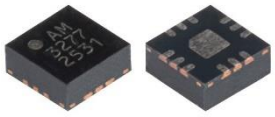
# AM3277 –Filter

## 16 GHz Lowpass Filter

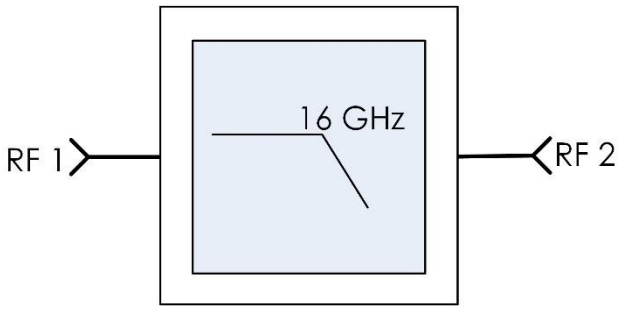


**AM3277 is a compact, lowpass filter that provides low loss and high rejection in a small 3 mm QFN package.** With a cutoff frequency of 12 GHz and sharp rejection skirt, the AM3277 is an excellent choice to filter unwanted signals in any RF system. The lowpass filter is matched to 50 ohms and operates from -40 C to +100 C.

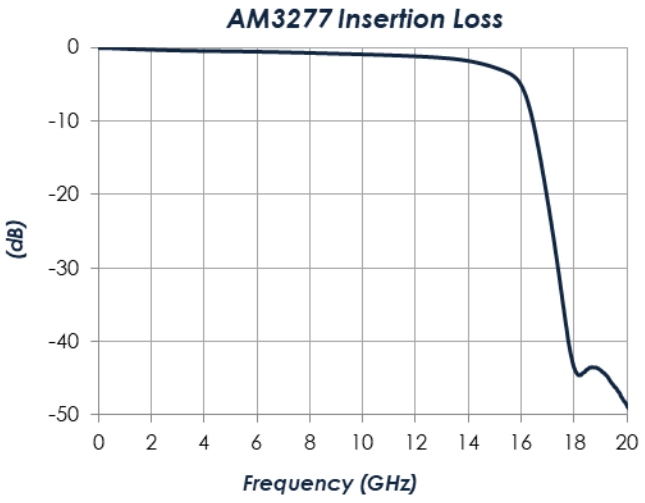
### FEATURES

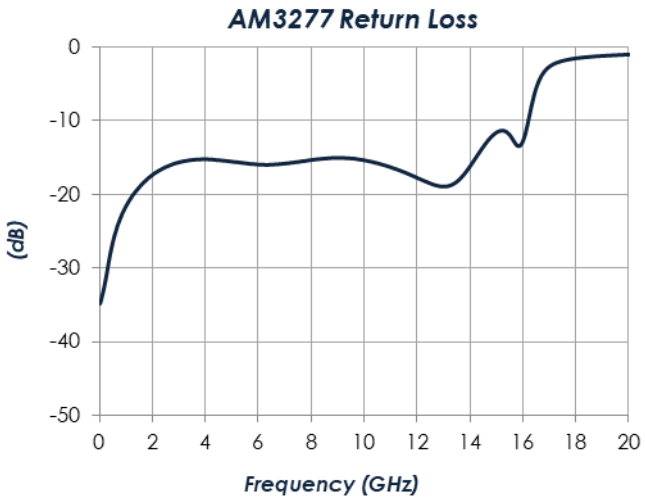
- 16 GHz Cutoff Frequency
- >42 dB Rejection in Stopband Typical
- 1 dB Loss in Passband Typical
- 3 mm QFN Package
- -40 C to +100 C Operation

