

AM2158 – Equalizer

8 dB Equalizer



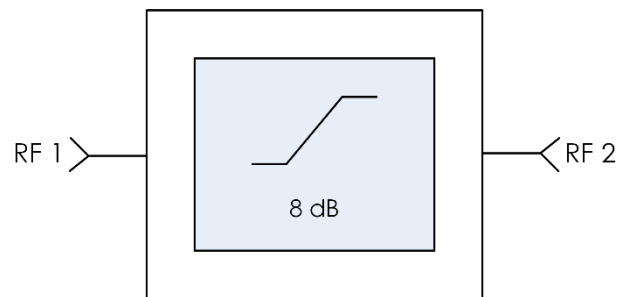
NOTE: Similar part picture shown.
Size and footprint identical.

AM2158 is a 8 dB gain equalizer. It operates with a flat frequency response from DC to 20 GHz. Packaged in a chipscale 1.3 x 2mm DFN package, the AM2158 is footprint compatible with the rest of Mercury's fixed attenuator and equalizer products which offers design flexibility with attenuation values ranging from 0dB to 5dB and equalizer gain slopes of 2, 4, 6, and 8dB operating to 20GHz.

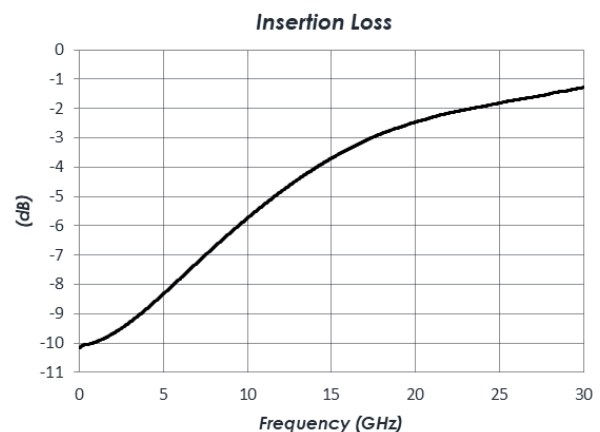
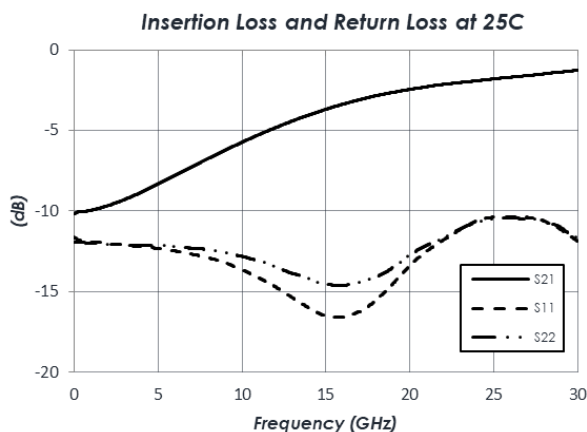
FEATURES

- 8 dB Slope
- DC to 20 GHz Frequency Range
- 1.3mm x 2mm DFN Package
- -40°C to +85°C Operation

FUNCTIONAL DIAGRAM



CHARACTERISTIC PERFORMANCE





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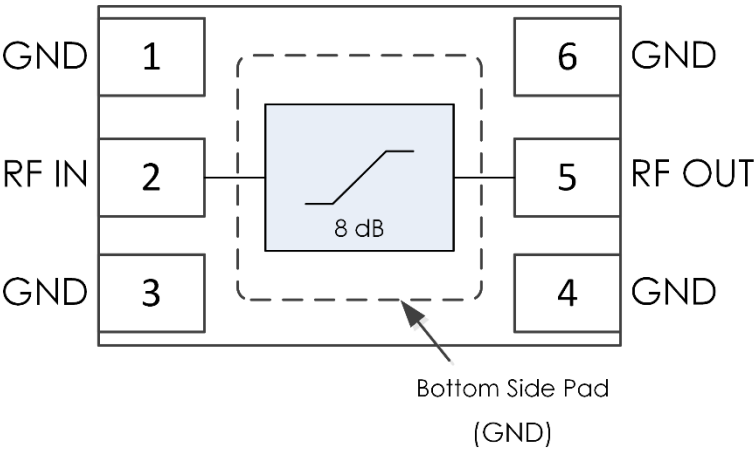
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REVISION HISTORY

Date	Revision	Notes
April 8, 2026	1	Initial Release

PIN LAYOUT AND DEFINITIONS



Pin	Name	Function
1	GND	Ground - Common
2	RF 1	RF Port - 50 Ohms, DC Coupled
3-4	GND	Ground - Common
5	RF 2	RF Port - 50 Ohms, DC Coupled
6	GND	Ground - Common

SPECIFICATIONS

Absolute Maximum Ratings

	Minimum	Maximum
RF Input Power		+30 dBm
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

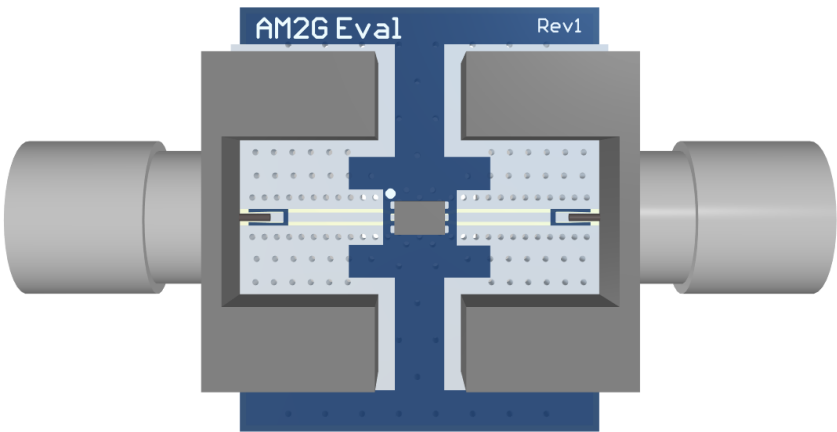
	Minimum	Typical	Maximum
Operating Case Temperature	-40 C		+85 C

RF Performance

(T = 25 °C unless otherwise specified)

Param	Testing Conditions	Min	Typical	Max
Frequency Range		DC		20 GHz
Insertion Loss	f=10 MHz		10.2 dB	
	f=10 GHz		5.7 dB	
Return Loss	f=20 GHz		2.5 dB	
	f=10 MHz		11.6 dB	
	f=10 GHz		13.7 dB	
	f=20 GHz		13.4 dB	

EVALUATION PC BOARD



PART ORDERING DETAILS

Part Number	Description
AM2158	1.3 mm x 2 mm QFN package
AM2158-EVAL	AM2158 Evaluation Board with Connectors

RELATED PARTS

Part Number	Description	
AM2152	DC to 20 GHz	2 dB Equalizer
AM2154	DC to 20 GHz	4 dB Equalizer
AM2156	DC to 20 GHz	6 dB Equalizer

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-ethylhexyl) 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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