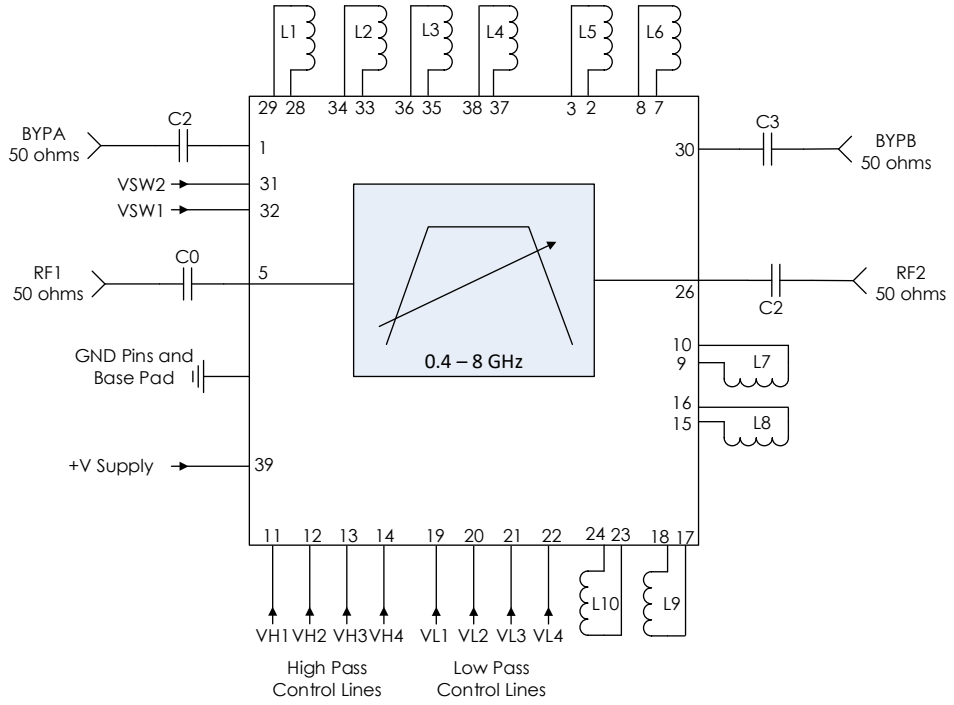
# AM3152 Application Note

## Digitally Tunable 400 MHz to 8.0 GHz Band Pass

## Typical Application



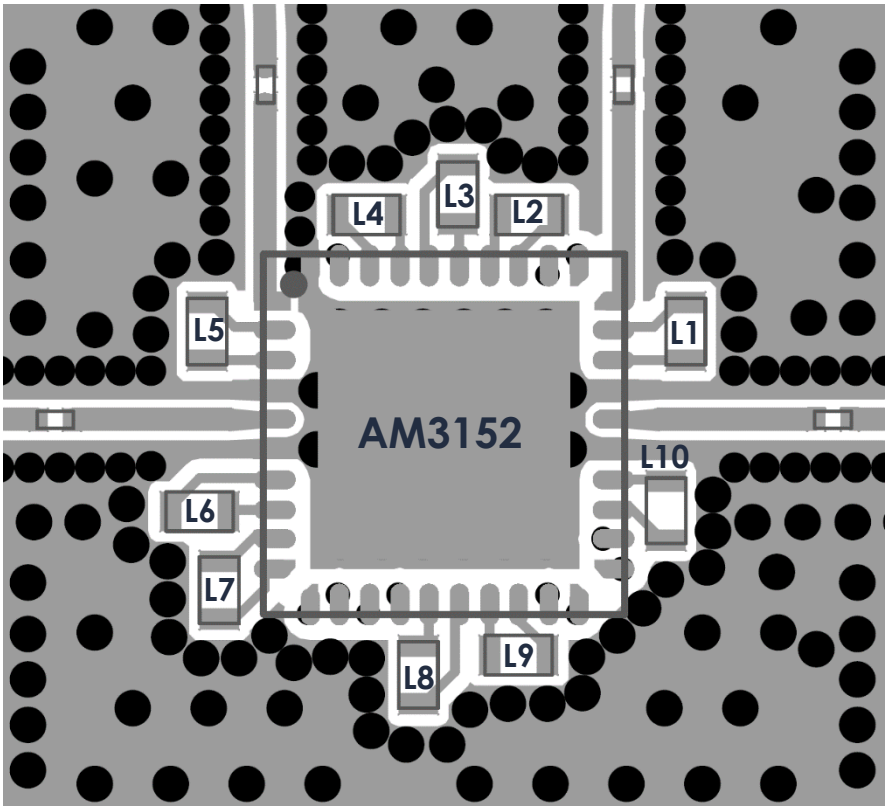

### Recommended Component List (or equivalent):

| Part | Value | Part Number | Manufacturer |
|---|---|---|---|
| C0 – C3 | 0.1 uF | 0201BB104KW160 | Passive Plus |
| L1 | 2.0 nH | 0402DC-2N0XGRU | Coilcraft |
| L2 | 2.8 nH | 0402DC-2N8XGRU | Coilcraft |
| L3, L5 | 5.1 nH | 0402DC-5N1XGRU | Coilcraft |
| L4 | 6.7 nH | 0402DC-6N7XGRU | Coilcraft |
| L6, L8 | 12 nH | 0402DC-12NXGRU | Coilcraft |
| L7 | 20 nH | 0402DC-20NXGRU | Coilcraft |
| L9 | 6.6 nH | 0402DC-6N6XGRU | Coilcraft |
| L10 | 4.7 nH | 0402DC-4N7XGRU | Coilcraft |

### Notes:

1. VDD and control Lines filtered internally providing high frequency isolation.
2. DC blocking capacitors should be high performance, low-loss, broadband capacitors for optimum performance.

## Recommended Layout




**Notes:**

1. Recommended input trace is grounded coplanar waveguide, 50 ohms.
2. IC, inductors, and RF inputs / outputs should be via fenced.
3. Vias should be placed under IC and GND pads (not shown).
4. Vias shown are 10mil hole size with 20mil pad.
5. To facilitate a better layout, control lines and power should via directly into board.
    a. Vias used here are 6mil hole size with 14mil pad.
6. Ground pour around inductors should be at least 8mil away to minimize fringing capacitance.
7. All inductors should be as close to AM3152 as possible.
8. Layout gerbers available upon request.

## Revision History

| Date | Revision Number | Notes |
|---|---|---|
| April 10, 2020 | 1 | Initial Release |