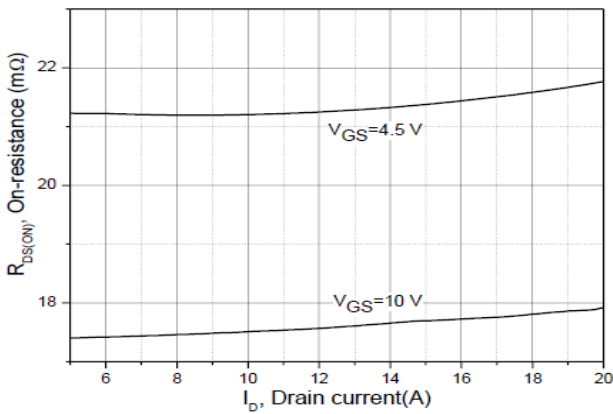


Figure5. Drain-Source on Resistance

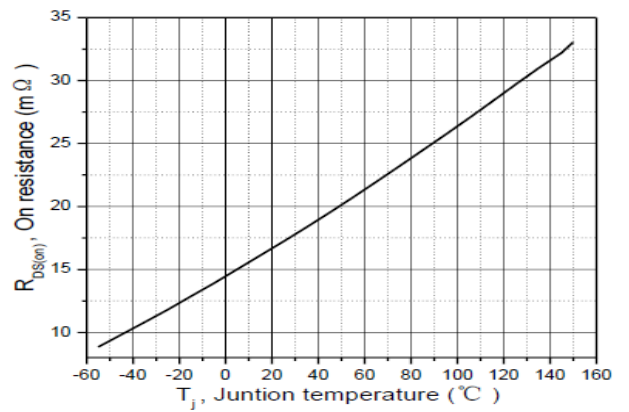


Figure6. Drain-Source on Resistance



YJQ35G10A

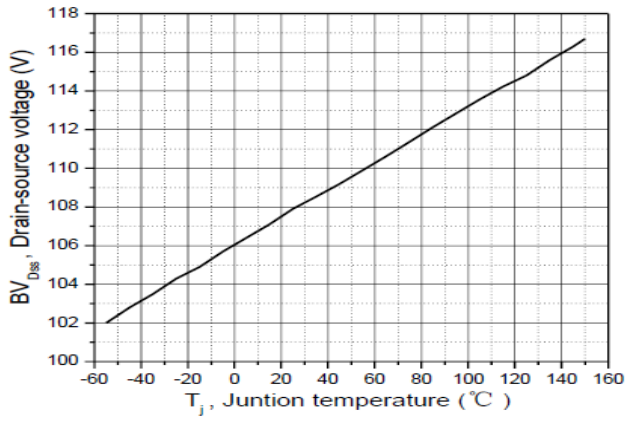


Figure7. Drain-source breakdown voltage

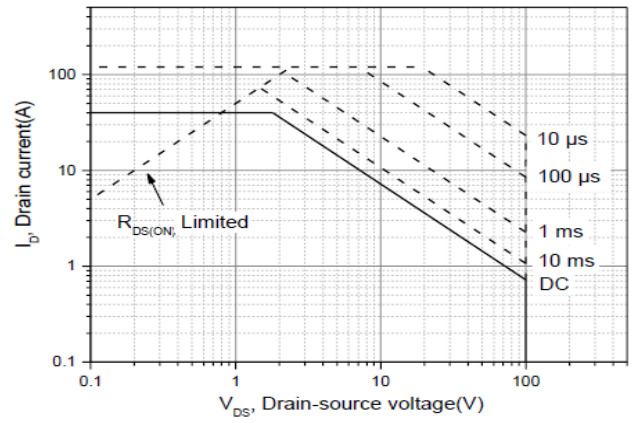
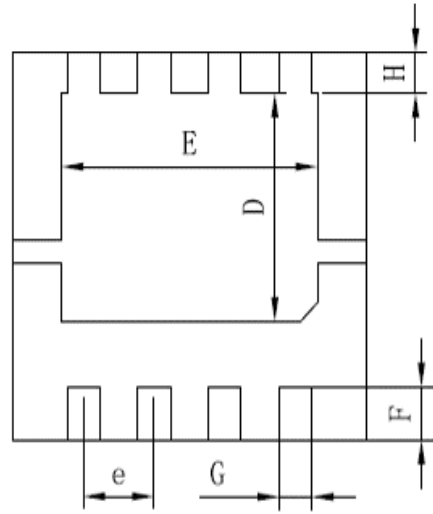
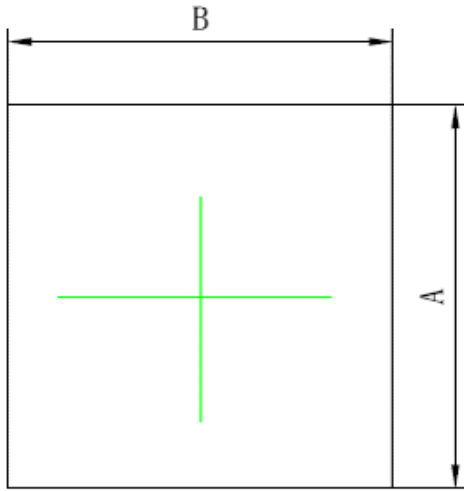
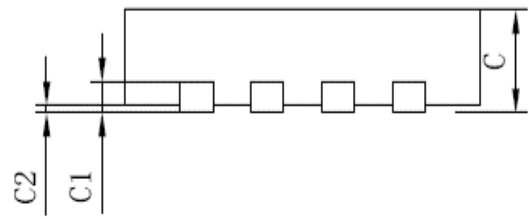


Figure8.Safe Operation Area

■ DFN3.3X3.3 Package information



A	B	C	C1
3.25±0.05	3.25±0.05	0.8±0.05	0.2±0.02
C2	D	E	F
0.05Max	1.9±0.1	2.35±0.15	0.45±0.05
G	H	e	
0.3±0.05	0.35±0.05	0.65±0.05	
单位: mm			





YJQ35G10A

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