



Fox-Yannis 800W/12V 電源解決方案

About Yannis 800W/12V Power Solution

方案介紹 (Solution Overview)

- 800W/DC 12~48V (Output)/ AC 110V~264V (Input)
- Yannis Topology: AFB + Single PFC + LLC

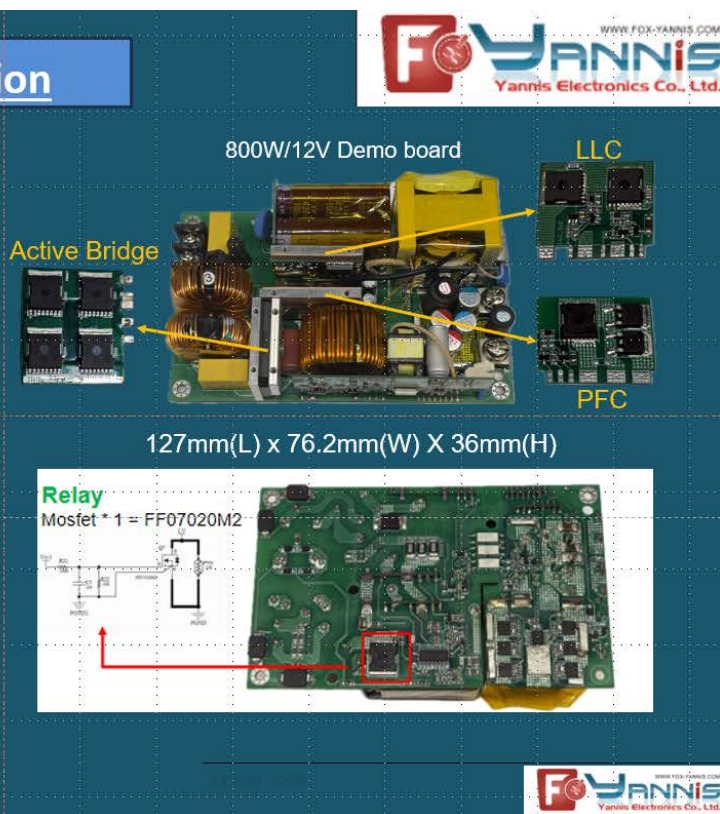
Active Full Bridge Mosfet * 4 = FF07020M2	Single PFC Mosfet * 1 = GR-65J050MS	LLC Mosfet * 2 = GR-65J050MS

技術特色 (Technical Highlights)

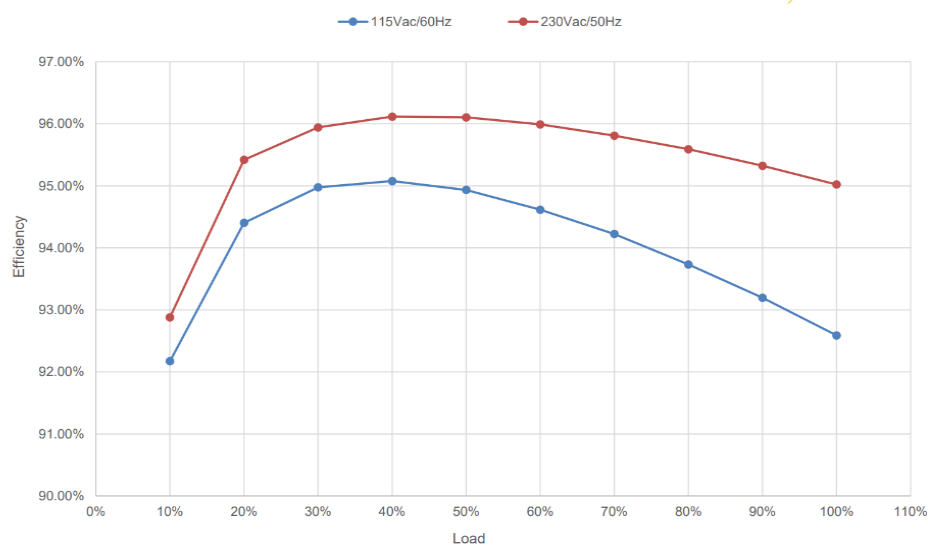
- 高效率 AC/DC 架構
- 採用高性能 Power Semiconductor (GaN / SiC兩者方案可選擇)
- 高頻、高功率密度設計
- 半載的效率可以達到約96%

技術支援 (Design Support)

