AM3335 – Filter

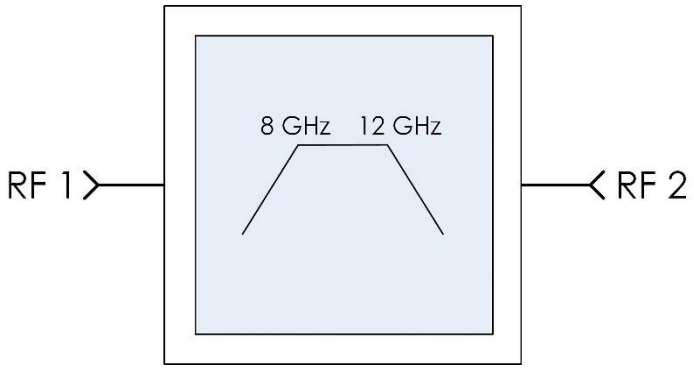
8 GHz to 12 GHz Bandpass Filter

AM3335 is a compact, high performance bandpass filter implemented in a small 3mm package. Designed for X-band applications, the filter delivers low insertion loss and superior out-of-band rejection with excellent passband flatness over the full 8 to 12 GHz range. AM3335 is AC coupled and matched to 50 ohms and operates over the -40 C to +100 C temperature range.

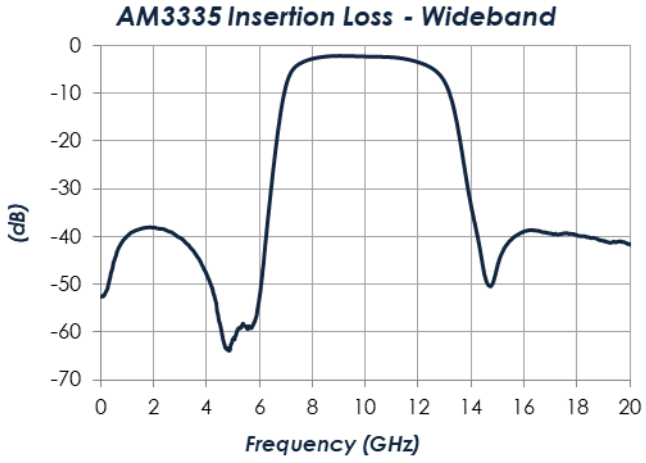
FEATURES

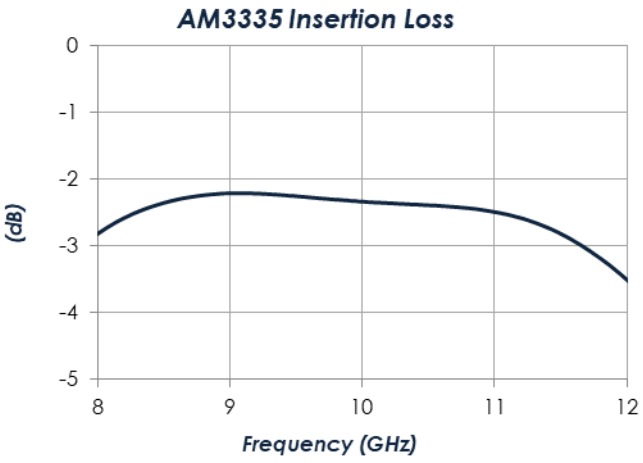
- 10 GHz Center Frequency
- 4 GHz Bandwidth
- 1.3 dB Passband Flatness Typical
- 34.8 dB Stopband Rejection
- 3 mm QFN Package
- -40C to +100C Operation

FUNCTIONAL DIAGRAM



CHARACTERISTIC PERFORMANCE





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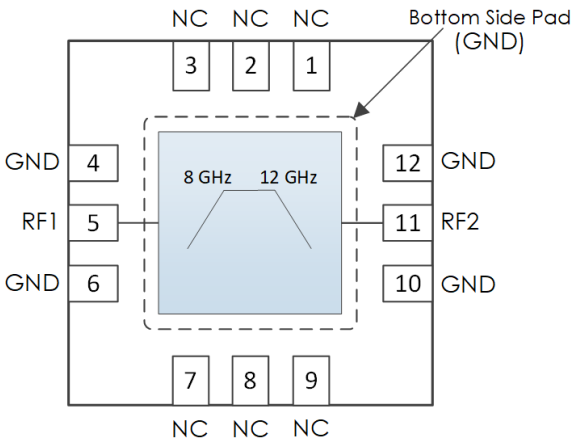
REVISION HISTORY

Date	Revision	Notes
April 23, 2026	1	Initial Release

PIN LAYOUT AND DEFINITIONS



Pin Number	Pin Name	Pin Function
1-3	NC	Not Connected*
4	GND	Ground – Common
5	RF1	RF Port 1 – 50 ohms, AC coupled.
6	GND	Ground – Common
7-9	NC	Not Connected*
10	GND	Ground – Common
11	RF2	RF Port 2 – 50 ohms, AC coupled.
12	GND	Ground – Common

* NC pins may be left open or connected to ground.

