DATA SHEET

ADDENDUM

SL2 FCS20

I-CONNECT SLI

Flip Chip Package Specification

Product Specification

Revision 3.0

Public

January 2003

Philips
Semiconductors

PHILIPS

I-CONNECT Specification   **SL2 FCS 20**

CONTENTS

I•CODE® is a registered trademark of Philips Electronics N.V.

I-CONNECT Specification   SL2 FCS 20

1 SCOPE

This document gives specifications for the product SL2FCS20; the I-CONNECT SLI.

- The SL2FCS2001DV/DH is the integrated circuit SL2ICS2001 in the package SOT732AA1.

- The SL2FCS2001DV/DC is the integrated circuit SL2ICS2001 in the package SOT732BB1.

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 FCP 2.1 Flip Chip Package.

- Functionality of the integrated circuit is described in the Functional Specification I•CODE SLI Smart Label IC SL2ICS2001.

I-CONNECT Specification   SL2 FCS 20

2 SPECIFICATIONS

2.1 Chip

Functionality of the integrated circuit is described in the I•CODE SLI Smart Label IC SL2ICS2001 Functional Specification.

2.2 ABSOLUTE MAXIMUM RATINGS[1, 2]

ABSOLUTE MAXIMUM RATINGS	TEST CONDITIONS	MIN	TYP[1]	MAX	UNIT
ESD Voltage Immunity	MIL-STD-883D, Method 3015.7, Human Body Model			± 2	kV_{peak}
Input Peak Current		-60		+60	mApeak
Processing temperature: refer to specification "FCP 2.1 Flip Chip Package"					

NOTES:

1. Stresses above those listed under Absolute Maximum Ratings may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any conditions other than those described in the Operating Conditions and Electrical Characteristics section of this specification is not implied.

2. 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.

2.3 OPERATING CONDITIONS

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP[1]	MAX	UNIT
$T_{j\,op}$	Operating Junction Temperature		- 25		+ 85	°C
$I_{LA\text{-}LB}$	Input Current[2]				30	mA_{rms}
$V_{LA\text{-}LB}$	Minimum Supply Voltage for READ/WRITE/EAS		± 2.5	± 2.6	± 2.9	V_{rms}
f_{op}	Operating Frequency[3]		13.553	13.560	13.567	MHz

NOTES:

1. Typical ratings are not guaranteed. These values listed are at room temperature.

2. The voltage between LA and LB is limited by the on-chip voltage limitation circuitry (corresponding to parameter $I_{LA\text{-}LB}$).

3. Bandwidth limitation (±7 kHz) according to ISM band regulations.

I-CONNECT Specification   **SL2 FCS 20**

2.4 Electrical Characteristics

T_{jop} = - 25 to +85 °C

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP[1]	MAX	UNIT
C_{res}	Input Capacitance between LA - LB[2]	V_{LA-LB} = 2 V_{rms}	22,7	23,5	25,1	pF
P_{min}	Minimum Operating Supply Power[3]			280		µW
m	Modulation of RF Voltage for Demodulator Response	$m = \dfrac{V_{max} - V_{min}}{V_{max} + V_{min}}$	**	**	**	%
$t_{P\,sm}$	Modulation Pulse Length of RF Voltage		**	**	**	µs
t_D	Demodulator Response Time	$m \geq 10\ \%$, 100%	**	**	**	µs
R_{mod}	Load Modulation		**	**	**	Ω
t_{ret}	EEPROM Data Retention	$T_{amb} \leq 55$ °C	10			Years
n_{write}	EEPROM Write Endurance		100 000			Cycles

NOTES:

1. Typical ratings are not guaranteed. These values listed are at room temperature.

2. Measured with an HP4285A LCR meter at 13.56 MHz.

3. Including losses in resonant capacitor and rectifier.

** : refer to ISO/IEC 15693-2 and 15693-3 including pulse shapes and tolerances; proper coil design assumed

3 ORDERING INFORMATION

Ordering Name	Description	Ordering Code
SL2FCS2001DV/DH	I-CONNECT SLI, Hot laminated backside tape	12NC: 9352 725 07118
SL2FCS2001DV/DC	I-CONNECT SLI, Cold laminated backside tape	12NC: 9352 725 06118

I-CONNECT Specification   **SL2 FCS 20**

4 DEFINITIONS

Data sheet status	
Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.
Limiting values	
Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics section of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.	
Application information	
Where application information is given, it is advisory and does not form part of the specification.	

5 DISCLAIMERS

5.1 Life support applications

These products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. Philips customers using or selling these products for use in such applications do so on their own risk and agree to fully indemnify Philips for any damages resulting from such improper use or sale.

5.2 Licence Policy

Purchase of this Philips IC with a functionally according to ISO/IEC 15693 Standard does not convey an implied license under any patent right on this standard. A license for the Philips portfolio of patents on the ISO/IEC 15693 Standard can be obtained via the Philips Intellectual Property and Standards department. For more information please contact the nearest Philips Semiconductors sales office.

I-CONNECT Specification   **SL2 FCS 20**

6 REVISION HISTORY

Table 1 Addendum Flip Chip Package Specification Revision History

REVISION	DATE	CPCN	PAGE	DESCRIPTION
3.0	Jan. 2003			Product version
2.1	Oct. 2002	-	5	typo of 12NC ordering code
2.0	Sept. 2002			Preliminary version
1.0	May 2002			Initital version.

I-CONNECT Specification   **SL2 FCS 20**

I-CONNECT Specification   **SL2 FCS 20**

NOTES

Philips Semiconductors - a worldwide company

Contact Information

For additional information please visit **http://www.semiconductors.philips.com**.Fax: **+31 40 27 24825**
For sales offices addresses send e-mail to: **sales.addresses@www.semiconductors.philips.com**.

Philips
Semiconductors

PHILIPS

PHILIPS

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[NXP]():
[SL2FCS2001DV/DH,11]()