

High Frequency Ceramic Solutions

Impedance-Matched Highly Integrated Ceramic Passive Component for Texas Instruments CC112x, CC117x & CC12xx

P/N 0900PC15J0013

Detail Specification: 1/15/2013

Page 1 of 5

General Specifications

| | | | |
|--------------------|---------------------------|------------------------|------------------------|
| Part Number | | 0900PC15J0013 | |
| Frequency | | 868 ~ 928MHz | |
| Tx Mode | Insertion Loss | 2.0 dB max. | |
| | Attenuation (min.) | 35.0 min. @ 2 x fo MHz | |
| | Attenuation (min.) | TX-ANT | 35.0 min. @ 3 x fo MHz |
| | Attenuation (min.) | | 35.0 min. @ 4 x fo MHz |
| | Attenuation (min.) | | 35.0 min. @ 5 x fo MHz |
| | Return Loss | TX & ANT | 9.5 dB min. |
| Rx Mode | Frequency Range | 868-915 MHz | |
| | Insertion Loss | 2.5 dB max. | |
| | Return Loss | TX-ANT | 9.5 dB min. |
| | Phase Diff. (deg) | 180±15 | |
| | Amp. Diff. | 2.0 dB max. | |

| | |
|---------------------------------------|---|
| Reel Quantity | 4,000 |
| Operating Temperature | -40 to +85°C |
| Recommended Storage Conditions | +5 ~ +35°C, Humidity: 45~75%RH, 18 mos. Max |

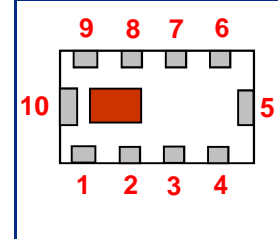


Terminal Configuration

| No. | Function |
|-----|----------|
| 1 | LNA_N |
| 2 | LNA_P |
| 3 | TRX |
| 4 | PA |
| 5 | GND |
| 6 | GND |
| 7 | ANT |
| 8 | GND |
| 9 | GND |
| 10 | GND |

Mechanical Dimensions

| | In | mm |
|---|--------------------|-----------------|
| L | 0.079 ± 0.008 | 2.00 ± 0.20 |
| W | 0.049 ± 0.008 | 1.25 ± 0.20 |
| T | 0.039 max. | 1.0 max. |
| a | 0.010 ± 0.004 | 0.25 ± 0.10 |
| b | 0.012 ± 0.006 | 0.30 ± 0.15 |
| c | 0.008 +.004/-0.006 | 0.20 +0.1/-0.15 |
| p | 0.020 ± 0.004 | 0.50 ± 0.10 |



Mounting Considerations

* Line width should be designed to provide 50 ohm impedance, depending on PCB material and thickness

Units: mm

Johanson Technology, Inc. reserves the right to make design changes without notice.
All sales are subject to Johanson Technology, Inc. terms and conditions.



