MF0 FCP2 U1

Flip chip package

Rev. 3.1 — 8 February 2007
073631

Product data sheet
PUBLIC

1. General description

1.1 Scope

This document specifies the products MF0FCP2U10 and MF0FCP2U11:

- The MF0FCP2U10/DH is the integrated circuit MF0ICU10 in the package SOT732CA2.
- The MF0FCP2U11/DH is the integrated circuit MF0ICU11 in the package SOT732CA2.

Therefore this document encompasses all information not covered by the specification of the package and/or the functional specification of the integrated circuit:

- Detailed information on the package is given in the “specification FCP2 flip chip package”.
- Functionality of the integrated circuit is described in the functional specification MF0 IC U1.

2. Features

3. Applications

4. Ordering information

Table 1. Ordering information

Type number	Package		
	Name	Description	Ordering Code
MF0FCP2U10/DH		Hot laminated transport tape	12NC: 9352 725 94118
MF0FCP2U11/DH		Hot laminated transport tape	12NC: 9352 725 96118

5. Functional description

5.1 Integrated circuit

Functionality of the integrated circuit is described in the “Functional specification MF0 IC U1x“.

founded by Philips

6. Limiting values

Table 2. Limiting values[1][2][3][4]

In accordance with the Absolute Maximum Rating System(IEC 134)

Symbol	Parameter	Conditions		Min	Max	Unit
T_{OP}	Operating temperature			-25	70	°C
I_{IN}	Input Current				30	mA
T_{STOR}	Storage temperature		[5]			
V_{ESD}	ESD Voltage Level	MIL883D, human body	[6]	2		kV_{peak}

[1] Stresses above one or more of the limiting values may cause permanent damage to the device

[2] These are stress ratings only. Operation of the device at these or any other conditions above those given in the Characteristics section of the specification is not implied

[3] Exposure to limiting values for extended periods may affect device reliability

[4] This product includes circuitry specifically designed for the protection of its internal devices from the damaging effects of excessive static charge. Nonetheless, it is suggested that conventional precautions be taken to avoid applying greater than the rated maxima

[5] Storage & Processing Temperature: refer to Package Specification “FCP2 Flip Chip Package”

[6] MIL Standard 883-C method 3015; Human body model: C = 100 pF, R = 1.5 kΩ

7. Characteristics

7.1 Electrical characteristics

T_{jop}= −25 to +70°C

Table 3. Characteristics [1][2][3][4]

Symbol	Parameter	Conditions		Min	Type	Max	Unit
F_{IN}	Input Frequency			-	13.56	-	MHz
C_{IN}	Input capacitance between LA - LB for the integrated circuit MF0ICU10.	22°C, Cp-D, 13.56 MHz, 2 V	[5]	14.85	17	20.13	pF
C_{IN}	Input capacitance between LA - LB for the integrated circuit MF0ICU11.	22°C, Cp-D, 13.56 MHz, 2 V	[5]	42.5	50	57.5	pF
t_W	EEPROM write time			-	3.8	-	ms
t_{RET}	EEPROM data retention	$T_{amb} \leq 55°C$		5	-	-	years
N_{WE}	EEPROM write endurance			10000	-	-	cycles

[1] Stresses above one or more of the limiting values may cause permanent damage to the device

[2] These are stress ratings only. Operation of the device at these or any other conditions above those given in the Characteristics section of the specification is not implied

[3] Exposure to limiting values for extended periods may affect device reliability

[4] Typical ratings are not guaranteed. These values listed are at room temperature

[5] Measured with an HP4258 LCR meter at 13.56 MHz

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8. Support information

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9. Revision history

Table 4. Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes
073610	June 2002	Initial version		1.0
073620	November 2002	Preliminary version		2.0
073630	October 2004	Product data sheet		3.0
073631	8 February 2007	Product data sheet		3.1
Modifications:	• The format of this data sheet has been redesigned to comply with the new identity guidelines of NXP Semiconductors. • Legal texts have been adapted to the new company name where appropriate.			

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10. Legal information

10.1 Data sheet status

Document status[1][2]	Product status[3]	Definition
Objective [short] data sheet	Development	This document contains data from the objective specification for product development.
Preliminary [short] data sheet	Qualification	This document contains data from the preliminary specification.
Product [short] data sheet	Production	This document contains the product specification.

[1] Please consult the most recently issued document before initiating or completing a design.

[2] The term 'short data sheet' is explained in section "Definitions".

[3] The product status of device(s) described in this document may have changed since this document was published and may differ in case of multiple devices. The latest product status information is available on the Internet at URL http://www.nxp.com.

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