

To our customers,

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## Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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## Evaluation Board Information

# **EC- $\mu$ PC3223TB** **Wideband Amplifier** **(For DBS LNB) Evaluation Board**

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- **Evaluation Board Pattern Layout**
- **Power Gain Data**
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- **2.15 GHz 2nd/3rd Harmonics vs. P<sub>in</sub>**

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**This document outlines general applications for this product. The application circuits and circuit constants provided in this document are simply examples and should not be used for mass production design. Be aware also that there is no intention to standardize the restrictions and characteristics of these application circuits.**

**The characteristics of high-frequency devices in particular vary depending on the external components and mounting pattern used.**

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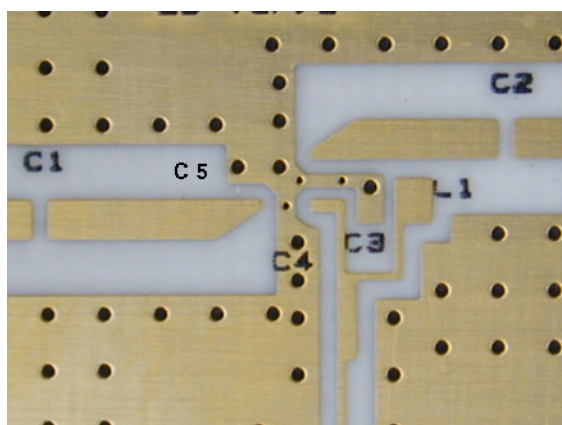
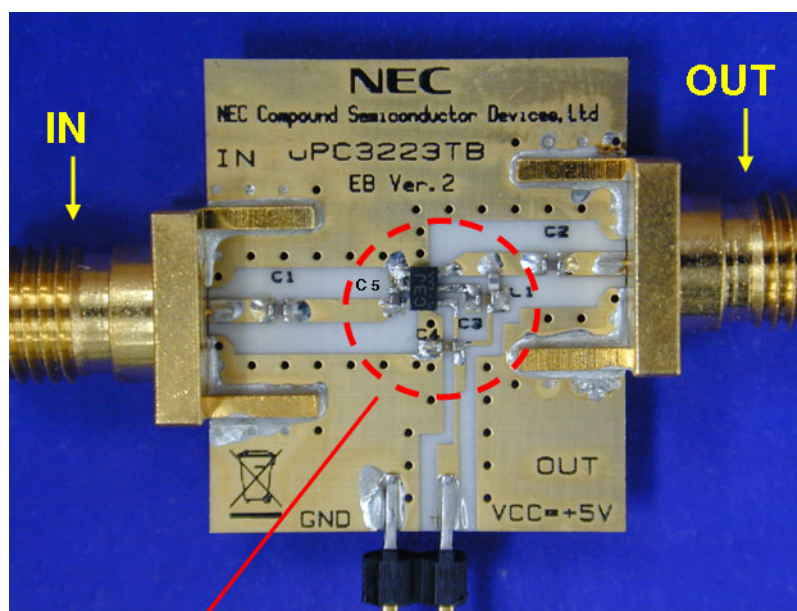
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## Evaluation Board Pattern Layout