SPECIFICATIONS

Absolute Maximum Ratings

	Minimum	Maximum
RF Input Power		+27 dBm
Operating Case Temperature	-40 C	+150 C
Storage Temperature Range	-55C	+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. Devices subjected to conditions outside of what is recommended for extended periods may affect device reliability.

Handling Information

	Minimum	Maximum
Moisture Sensitivity Level	MSL 3	

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

Recommended Operating Conditions

Param	Min	Typical	Maximum
Operating Case Temperature	-40 C		+100 C

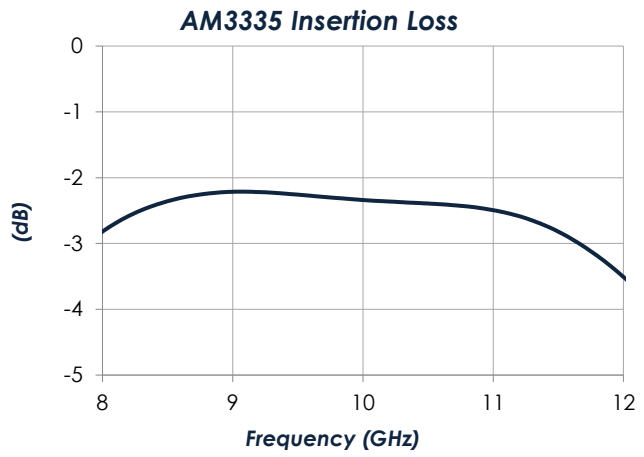
RF Performance

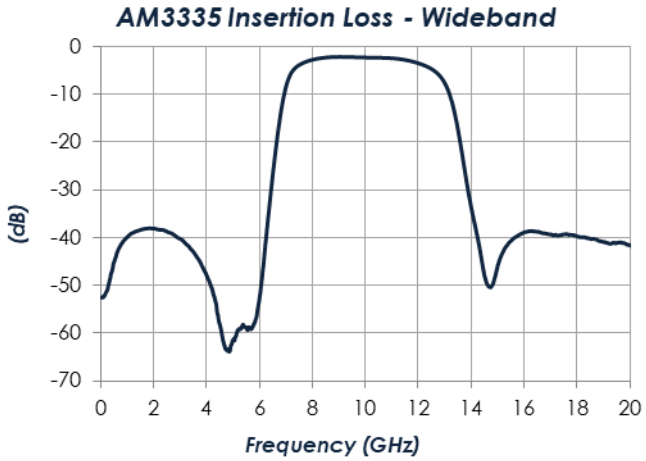
(T = 25 °C unless otherwise specified)

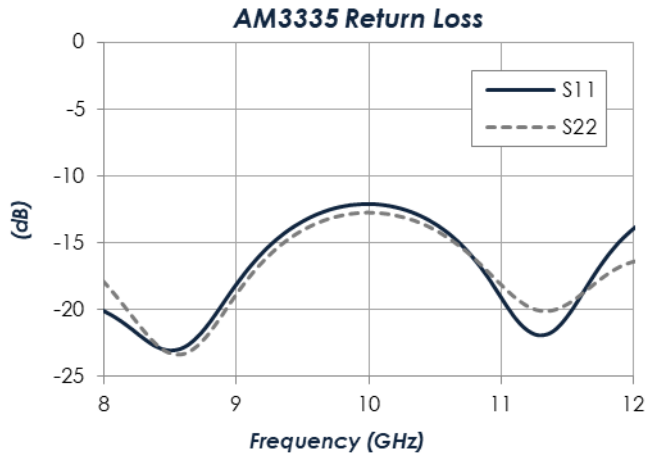
Param	Testing Conditions	Min	Typical	Max
Passband Range		8 GHz		12 GHz
Bandwidth			4 GHz	
Passband Flatness			1.3 dB	
Stopband Rejection	f < 8 GHz		39.5 dB	
	f > 12 GHz		34.8 dB	
Insertion Loss	f = 8 GHz		2.8 dB	
	f = 10 GHz		2.3 dB	
	f = 12 GHz		3.5 dB	
Return Loss	f = 8 GHz		20.1 dB	
	f = 10 GHz		12.1 dB	
	f = 12 GHz		14.1 dB	

