To our customers,

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

April 1st, 2010
Renesas Electronics Corporation

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

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# Evaluation Board Information

# μPC8178TB
# 1.9 GHz Silicon MMIC Evaluation Board

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- **Evaluation Board Pattern Layout**
- **Circuit Description**
- **Circuit Current and Power Gain Data**
- **1 dB Gain Compression Output Power Data**
- **Isolation Data**
- **Input and Output Return Loss Data**

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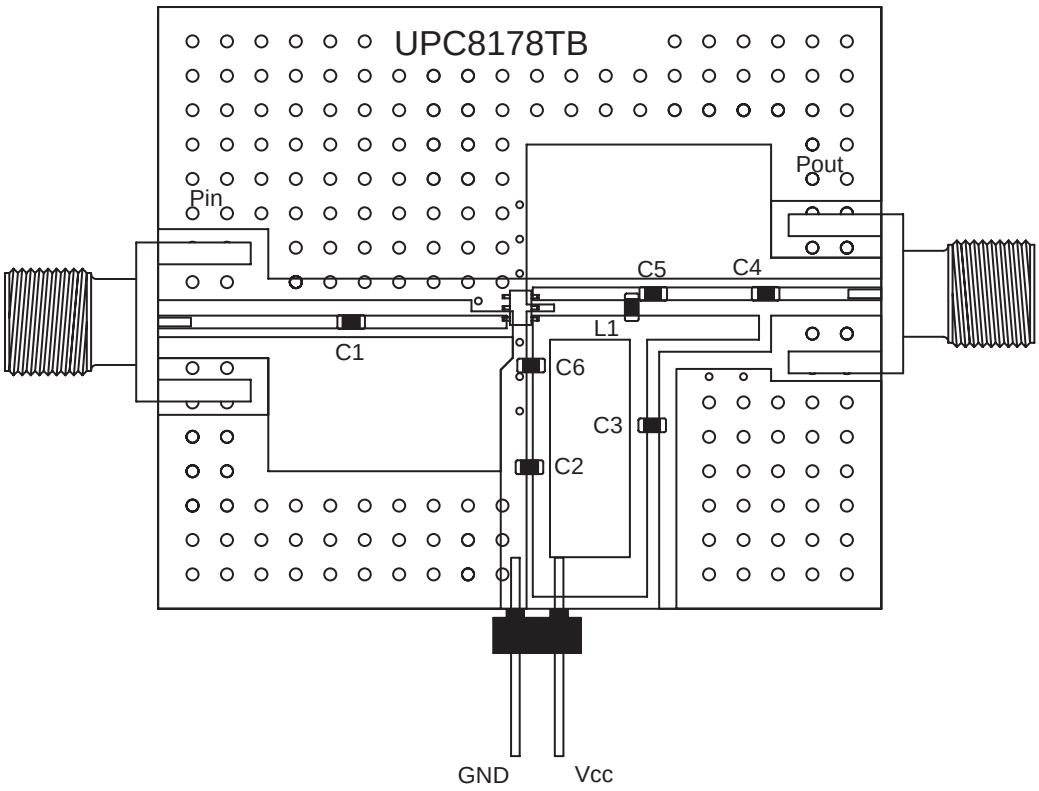
M8E 00. 4 - 0110

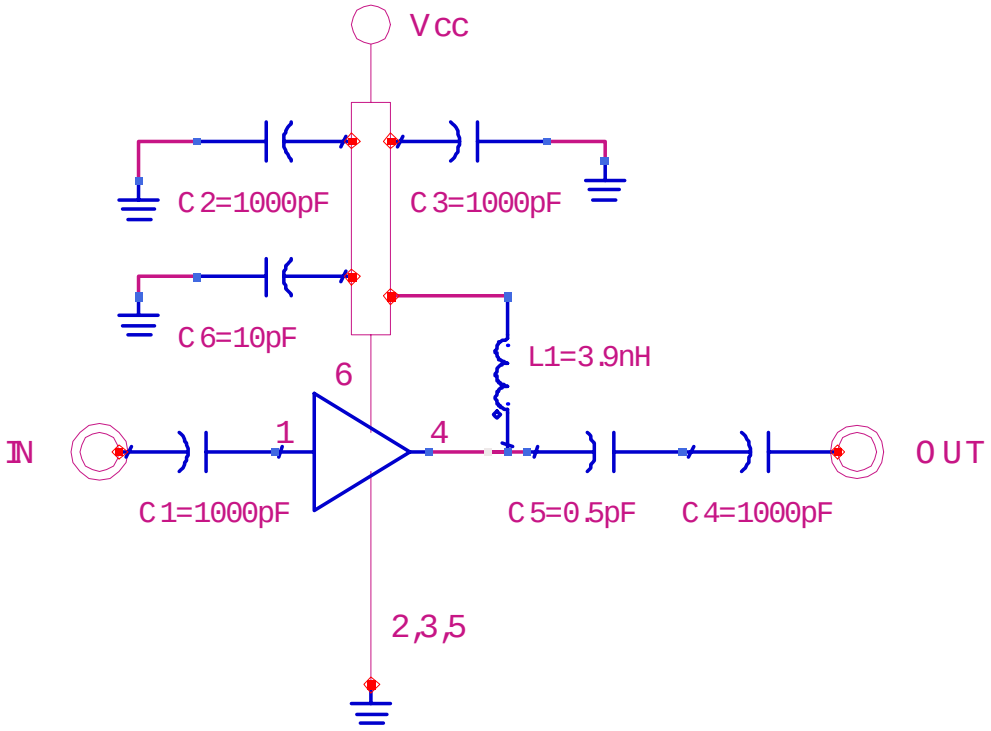
## Evaluation Board Pattern Layout

uPC8178TB f = 1.9 GHz



# Circuit Description

uPC8178TB f=1.9GHz



**KC-8178TB**

**@ f = 1.9 GHz, $V_{CC}$ = 3.0 V**

| Symbol | $I_{CC}$ | $G_P$ | $P_{O(1\ dB)}$ | ISL | $RL_{in}$ | $RL_{out}$ |
|---|---|---|---|---|---|---|
| Unit | mA | dB | dBm | dB | dB | dB |
| Conditions | No signal | $P_{in}$ = –30 dBm | — | $P_{in}$ = –30 dBm | $P_{in}$ = –30 dBm | $P_{in}$ = –30 dBm |
| TYP. | 1.90 | 11.5 | –7.0 | 40.0 | 8.0 | — |
| 1 | 1.76 | 10.9 | –8.1 | 42.5 | 7.8 | 17.2 |
| 2 | 1.77 | 10.7 | –7.5 | 42.2 | 7.5 | 18.5 |
| 3 | 1.78 | 10.9 | –8.1 | 43.0 | 7.9 | 20.2 |
| 4 | 1.76 | 10.9 | –8.3 | 42.8 | 7.8 | 14.0 |
| 5 | 1.74 | 10.7 | –7.5 | 44.4 | 7.8 | 18.2 |
| AVE. | 1.76 | 10.8 | –7.9 | 43.0 | 7.8 | 17.6 |

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