

Infineon FS100R12PT4 EconoPACK™4 1200V IGBT4 Module

Infineon IGBT4 power module with lower switching losses and higher operating temperature.

The FS100R12PT4 from Infineon is a 6-pack IGBT4 generation high-voltage power module in EconoPACK™4 package. With a breakdown voltage of 1200V for a current of 100A, the module is optimized for high power converters and motor drivers. The power module integrates in a new power package the improved IGBT4 and the optimized EMCON4 diodes from Infineon.

The EconoPACK™ IGBT4 offers a very low on-resistance™ (1.4 mΩ) and a high operating temperature (up to 150 °C) in a 130.0 x 103.0 x 20.55 mm package. The IGBT4 differs from the IGBT3 for an adjusted backside, a different gate dimensions to obtain lower switching losses and increase softness for the same robustness.

This full reverse costing analysis has been conducted to provide insight on technology data, manufacturing cost and selling price of the Infineon FS100R12PT4, including a technological comparison between Infineon IGBT3 and IGBT4 and EconoPACK4 vs. HybridPACK2.



**REVERSE COSTING ANALYSIS
REPORT BY** 

EconoPACK4 IGBT4 Module
106 pages
November 2014
Pdf file + Xls file

PRICE :

Full report: EUR 2,990
Technology report: EUR 1,990

COMPLETE TEARDOWN WITH:

- Detailed photos and identification
- Comparison of IGBT4 vs. IGBT3
- Comparison of EconoPACK4 and HybridPACK2
- Manufacturing process flow
- In-depth economical analysis
- Manufacturing cost breakdown
- Selling price estimation

TABLE OF CONTENTS

Overview / Introduction

Companies Profile

Physical Analysis

- Physical Analysis Methodology
- Package Views & Dimensions
- Package Cross-Section
- Infineon EconoPACK4 vs HybridPACK2
- **IGBT Analysis**
- Die View, Dimensions & Marking
- Gate Supply Line
- Guard Ring
- Trench Gate Cross-Section
- Revelation
- Infineon IGBT4 vs IGBT3
- **Diode Analysis**
- Dimensions
- Guard Ring
- Revelation

Manufacturing Process Flow

- Global Overview
- IGBT and Diode Process Flow
- Package Process Flow

Cost Analysis

- Synthesis of the cost analysis
- Main steps of economic analysis
- Yields Hypotheses
- IGBT and Diode Front-End Cost
- IGBT and Diode Wafer Cost
- IGBT and Diode Cost per process steps
- IGBT and Diode: Equipment Cost per Family
- IGBT and Diode: Material Cost per Family
- IGBT and Diode: Back-End
- FS100R12PT4 – DBC Package
- FS100R12PT4 – Module Package
- FS100R12PT4 - Final Test

Price Estimation

Contact

Performed by



Distributed by



ORDER FORM

Please process my order for "Infineon IGBT 4" Reverse Costing Report

Ref.: SP14186

Full Reverse Costing report: EUR 2,990*

Technology Analysis** report: EUR 1,990

*For price in dollars please use the day's exchange rate

*All reports are delivered electronically in pdf format

*For French customer, add 20 % for VAT

** Technology Analysis report contains only Physical Analysis & Manufacturing Process Flow

SHIP TO

Name (Mr/Ms/Dr/Pr):

.....

Job Title:

.....

Company:

.....

Address:

.....

City:

State:

.....

Postcode/Zip:

.....

Country*:

.....

*VAT ID Number for EU members:

.....

Tel:

.....

Email:

.....

Date:

.....

Signature :

.....

PAYMENT

DELIVERY on receipt of payment:

By credit card:

Number: _____ Expiration date: __/__/

Card Verification Value: _____



By bank transfer:

HSBC – CAE- Le Terminal -2 rue du Charron- 44800 St Herblain France

BIC code : CCFRFRPP

In EUR

Bank code : 30056 - Branch code : 00955 - Account : 09550003234

IBAN : FR76 3005 6009 5509 5500 0323 439

In USD

Bank code : 30056 - Branch code : 00955 - Account : 09550003247

IBAN : FR76 3005 6009 5509 5500 0324 797

Return order by:

FAX: +33 (0)253 55 10 59

MAIL: SYSTEM PLUS CONSULTING

21 rue La Nouë Bras de Fer

44200 Nantes – France

Contact:

sales@systemplus.fr, Tel: +33 (0)240 18 09 16

BILLING CONTACT

Name:

Email:

Phone:

Our prices are subject to change.