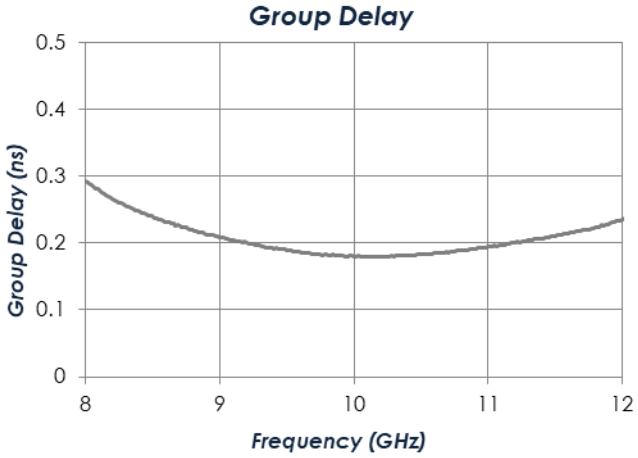
TYPICAL PERFORMANCE

(T = 25 °C unless otherwise specified.)

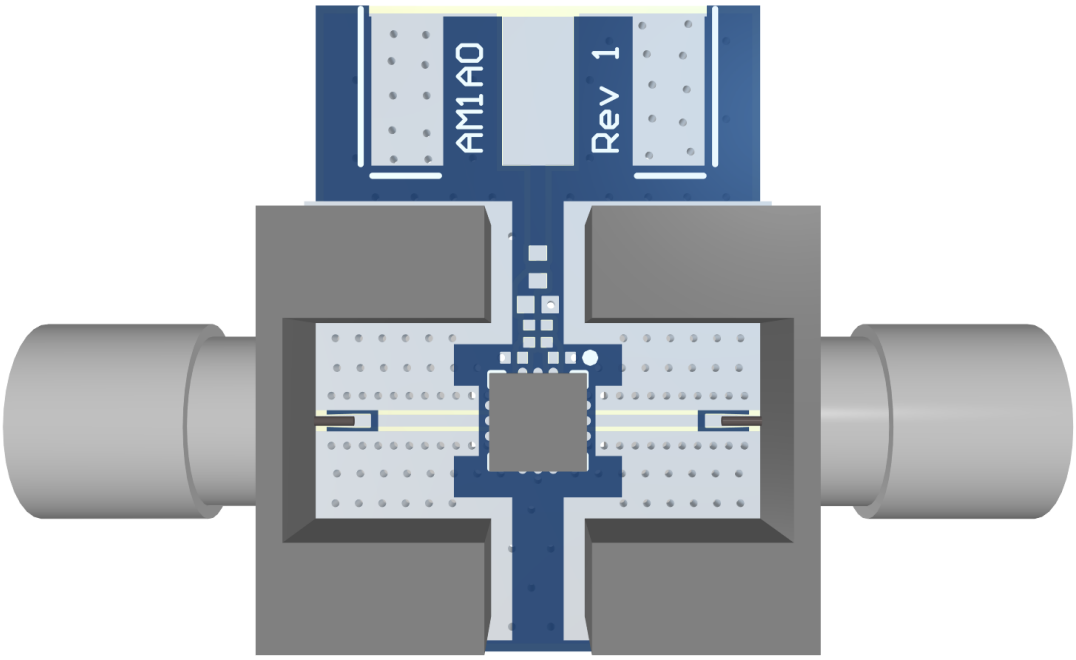








EVALUATION PC BOARD



PART ORDERING DETAILS

Description	Part Number
3 mm x 3 mm x 1.2 mm QFN package	AM3335
Evaluation Board	AM3335-Eval

RELATED PARTS

Part Number	Description
AM3235	8 to 12 GHz Bandpass Filter
AM3276	12 GHz Lowpass Filter
AM3230	8.5 to 9.5 GHz Bandpass 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.

Corporate Headquarters

50 Minuteman Road
Andover, MA 01810 USA
+1 978.967.1401 tel
+1 866.627.6951 tel
+1 978.256.3599 fax

International Headquarters
Mercury International
Avenue Eugène-Lance, 38
PO Box 584
CH-1212 Grand-Lancy 1
Geneva, Switzerland
+41 22 884 5100 tel

Learn more
Visit: mrcy.com
For pricing details, contact: MMICsales@mrcy.com
For technical details, contact: MMICsupport@mrcy.com