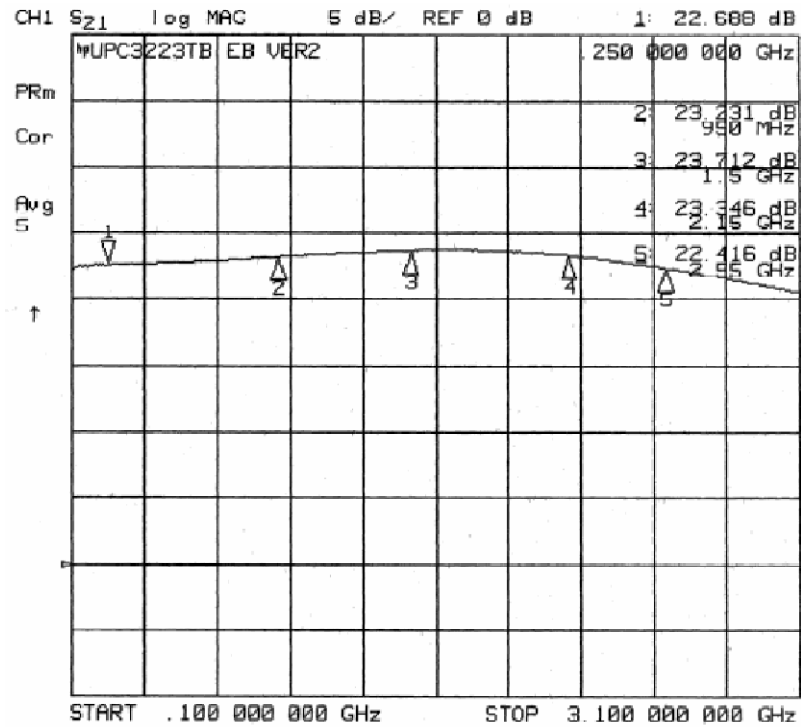


size 19 mm × 21.46 mm

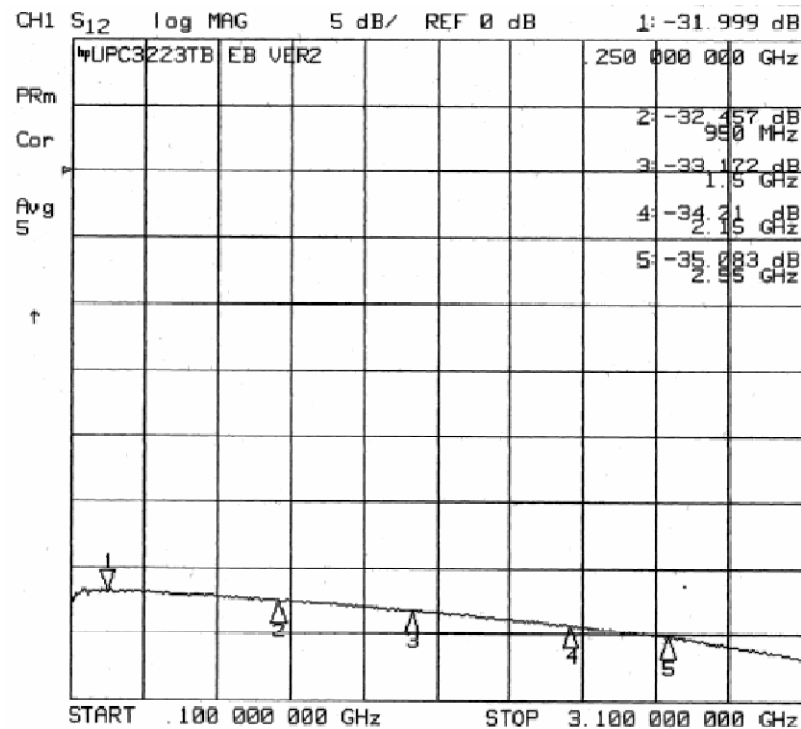
substrate RO4003 (Rogers)  
t = 0.51 mm,  $\epsilon_r = 3.38$

Parts	Model No.	Value	Maker	Symbol
Chip Capacitance	GRM1552C1H101JZ01	100 pF	Murata	C1, C2
	GRM155B11H102KA01	1 000 pF	Murata	C3, C4
	GRM1554C1HR50KZ01	0.5 pF	Murata	C5
Chip Inductor	AML1005HR10JT	100 nH	FDK	L1
PC Terminal	A2-2PA-2.54DSA	—	Hirose	—
RF Connector	WK72475	—	Waka	—
Substrate	RO4003 (t = 0.51 mm)	—	Rogers	—

