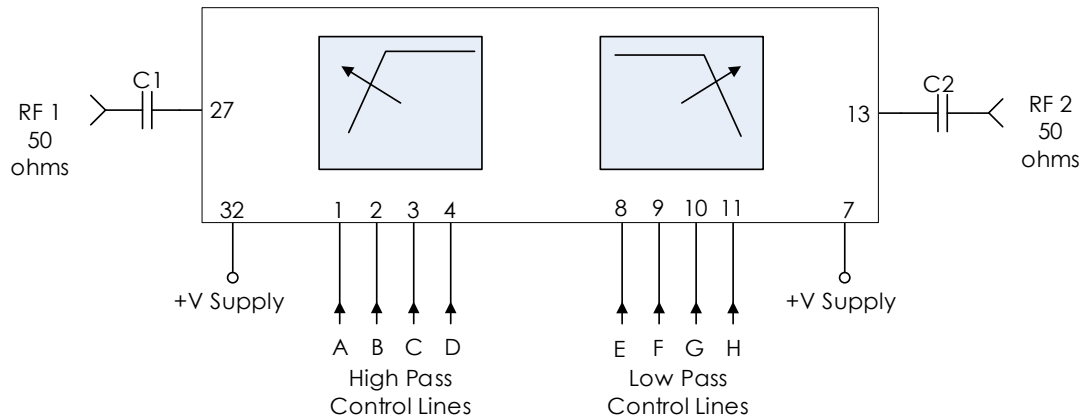


## APPLICATION NOTE

### AM3103 / AM3104 - Digitally Tunable Bandpass

## TYPICAL APPLICATION



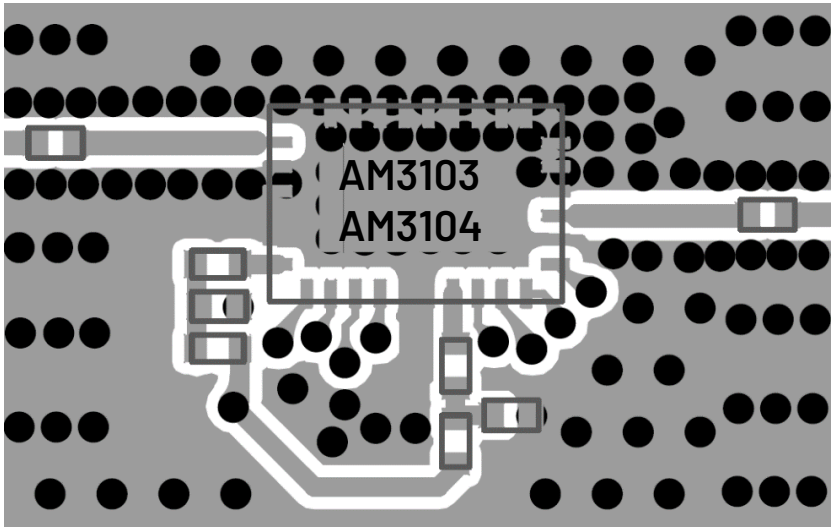
## RECOMMENDED COMPONENT LIST (OR EQUIVALENT)

| Part   | Value  | Part Number    | Manufacturer  |
|--------|--------|----------------|---------------|
| C1, C2 | 0.1 uF | 0402BB104KW160 | Passives Plus |

### Notes:

- DC blocking capacitors should be low-loss, broadband capacitors for optimum performance.
- VDD and control lines filtered internally providing high frequency isolation to 50 + GHz.
  - See AM35 datasheet for more information.
  - Adding an additional ferrite bead, LC, or LCL filter on VDD lines is recommended in applications that have space to improve VDD isolation.

RECOMMENDED LAYOUT



- Notes:
- 1. Power line filtering is made symmetric here such that it is L – C – L filtering. L – C filtering or even a single ferrite bead may be used if space is critical.
  - 2. Recommended input trace is grounded coplanar waveguide, 50 ohms.
  - 3. IC and RF inputs / outputs should be via fenced.
  - 4. Vias should be placed under IC and GND pads (not shown).
  - 5. Vias shown are 10mil hole size with 24mil pad.

REVISION HISTORY

| Date          | Revision | Notes  |
|---------------|----------|--|
| May 21, 2020  | 1        | Initial release                                  |
| July 30, 2024 | 2        | Changed to Mercury branding. No content changes. |

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

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