### FUNCTIONAL DIAGRAM




### CHARACTERISTIC PERFORMANCE



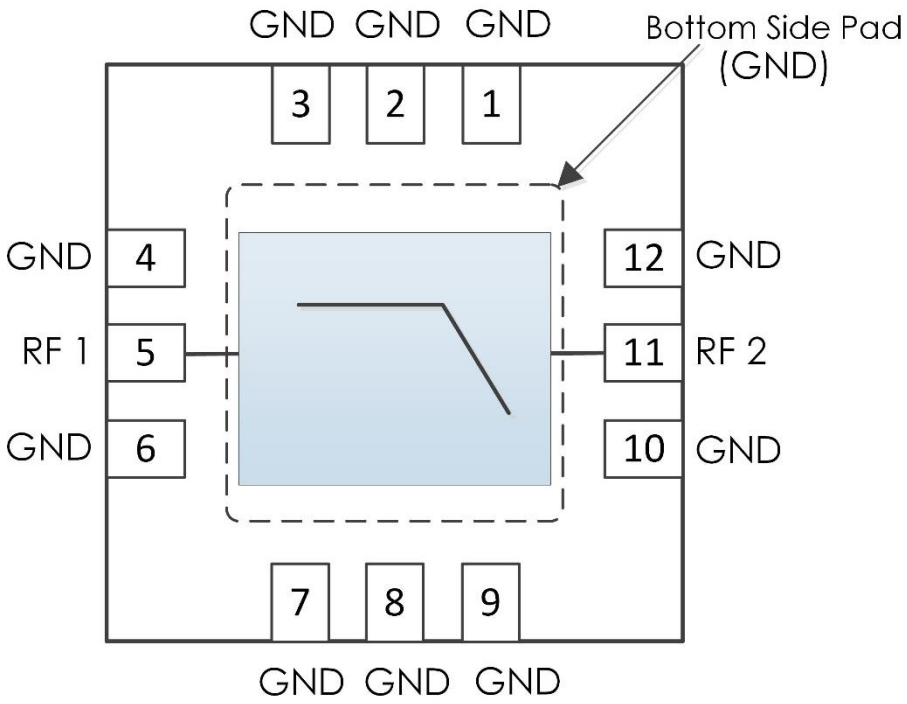
## CONTENTS



## REVISION HISTORY

| Date | Revision | Notes |
|---|---|---|
| April 28, 2026 | 1 | Initial Release |

## PIN LAYOUT AND DEFINITIONS




| Pin | Name | Function |
|---|---|---|
| 1 - 4 | GND | Ground - Common |
| 5 | RF 1 | RF Port 1 – 50 ohms |
| 6 - 10 | GND | Ground – Common |
| 11 | RF 2 | RF Port 2 – 50 ohms |
| 12 | GND | Ground – Common |

## SPECIFICATIONS

### Absolute Maximum Ratings

| | Minimum | Maximum |
|---|---|---|
| RF Input Power | | +27 dBm |
| Storage Temperature Range | -55 C | +150 C |

**Note:** Any device operation beyond the Absolute Maximum Ratings may result in permanent damage to the device. The values listed in this table are extremes and do not imply functional operation of the device at these or any other conditions beyond what is listed under Recommended Operating Conditions. Any part subjected to conditions outside of what is recommended for an extended amount of time may suffer from reliability concerns.

### Handling Information

| | Minimum | Maximum |
|---|---|---|
| Moisture Sensitivity Level | MSL 3 | |

Mercury products are electrostatic sensitive.
Follow safe handling practices to avoid damage.

### Recommended Operating Conditions

| | Minimum | Typical | Maximum |
|---|---|---|---|
| Operating Case Temperature | -40 C | | +100 C |