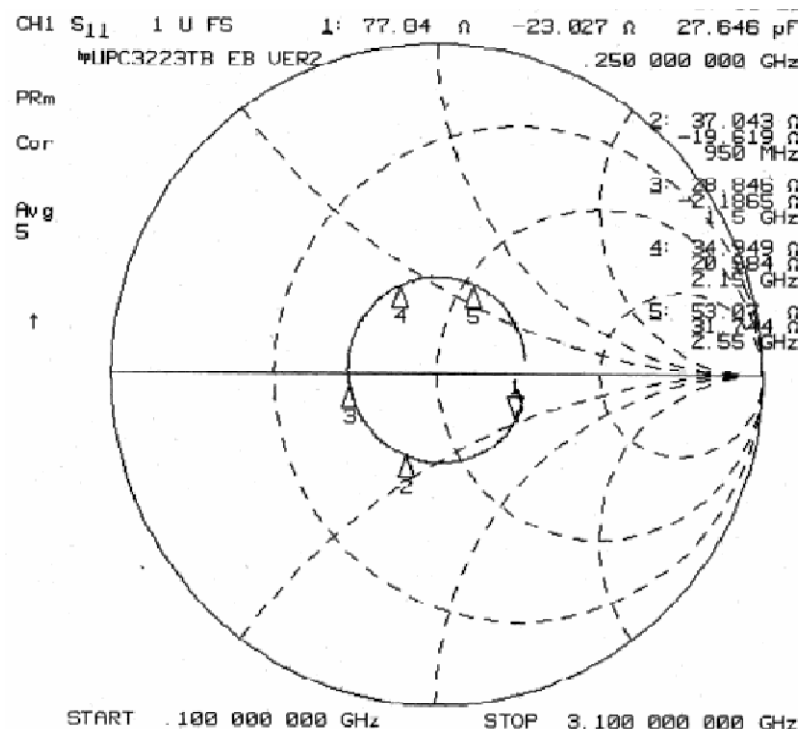
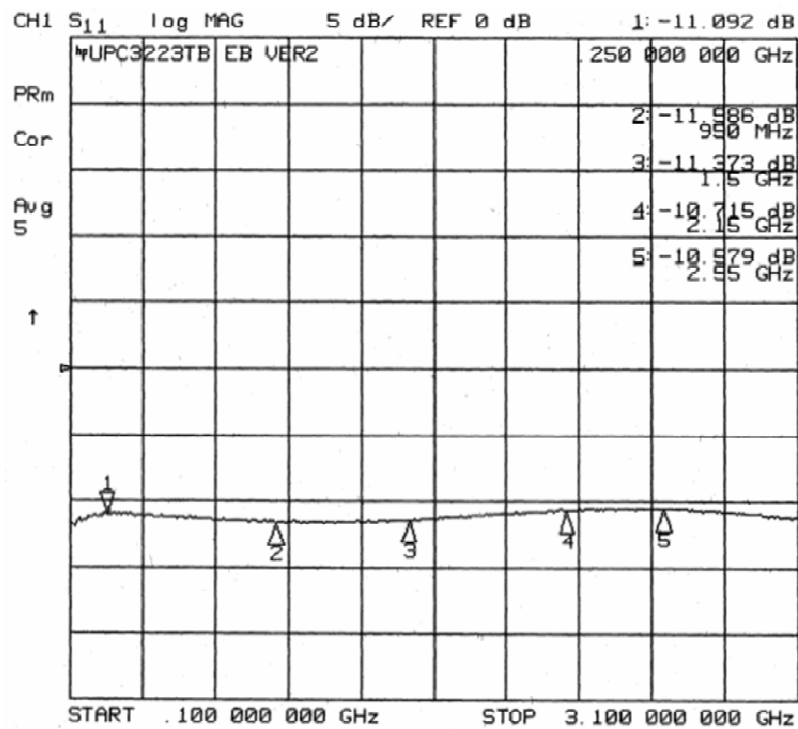
## Power Gain Data



