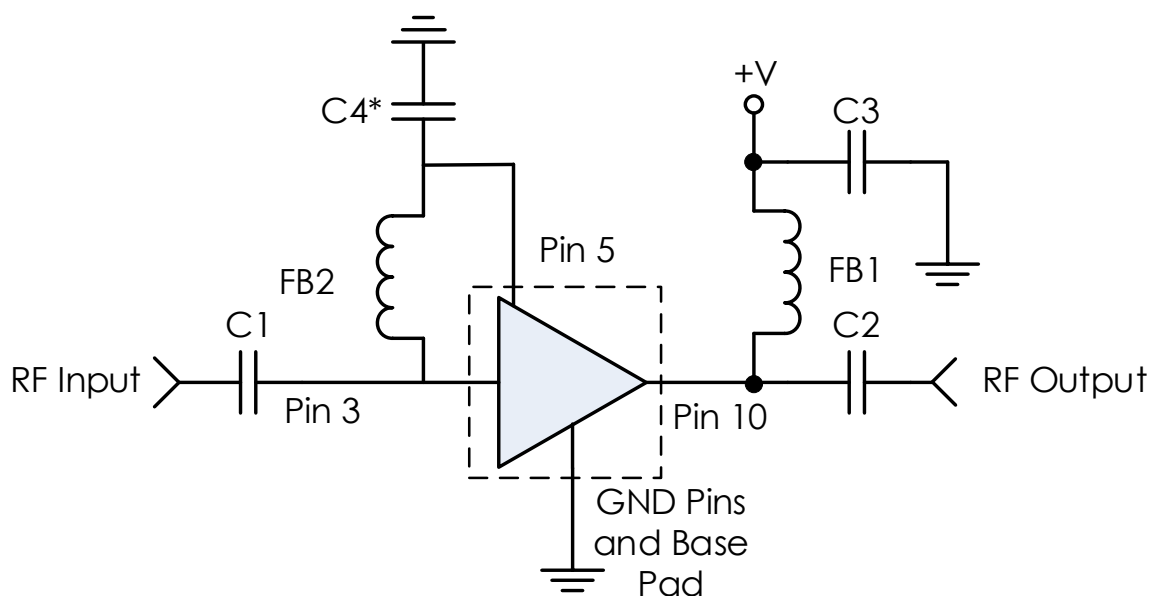


## TYPICAL APPLICATION



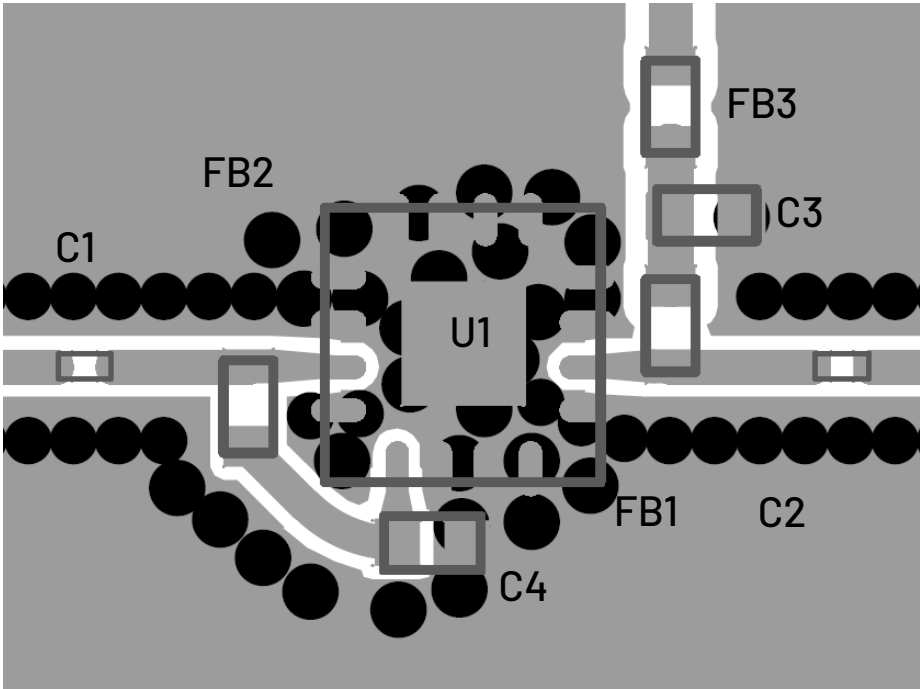
## RECOMMENDED COMPONENT LIST (OR EQUIVALENT)

Part	Value	Part Number	Manufacturer
C1, C2	0.1 uF	0201BB104KW160	Passives Plus
C3, C4	0.1 uF	GRM155R71C104KA88	Murata
FB1, FB2	-	MMZ1005A222E	TDK

## Notes:

- Application shown above is the minimum needed for an operational circuit. The circuit above is representative of the s-parameters as available on the website.
- Install C4 for best noise figure below 50 MHz. If operating above 50 MHz, C4 is not needed.
- To choose the best component for FB2, Atlanta Micro recommends the following:
  - First, determine your desired frequency range of operation.
  - Next, design your output bias tee (FB1/C3 + any other components) for your desired power supply isolation and chosen frequency range.
  - The component(s) used for FB2 should then be component(s) as used in your bias tee that connect to the main RF output (pin 10) line only.
    - This does not need to be the whole bias tee design.
    - This should be all components before the first decoupling capacitor on the bias tee.
    - In the example above, FB2 = FB1.

RECOMMENDED LAYOUT



Notes:

- 1. FB3 = FB1= MMZ1005A222E for symmetry.
- 2. C4 = C3 = GRM155R71C104KA88. C4 recommended for better noise figure performance below 50 MHz. If operating above 50 MHz C4 is not needed.
- 3. Recommended input trace is grounded coplanar waveguide, 50 ohms.
- 4. IC and RF input / output should be via fenced.
- 5. Vias should be placed under IC and GND pads.
- 6. Components recommended and shown above are 0402 components though 0201 component may also be used.

REVISION HISTORY

Date	Revision	Notes
June 25, 2020	1	Initial release.
August 31, 2020	2	Additional Notes Added to Typical Application.
February 15, 2021	3	Additional Notes for FB2 selection added. Added information for capacitor at pin 5 input.
August 14, 2024	4	Changed to Mercury branding. No content changes.

For more information, contact: [MMICsupport@mrchy.com](mailto:MMICsupport@mrchy.com)

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