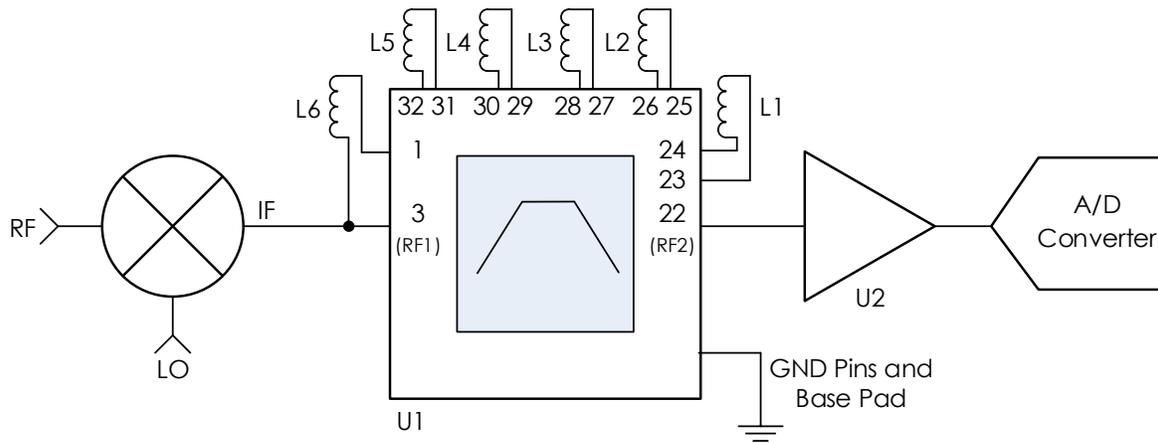


APPLICATION NOTE

AM3055 and AM3056 - IF Bandpass Filter

TYPICAL APPLICATION



RECOMMENDED COMPONENT LIST (OR EQUIVALENT)

AM3055			AM3056		
Part	Value	Part Number	Value	Part Number	Manufacturer
U1		AM3055		AM3055	Mercury
U2		AM1025B		AM1025B	Mercury
L1	2.1 nH	0402DC-2N1XGRU	16 nH	0402DC-16NXGRU	Coilcraft
L2	2.0 nH	0402DC-2N0XGRU	7.5 nH	0402DC-7N5XGRU	Coilcraft
L3	1.2 nH	0402DC-1N2XGRU	15 nH	0402DC-15NXGRU	Coilcraft
L4	2.1 nH	0402DC-2N1XGRU	4.8 nH	0402DC-4N8XGRU	Coilcraft
L5	6.4 nH	0402DC-6N4XGRU	4.1 nH	0402DC-4N1XGRU	Coilcraft
L6	4.5 nH	0402DC-4N5XGRU	4.9 nH	0402DC-4N9XGRU	Coilcraft

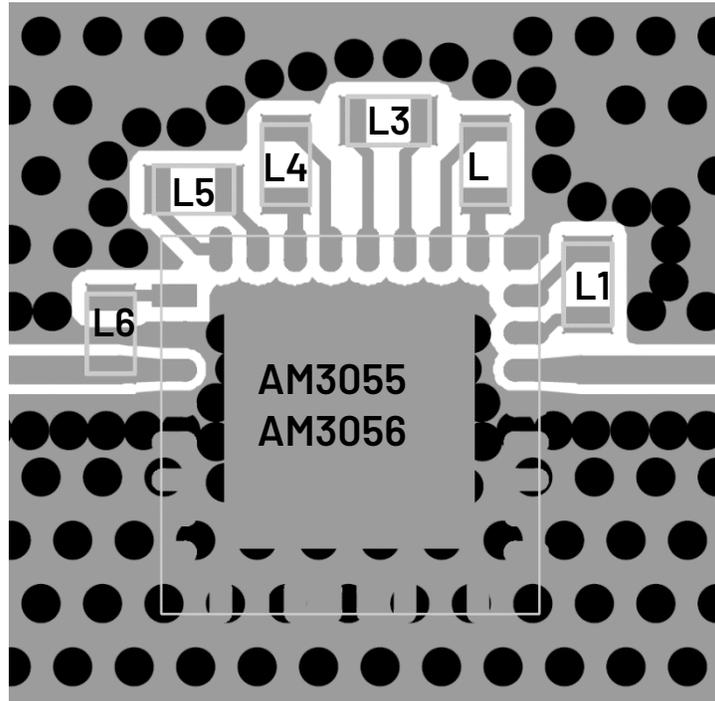
Notes:

- Follow placement of L1 through L6 as shown in layout on next page.
- L1 through L6 should not be bigger than 0402 inductors to maintain optimum performance and board layout.
- Traces to inductors from IC do not need to be 50 ohms if the traces are minimum length relative to the layout on the next page.
 - Though not recommended, if inductors must be further away from IC, then these lines should become 50 ohm lines.
- U2 can be any high linearity amplifier and will vary based on your application.

APPLICATION NOTE

AM3055 and AM3056 - IF Bandpass Filter

RECOMMENDED LAYOUT



Notes:

1. Follow placement of L1 through L6 as shown above. Layout gerbers may be provided upon request.
2. Ground pour clearance from L1-L6 pad should not be less than 8mils to prevent performance loss due to parasitic capacitance.
3. Ground pour should not flow under L1-L5 and should be removed if present. Ground may flood under L6 as shown.
4. Recommended input trace is grounded coplanar waveguide, 50 ohms.
5. IC, inductors, and RF inputs / outputs should be via fenced.
6. Vias should be placed under IC and GND pads (not fully shown).
7. Vias shown are 10mil hole size with 20mil pad.
8. Ground plane below top layer should not be closer than 6mils. If the next copper layer must be closer than 6mils it is recommended to cut out the ground plane in layers under the inductors until the reference ground plane is at least 6mils away.

REVISION HISTORY

Date	Revision	Notes
August 2, 2021	1	Initial release
August 12, 2024	2	Changed to Mercury branding. No content changes.

For more information, contact: MMICsupport@mrchy.com

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