## Isolation Data

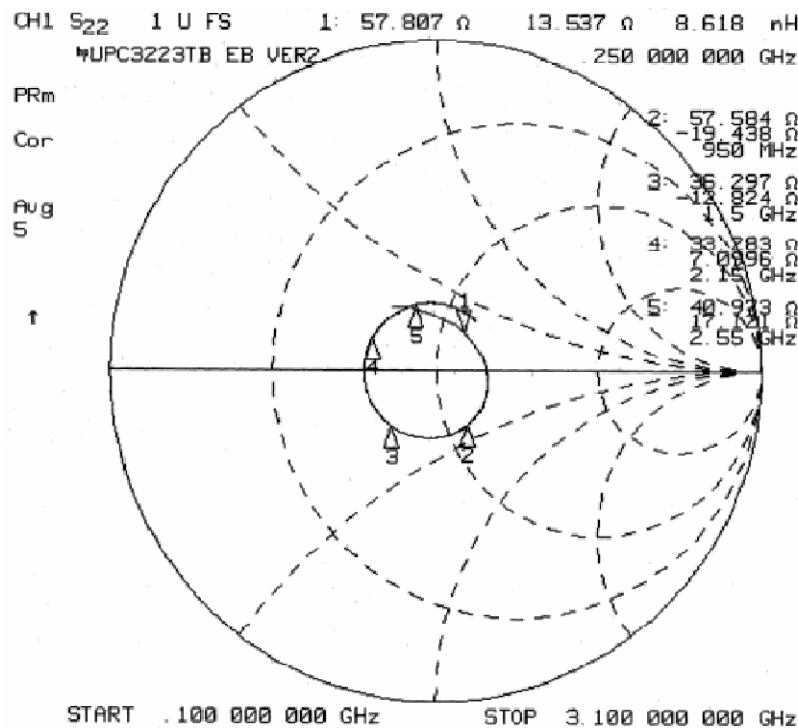
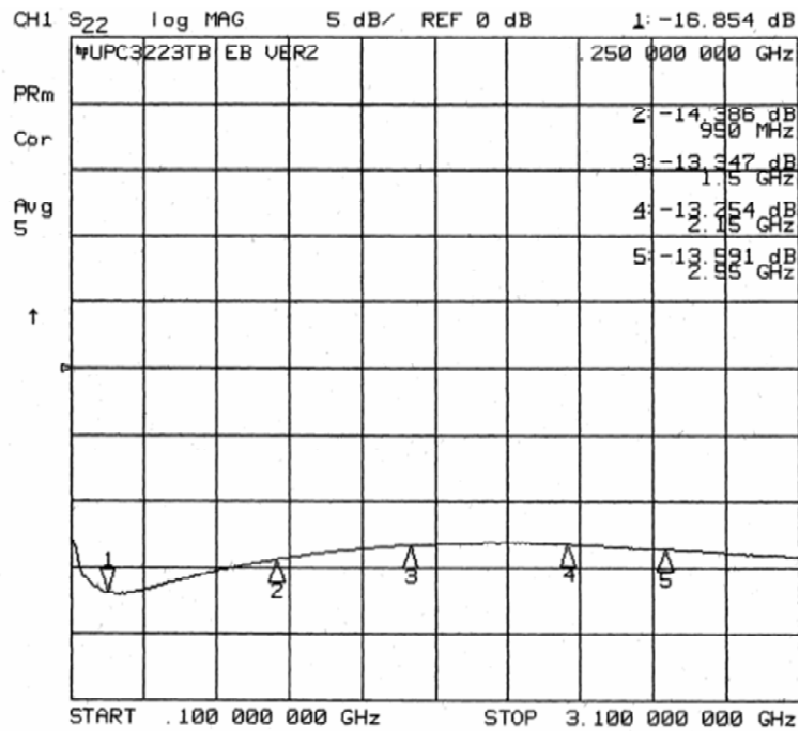