- 我司FAE可協助共同開發
- Power Stage的優化
- Prototype Support
- RD 技術交流



115Vac/60Hz	
Load	Eff
10%	92.17%
20%	94.40%
30%	94.98%
40%	95.08%
50%	94.93%
60%	94.61%
70%	94.22%
80%	93.73%
90%	93.20%
100%	92.59%
230Vac/50Hz	
Load	Eff
10%	92.88%
20%	95.42%
30%	95.94%
40%	96.11%
50%	96.10%
60%	95.99%
70%	95.81%
80%	95.59%
90%	95.32%
100%	95.02%



iDEAL 200V / 300V MOSFET 業界領先規格，強勢登場!!



iS20M5R5S1TC

SuperQ™ 200V N-Channel Power MOSFET

FEATURES

- Industry leading $R_{DS(on)}$ in TOLT package
- High short-circuit withstand capability (SCWC)
- 100% UIS tested in production
- Low switching losses, Q_{sw} and E_{oss}
- Easier parallelling with $\pm 0.5V$ gate threshold

APPLICATIONS

- Motor control
- Boost converters and SMPS control FETs
- Secondary side synchronous rectifier

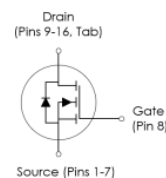
DESCRIPTION

Engineered for high-efficiency SMPS and motor drives, this 200V SuperQ MOSFET delivers ultra-low conduction and switching losses in a robust TOLT package. Featuring best-in-class $R_{DS(on)}$ and Q_{sw} , it minimizes heat dissipation at both full and partial loads.

PRODUCT SUMMARY



TOLT



Parameter	Value	Unit
$T_A = 25^\circ C$		
V_{DS}	200	V
$R_{DS(on),max}$	5.5	m Ω
I_D	151	A
Q_G	113	nC
Q_{sw}	7.5	nC
E_{oss}	4.0	μJ



ORDERING INFORMATION

Part Number	Package	Marking	Packaging
iS20M5R5S1TC	TOLT	iS20M5R5S1	13" 2,000pcs T&R



iS20M8R8S1C

SuperQ™ 200-V N-Channel Power MOSFET

FEATURES

- Lowest on-resistance, $R_{DS(on)}$
- Optimized Q_{sw} for hard switching
- Ultra low energy stored, E_{oss}
- Ultra low turn-off energy, E_{off}
- Low reverse recovery time T_{rr} and Q_{rr}

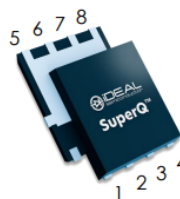
APPLICATIONS

- Boost converters and SMPS control FETs
- Secondary side synchronous rectifier
- Motor control

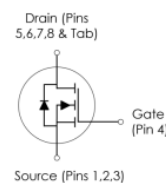
DESCRIPTION

This 200V, 8.8m Ω_{MAX} SuperQ power MOSFET is designed to minimize losses in SMPS applications through leading $R_{ds,on}$, ultra low energy storage, fast turn-off time and minimal switching charge.

PRODUCT SUMMARY



PDFN 5x6mm



Parameter	Value	Unit
$T_A = 25^\circ C$		
V_{DS}	200	V
$R_{DS(on),max}$	8.8	m Ω
I_D	113	A
Q_G	58	nC
Q_{sw}	3	nC
E_{oss}	1.8	μJ



ORDERING INFORMATION

Part Number	Package	Marking	Packaging
iS20M8R8S1C	PDFN 5X6	iS20M8R8S1	13" 5,000pcs T&R



iS30M035S1C

SuperQ™ 300V N-Channel Power MOSFET

FEATURES

- Industry leading resistance in PDFN 5x6 package
- High short-circuit withstand capability (SCWC)
- 100% UIS tested in production, 175°C rated
- Low switching losses, Q_{sw} and E_{oss}
- Easier parallelling with $\pm 0.5V$ gate threshold

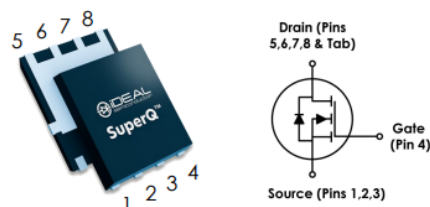
APPLICATIONS

- LED Lighting
- Boost converters and SMPS control FETs
- Motor Drive

DESCRIPTION

Engineered for LED lighting and high-efficiency SMPS and motor drives, this 300V SuperQ MOSFET delivers ultra-low conduction and switching losses in a robust PDFN 5x6 package. Featuring low $R_{DS(on)}$ and Q_{sw} , it minimizes heat dissipation at both full and partial loads.