Please check our new releases and price changes on www.systemplus.fr

The present document is valid 6 months after its publishing date: 25th November 2014.

ABOUT SYSTEM PLUS CONSULTING

System Plus Consulting specializes in the **cost analysis** of electronics, from **semiconductor devices** to **electronic systems**, and has developed a complete range of services and costing tools to provide **in-depth production cost studies** and to estimate the **objective selling price** of a product.

COSTING SERVICES

- ✓ **On demand Reverse Costing studies** are performed on ICs, ASICs, MEMs, Power Devices, ECUs, electronic boards and full electronic systems.
- ✓ **The catalog of available reports** includes cost analyzes on MEMS, LEDs, Modules and Electronic systems.

All these analyses are performed using in-house developed, proprietary costing tools and their technological databases.

COSTING TOOLS

« Purchaser » tools

- ✓ IC Price+ to estimate the cost of any integrated circuit
- ✓ Power Price+ for any power component or module

- ✓ PCB Price+ for printed circuit boards
- ✓ SYS.Cost+ for electronic boards and systems

Cost Simulation Tools, process flow based

- ✓ MEMS CoSim+
- ✓ LED CoSim+
- ✓ Power CoSim+
- ✓ 3D Package CoSim+
- ✓ Sapphire CoSim+

Other costing models can be developed according to customer specifications

Distributed by



Performed by



TERMS AND CONDITIONS OF SALES

1. INTRODUCTION

The present terms and conditions apply to the offers, sales and deliveries of services managed by System Plus Consulting except in the case of a particular written agreement.

Buyer must note that placing an order means an agreement without any restriction with these terms and conditions.

2. PRICES

Prices of the purchased services are those which are in force on the date the order is placed. Prices are in Euros and worked out without taxes. Consequently, the taxes and possible added costs agreed when the order is placed will be charged on these initial prices.

System Plus Consulting may change its prices whenever the company thinks it necessary. However, the company commits itself in invoicing at the prices in force on the date the order is placed.

3. REBATES and DISCOUNTS

The quoted prices already include the rebates and discounts that System Plus Consulting could have granted according to the number of orders placed by the Buyer, or other specific conditions. No discount is granted in case of early payment.

4. TERMS OF PAYMENT

System Plus Consulting delivered services are to be paid within 30 days end of month by bank transfer except in the case of a particular written agreement.

If the payment does not reach System Plus Consulting on the deadline, the Buyer has to pay System Plus Consulting a penalty for late payment the amount of which is three times the legal interest rate. The legal interest rate is the current one on the delivery date. This penalty is worked out on the unpaid invoice amount, starting from the invoice deadline. This penalty is sent without previous notice.

When payment terms are over 30 days end of month, the Buyer has to pay a deposit which amount is 10% of the total invoice amount when placing his order.

5. OWNERSHIP

System Plus Consulting remains sole owner of the delivered services until total payment of the invoice.

6. DELIVERIES

The delivery schedule on the purchase order is given for information only and cannot be strictly guaranteed. Consequently any reasonable delay in the delivery of services will not allow the buyer to claim for damages or to cancel the order.

7. ENTRUSTED GOODS SHIPMENT

The transport costs and risks are fully born by the Buyer. Should the customer wish to ensure the goods against lost or damage on the base of their real value, he must imperatively point it out to System Plus Consulting when the shipment takes place. Without any specific requirement, insurance terms for the return of goods will be the carrier current ones (reimbursement based on good weight instead of the real value).

8. FORCE MAJEURE

System Plus Consulting responsibility will not be involved in non execution or late delivery of one of its duties described in the current terms and conditions if these are the result of a force majeure case. Therefore, the force majeure includes all external event unpredictable and irresistible as defined by the article 1148 of the French Code Civil?

9. CONFIDENTIALITY

As a rule, all information handed by customers to system Plus Consulting are considered as strictly confidential.

A non-disclosure agreement can be signed on demand.

10. RESPONSABILITY LIMITATION

The Buyer is responsible for the use and interpretations he makes of the reports delivered by System Plus Consulting. Consequently, System Plus Consulting responsibility can in no case be called into question for any direct or indirect damage, financial or otherwise, that may result from the use of the results of our analysis or results obtained using one of our costing tools.

11. APPLICABLE LAW

Any dispute that may arise about the interpretation or execution of the current terms and conditions shall be resolved applying the French law.

If the dispute cannot be settled out-of-court, the competent Court will be the Tribunal de Commerce de Nantes.