www.johansontechnology.com

4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821

Ver 1.2

2012 Johanson Technology, Inc. All Rights Reserved

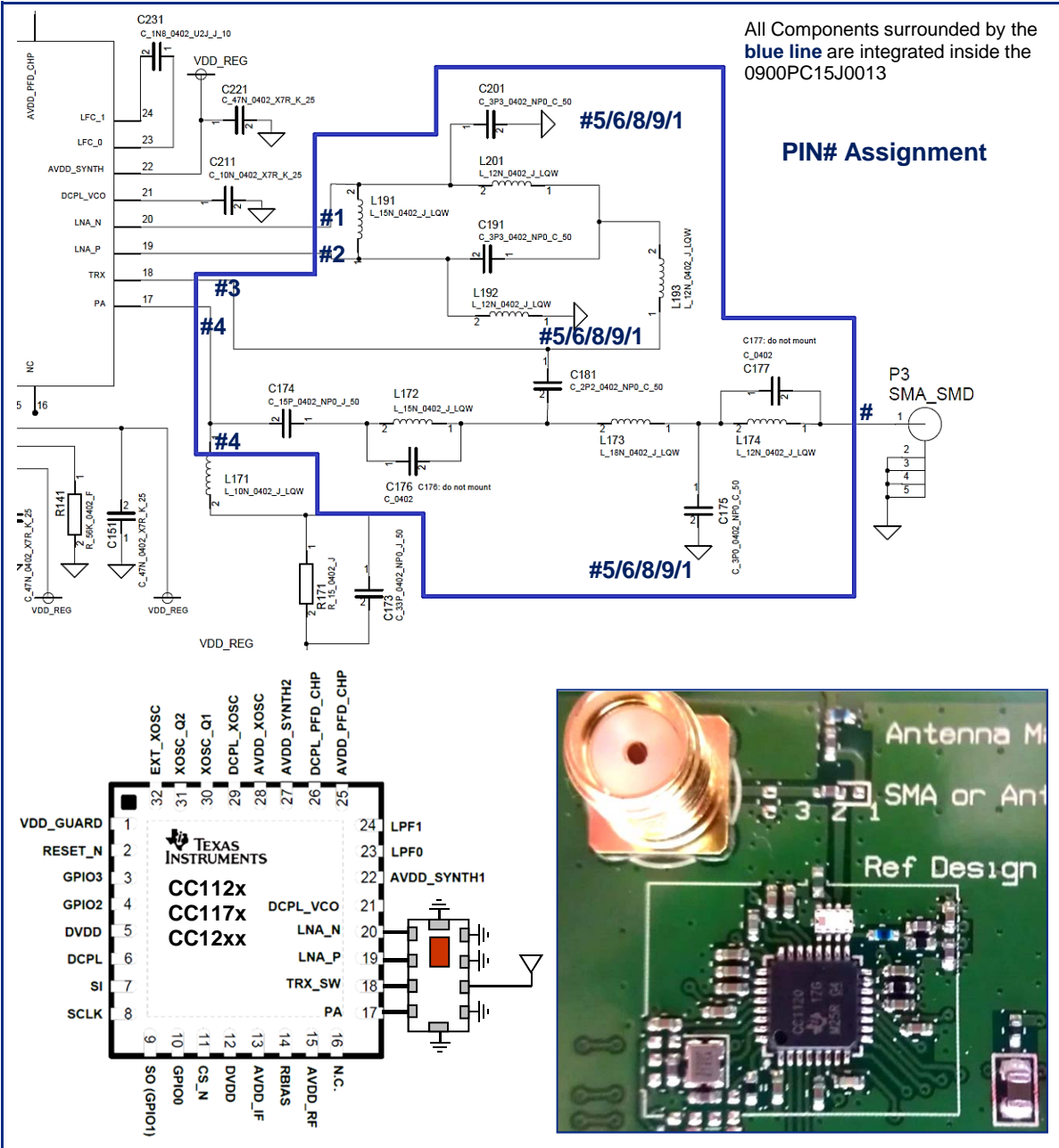
High Frequency Ceramic Solutions

Impedance-Matched Highly Integrated Ceramic Passive Component for Texas Instruments CC112x, CC117x & CC12xx
 Detail Specification: 1/15/2013

P/N 0900PC15J0013

Page 2 of 5

Circuit Schematic and Application



Johanson Technology, Inc. reserves the right to make design changes without notice.
 All sales are subject to Johanson Technology, Inc. terms and conditions.