PRODUCT SUMMARY



PDFN 5x6mm

Parameter $T_A = 25^\circ C$	Value	Unit
V_{DS}	300	V
$R_{DS(on),max}$	35	m Ω
I_D	39	A
Q_G	28	nC
Q_{sw}	2.7	nC
E_{oss}	1.4	μJ



iS30M035S1F

SuperQ™ 300V N-Channel Power MOSFET

FEATURES

- 175°C Industrial temperature rating
- High short-circuit withstand capability (SCWC)
- 100% UIS tested in production
- Low switching losses, Q_{sw} and E_{oss}
- Easier parallelling with $\pm 0.5V$ gate threshold

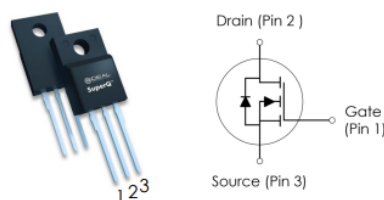
APPLICATIONS

- LED Lighting
- Boost converters and SMPS control FETs
- Motor Drive

DESCRIPTION

Engineered for LED lighting and high-efficiency SMPS and motor drives, this 300V SuperQ MOSFET delivers ultra-low conduction and switching losses in a robust ITO-220 package. Featuring low $R_{DS(on)}$ and Q_{sw} , it minimizes heat dissipation at both full and partial loads.

PRODUCT SUMMARY



ITO-220

Parameter $T_A = 25^\circ C$	Value	Unit
V_{DS}	300	V
$R_{DS(on),max}$	35	m Ω
I_D	21	A
Q_G	28	nC
Q_{sw}	2.7	nC
E_{oss}	1.4	μJ



ORDERING INFORMATION

Part Number	Package	Marking	Packaging
iS30M035S1F	ITO-220	iS30M035S1	50pc Tube

FSS SiC MOSFET 全新 QDPAK 產品系列

FF07009M2
Product Datasheet

Silicon Carbide MOSFET

750V, 9mΩ SiC MOSFET – Falcon M2 Series



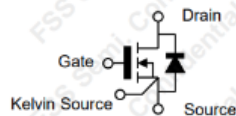
Features

- Optimized $R_{DS(on)}$ with Rapid Switching Behavior
- Compatible with Standard Gate Drivers
- Clean Kelvin-Source Switching Pin-out
- High Avalanche Endurance Capability
- Optimized for High Power Density Applications
- RoHS Compliant and Halogen Free

Potential Applications

- Switching Mode Power Supply
- PFC & DC/DC Converter
- Portable Adaptor
- Renewable Energy
- Power Inverter
- Motor Driver

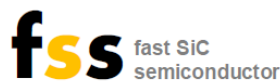
Product Information:



Benefits

- Higher System Efficiency
- Increase Parallel Device Convenience
- Enable High Temperature Application
- Allow High Frequency Operation
- Realize Compact and Lightweight Systems
- High Reliability

Product Information	Packaging Type		
	TOLT	QDPAK	TOLL
Gate	8	1	1
Drain	9-16, Tab	12-22, Tab	Tab
Source	1-6	3-11	3, 4, 5, 6, 7, 8
Kelvin Source	7	2	2
Part Number	FF07009M2K	FF07009M2L	FF07009M2F
Marking	FF07009M2	FF07009M2	FF07009M2
Continuous Drain Current	260A	230A	260A
Power Dissipation	1153W	882W	1153W

FF12030M2
Product Datasheet

Silicon Carbide MOSFET

1200V, 30mΩ SiC MOSFET – Falcon M2 Series



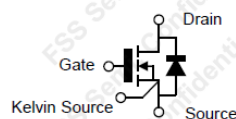
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- RoHS Compliant and Halogen Free

Potential Applications

- Switching Mode Power Supply
- PFC & DC/DC Converter
- EV Charging Station
- UPS
- Renewable Energy
- Power Inverter & Motor Driver

Product Information:



Benefits

- Higher System Efficiency
- Increase Parallel Device Convenience
- Enable High Temperature Application
- Allow High Frequency Operation
- Realize Compact and Lightweight Systems
- High Reliability

Product Information	Packaging Type	
	QDPAK	T2PAK
Gate	1	1
Drain	12-22, Tab	Tab
Source	3-11	3-7
Kelvin Source	2	2
Part Number	FF12030M2L	FF12030M2T
Marking	FF12030M2	FF12030M2
Continuous Drain Current	82 A	77 A