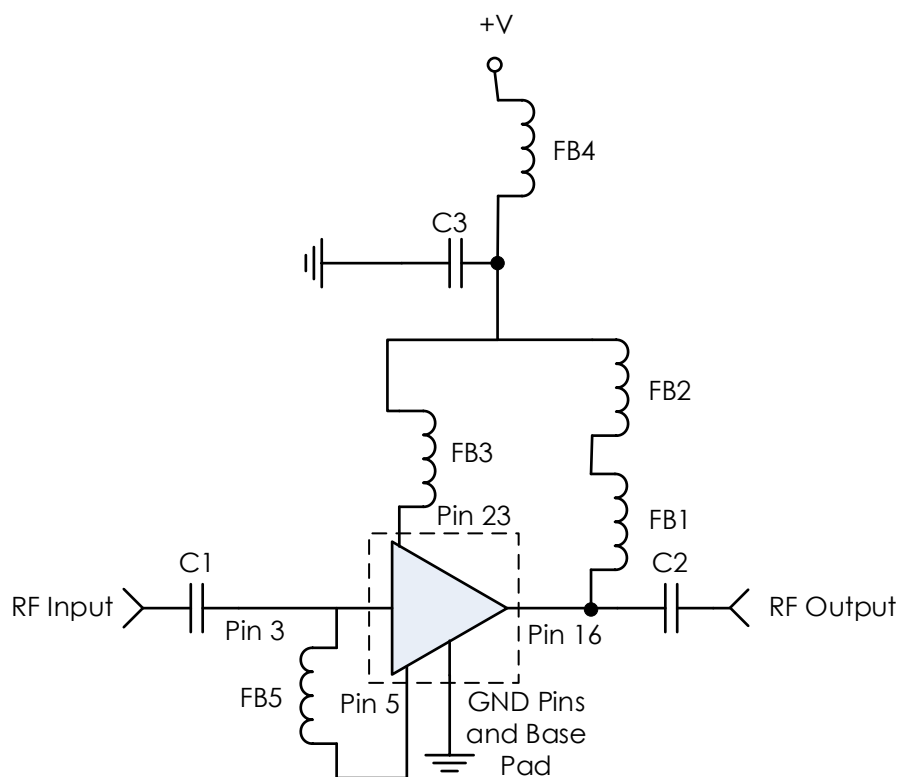


## TYPICAL APPLICATION



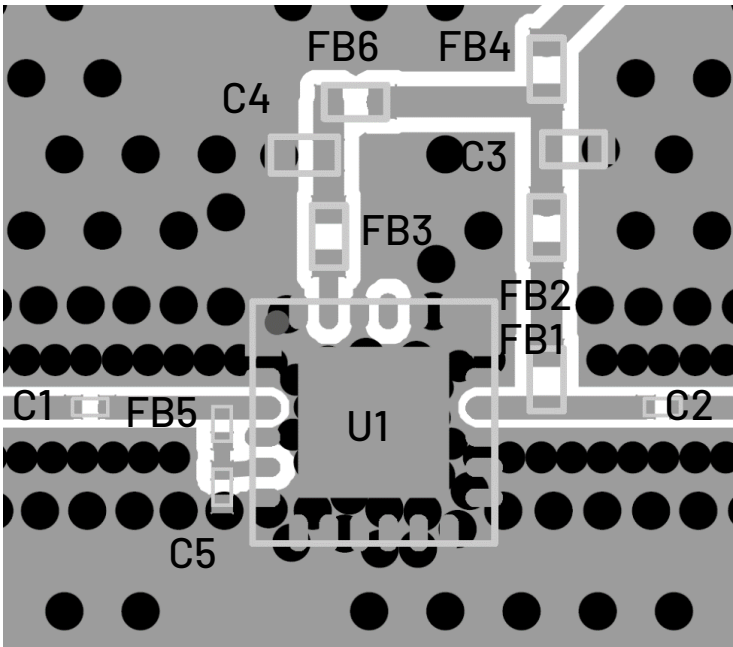
## RECOMMENDED COMPONENT LIST (OR EQUIVALENT)

Part	Value	Part Number	Manufacturer
C1, C2	0.1 $\mu$ F	0402BB104KW106	Passive Plus
C3	0.1 $\mu$ F	GRM155R71C104KA88	Murata
FB1, FB2, FB3	-	MMZ1005A182ET000	TDK
FB4	-	MMZ1005S102HT000	TDK
FB5	-	MMZ0603S102ET000	TDK

## Notes:

1. NC pins may be grounded or left open.
2. DC blocking capacitors should be high performance, low-loss, broadband capacitors for optimum performance.
3. FB1 and FB2 choke gives best low frequency performance extension without a capacitor to ground.
  - a. Low frequency performance may be improved by replacing FB1 and FB2 with a different bead, inductor, or bias tee.

RECOMMENDED LAYOUT



Notes:

- 1. FB6 = FB3 = MMZ1005A182E and C4 = C3 = GRM155R71C104KA88 for additional power supply rejection. C4 and FB6 are not required for part operation though they are recommended if space allows.
- 2. C5 = 0.1 $\mu$ F = GRM033R61E104KE14J. Addition of C5 optimizes noise figure for 20 MHz to 50 MHz. C5 is not needed if operating outside of this range.
- 3. FB5 may be an 0402 ferrite bead if desired. In layout above, an 0201 ferrite bead is used to allow for the addition of C5.
- 4. Recommended input trace is grounded coplanar waveguide, 50 ohms.
- 5. IC and RF input / output should be via fenced.
- 6. Vias must be placed under IC and GND pads.
  - a. Mercury recommends a minimum of a 4 x 4 via array to ensure proper heat dissipation into the PCB.

REVISION HISTORY

Date	Revision	Notes
June 25, 2020	1	Initial release.
August 19, 2021	2	Updated component list in Typical Application.
August 13, 2024	3	Changed to Mercury branding. No content changes.

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