www.johansontechnology.com

4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821

Ver 1.2

2012 Johanson Technology, Inc. All Rights Reserved

High Frequency Ceramic Solutions

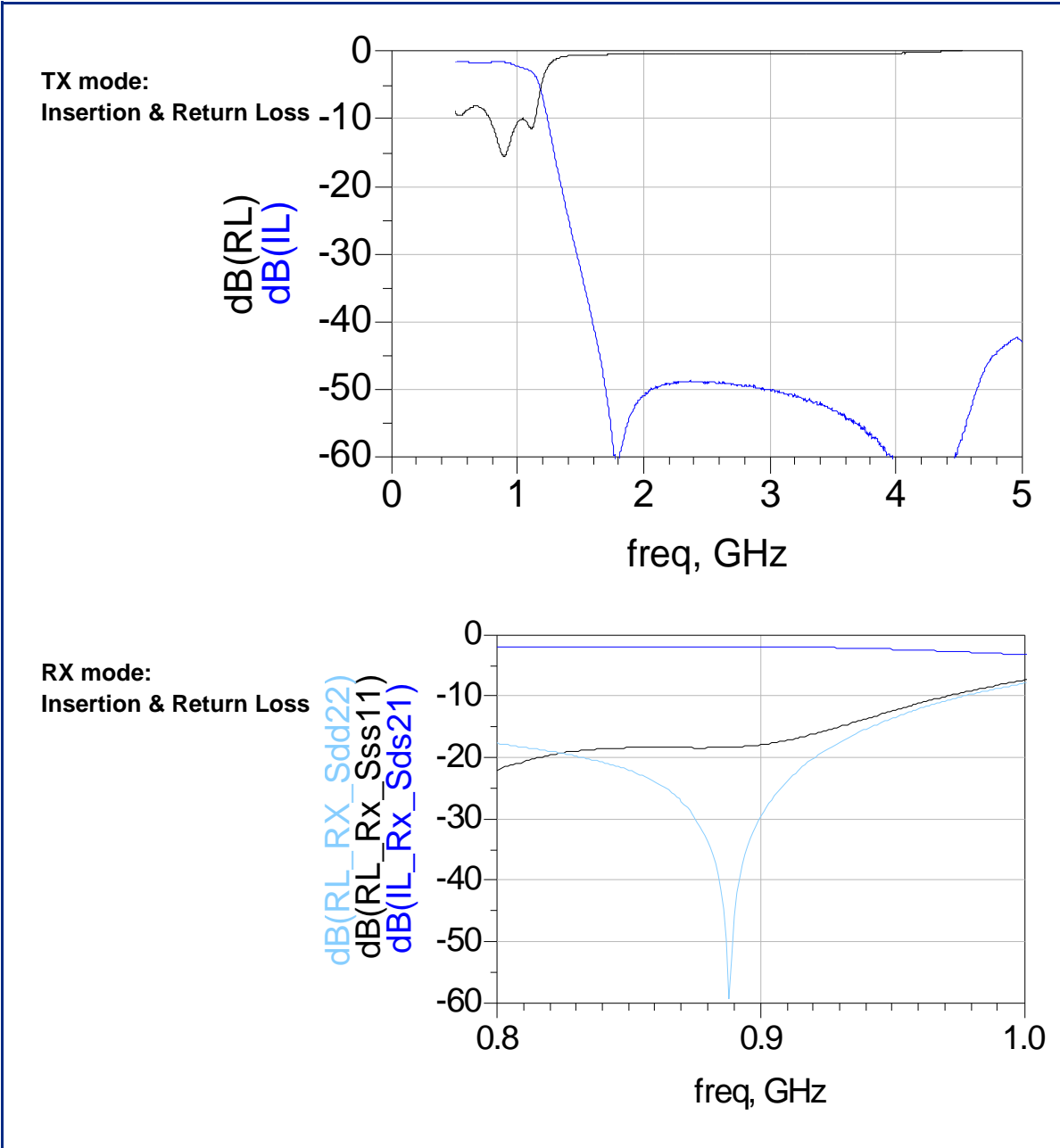
Impedance-Matched Highly Integrated Ceramic Passive
Component for Texas Instruments CC112x, CC117x & CC12xx

P/N 0900PC15J0013

Detail Specification: 1/15/2013

Page 3 of 5

Typical Electrical Performance (T=25°C)



Johanson Technology, Inc. reserves the right to make design changes without notice.
All sales are subject to Johanson Technology, Inc. terms and conditions.



www.johansontechnology.com

4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821

Ver 1.2

2012 Johanson Technology, Inc. All Rights Reserved

High Frequency Ceramic Solutions

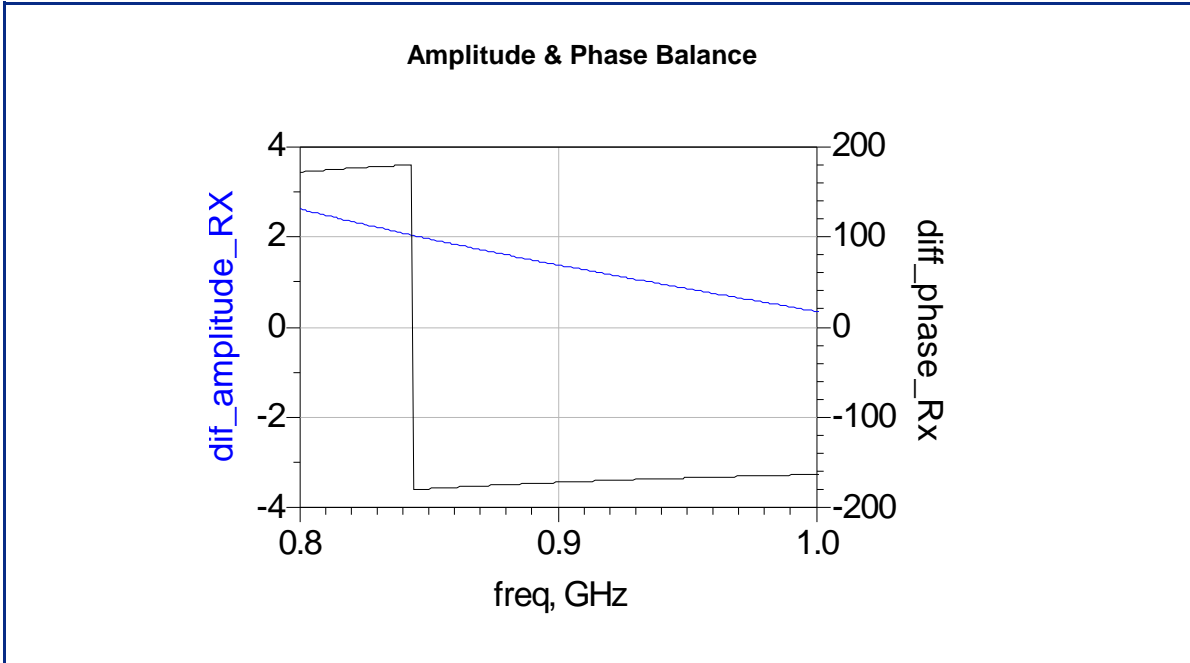
Impedance-Matched Highly Integrated Ceramic Passive
Component for Texas Instruments CC112x, CC117x & CC12xx