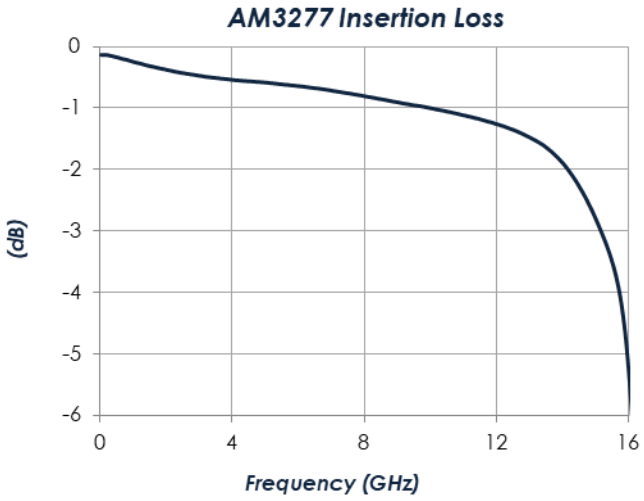
### RF Performance

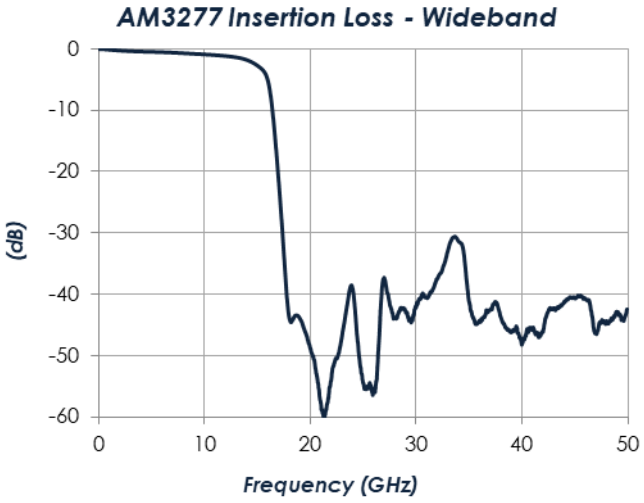
(T = 25 °C unless otherwise specified)

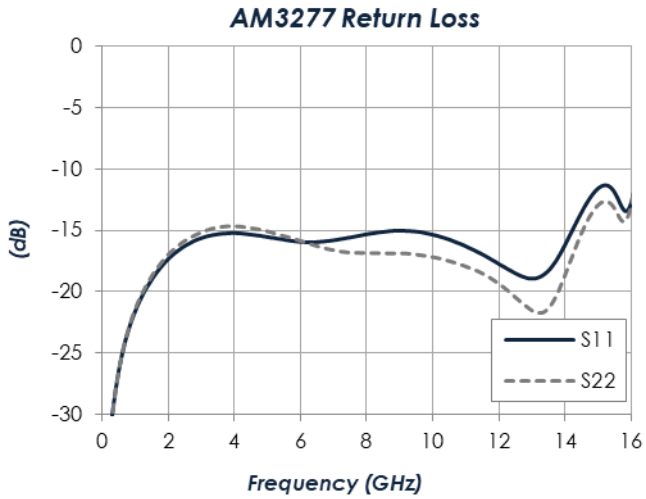
| Param | Testing Conditions | Min | Typical | Max |
|---|---|---|---|---|
| Frequency Range | | DC | | 16 GHz |
| Passband Flatness | | | 1.1 dB | |
| Stopband Rejection | f > 16 GHz | | 42.7 dB | |
| Insertion Loss | f = 10 MHz | | 0.1 dB | |
| | f = 8 GHz | | 0.8 dB | |
| | f = 16 GHz | | 5.2 dB | |
| Return Loss | f = 10 MHz | | 34.9 dB | |
| | f = 8 GHz | | 15.3 dB | |
| | f = 16 GHz | | 12.7 dB | |

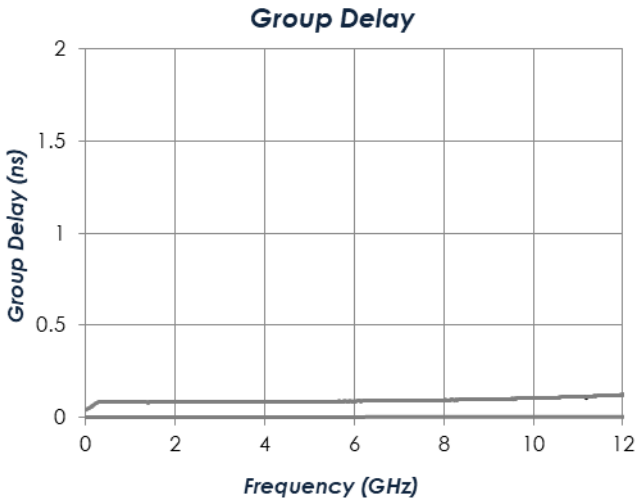
## TYPICAL PERFORMANCE

(T = 25 C unless otherwise specified. Refer to s-parameters available for download on the Mercury website for more information.)