## Input Return Loss Data

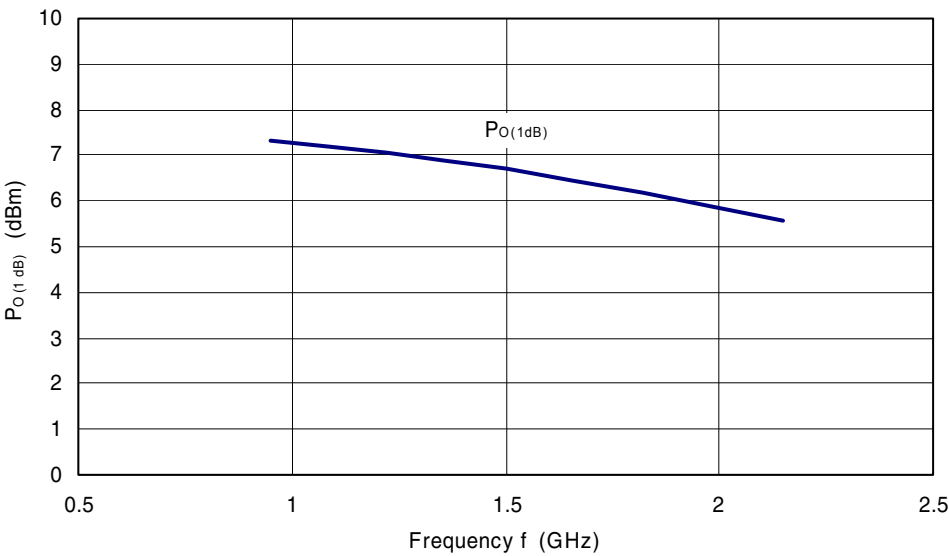




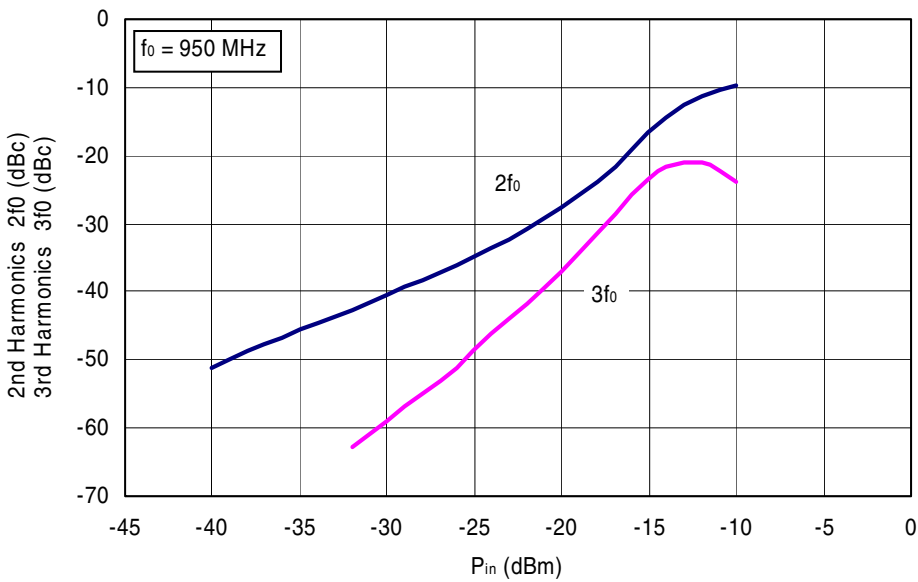
## Output Return Loss Data



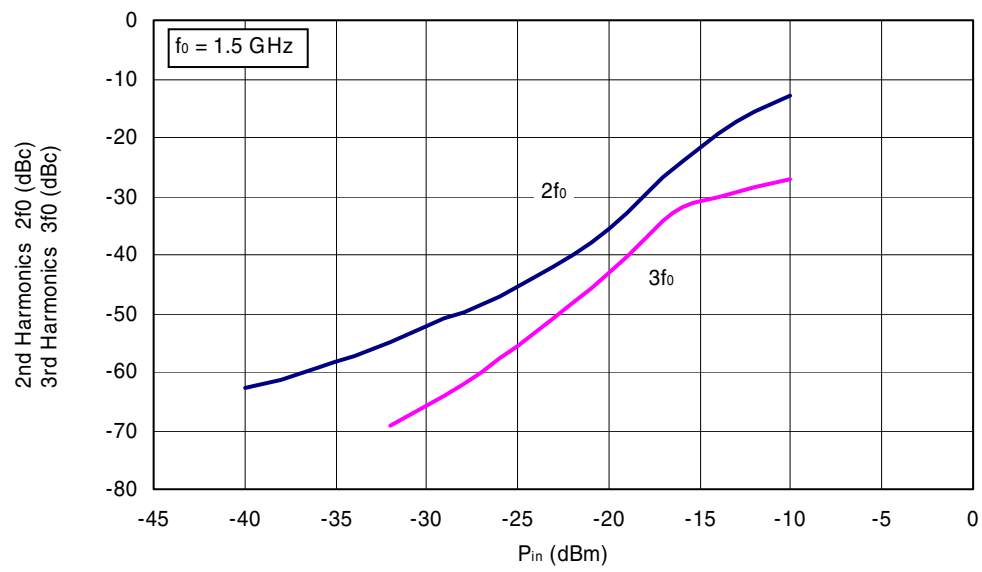
### P<sub>O</sub> (1 dB) vs. Frequency