P/N 0900PC15J0013

Detail Specification: 1/15/2013

4 of 5

Typical Electrical Performance (T=25°C)



P/N Ordering

| | | | |
|--------------------------|-----------------|------------------------|--------------------------|
| Packaging Style* | Bulk | Suffix = S | Eg. 0900PC15J0013S |
| | T & R | Suffix = E | Eg. 0900PC15J0013E |
| | T & R (Reverse) | Suffix = R | Eg. 0900PC15J0013R |
| Termination Style | 100% Tin | Suffix = None | Eg. 0900PC15J0013(E/R/S) |
| | Tin / Lead | Please consult Factory | |

*<http://johansontechnology.com/en/integrated-passives/integrated-passive-tape-a-reel-packaging.html>



Johanson Technology, Inc. reserves the right to make design changes without notice.
All sales are subject to Johanson Technology, Inc. terms and conditions.



www.johansontechnology.com

4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821

Ver 1.2

2012 Johanson Technology, Inc. All Rights Reserved

High Frequency Ceramic Solutions

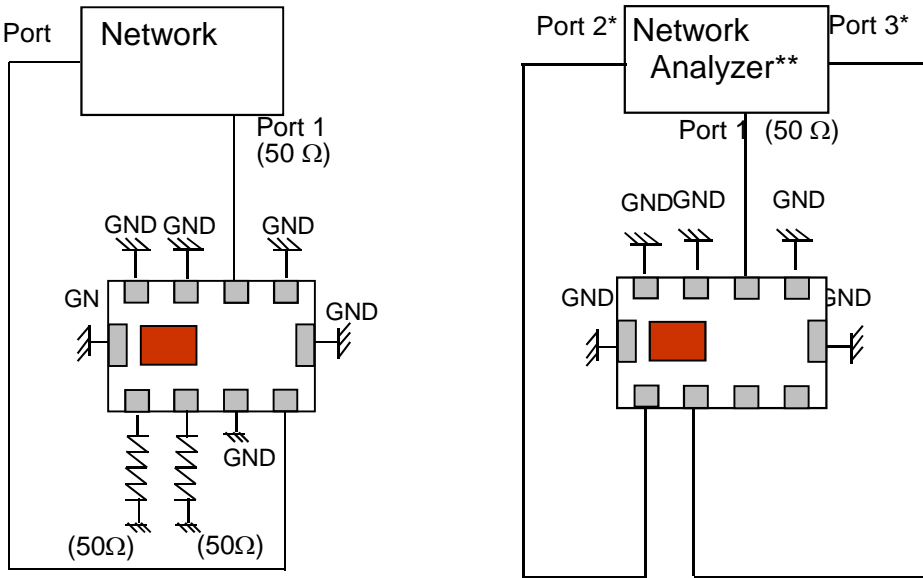
Impedance-Matched Highly Integrated Ceramic Passive
Component for Texas Instruments CC112x, CC117x & CC12xx

P/N 0900PC15J0013

Detail Specification: 1/15/2013

Page 5 of 5

Measuring Diagram



Tx :

Port1: Antenna Port
Port1 Terminate impedance:
50ohm
Port2: PA Port
Port2 Terminate impedance:
Complex conjugate to
impedance of TI CC112X PA
pin
 $IL = S_{21}$
 $RL = S_{11} / S_{22}$
**E5071B / C from Agilent

RX:

Port 1: Antenna Port
Port1 Terminate impedance: 50ohm
Ports 2 and 3: Rx Balanced Port
*Port 2 and 3 Terminate impedance :
Complex conjugate to $1/2 \times$ (Balance
impedance of TI CC112X LNA_N /
LNA_P pins)
 $IL = S_{ds21}$
 $RL = S_{ss11} / S_{dd22}$
 $Amp_balance = dB(S(3,1)/S(2,1))$
 $Phase_balance = Phase(S(3,1)/S(2,1))$

Johanson Technology, Inc. reserves the right to make design changes without notice.
All sales are subject to Johanson Technology, Inc. terms and conditions.



www.johansontechnology.com

4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821

Ver 1.2

2012 Johanson Technology, Inc. All Rights Reserved

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9