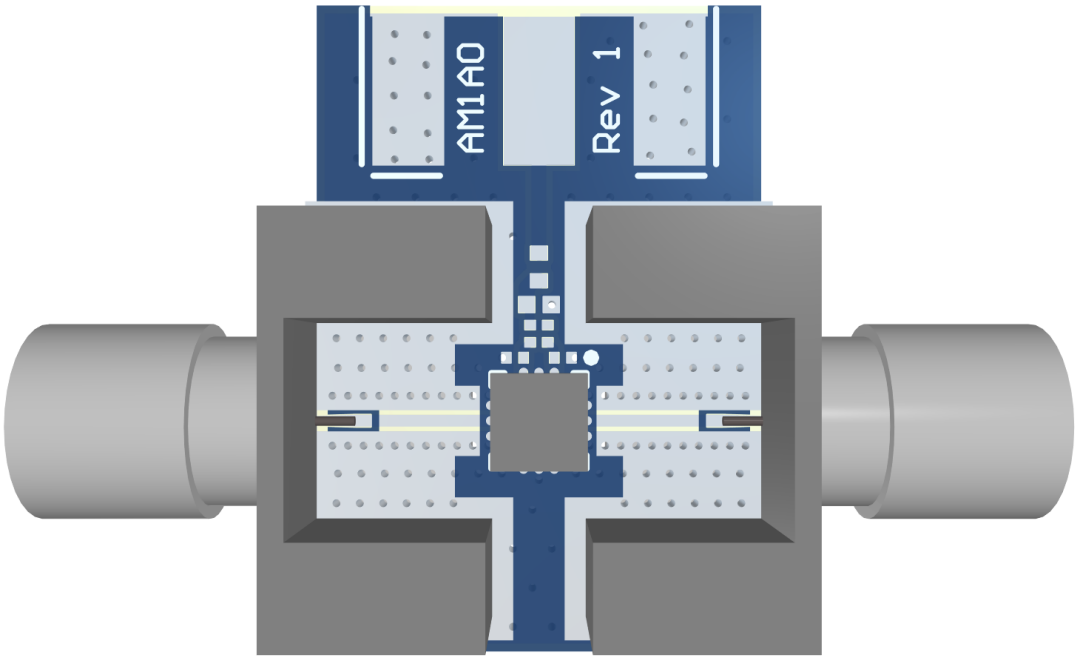


## EVALUATION PC BOARD




## PART ORDERING DETAILS

| Description | Part Number |
|---|---|
| 3 mm x 3 mm x 1.2 mm QFN package | AM3277 |
| AM3277 Evaluation Board with Connectors | AM3277-Eval |

## RELATED PARTS

| Part Number | | Description |
|---|---|---|
| AM3228 | 18 GHz | Lowpass Filter |
| AM3276 | 12 GHz | Lowpass Filter |

## COMPONENT COMPLIANCE INFORMATION

**RoHS:** Mercury Systems, Inc. hereby certifies that all products comply with the EC Directive 2011/65/EC on the Restriction of Hazardous Substances, commonly known as EU-RoHS 6 and 10. All products supplied by Mercury shall be compliant with the European Directive 2011/65/EC based on the following substance list.

| Substance List | Allowable Maximum Concentration |
|---|---|
| Lead (Pb) | <1000 PPM (0.1% by weight) |
| Mercury (Hg) | <1000 PPM (0.1% by weight) |
| Cadmium (Cd) | <75 PPM (0.0075% by weight) |
| Hexavalent Chromium (CrVI) | <1000 PPM (0.1% by weight) |
| Polybrominated Biphenyls (PBB) | <1000 PPM (0.1% by weight) |
| Polybrominated Diphenyl ethers (PBDE) | <1000 PPM (0.1% by weight) |
| Decabromodiphenyl Deca BDE | <1000 PPM (0.1% by weight) |
| Bis (2-ethylheyl) Phthalate (DEHP) | <1000 PPM (0.1% by weight) |
| Butyl Benzyl Phthalate (BBP) | <1000 PPM (0.1% by weight) |
| Dibutyl Phthalate (DBP) | <1000 PPM (0.1% by weight) |
| Diisobutyl Phthalate (DIBP) | <1000 PPM (0.1% by weight) |

**REACH:** Mercury Systems, Inc. neither uses nor intentionally adds any of the substances considered to be a Substance of Very High Concern (SVHC) as defined by the EU Regulation (EC) No. 1907-2006 on Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH).

**Conflict Materials:** Mercury does not knowingly use materials that are sourced from the Democratic Republic of Congo (DRC) or any other known conflict regions. Mercury's supply chain is comprised of sources that are both environmentally and socially responsible. We periodically review this requirement with our vendors to ensure continued compliance.

**Mercury takes its responsibility as a global partner seriously and will use due diligence within our supply chain to ensure all standards are met to the best of our knowledge.**

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