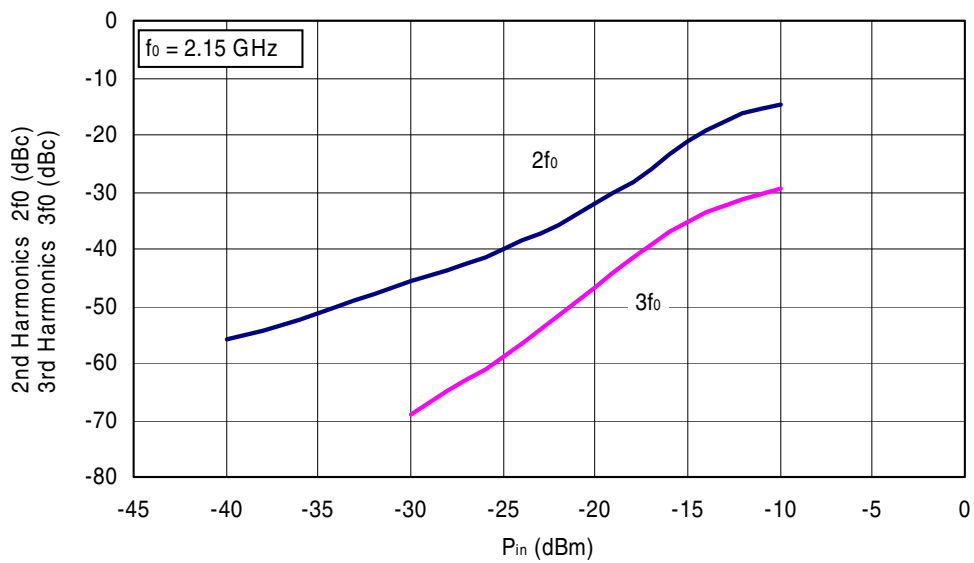
### 950 MHz 2nd/3rd Harmonics vs. P<sub>in</sub>



## 1.5 GHz 2nd/3rd Harmonics vs. $P_{in}$



## 2.15 GHz 2nd/3rd Harmonics vs. $P_{in}$



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