

**Ea**

**EMI MICROWAVE ABSORBERS**



**LEADER  
TECH**   
a HEICO company

*The Leading Edge in EMI Shielding Technology*

# We've Got You Covered

## Reliable Board, Enclosure and Cable Shielding Solutions

Leader Tech is a world-leading innovator and US-based manufacturer of EMI shielding products for circuit boards, enclosures and cables. In addition to our best selling standard, modified standard and custom CBS shields, Leader Tech offers an expansive line of beryllium copper fingerstock gaskets, conductive elastomers, advanced RF absorber materials and EMI/RFI ferrites.



TECHSIL Conductive Elastomer Catalog

FSG Fabric Shielding Catalog

EMI Enclosure Solutions Catalog

Circuit Board Shielding Catalog

FerriShield Ferrites Catalog

## LeaderTech Shielding Products

### Board Level Shielding

- Standard and Multi-Cavity CBS
- Modified Standard Options
- Custom Circuit Board Shields

### FerriShield Ferrites

- Snap-On Bisected & Solid Bead Ferrites
- Round & Flat Styles for Cables, Wires and Flex Circuits
- Low, High, Microwave and Wideband Frequency-Specific Material

### Enclosure Shielding

- BeCu Fingerstock Gaskets
- TechSIL 5000 Conductive Elastomers
- Conductive Fabric Shielding Gaskets
- TechSIL 8000 Oriented Wire Gaskets
- TechMESH Knitted Wire Gaskets
- TechMESH Combo Strip & Gaskets
- TechVent Honeycomb Shielding Panels

# EMI Problem?

Our sales engineers are waiting for your call: 866-TECH-EMI (866-832-4364)

Visit our web site today to browse our complete product line, download literature and find your local sales engineer or sales representative!  
[www.leadertechinc.com](http://www.leadertechinc.com)

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# Table of Contents

Absorber Comparison Chart .....	4
Narrowband .....	5
Tuned .....	6
Cavity Resonance .....	7
Wideband .....	
Low Profile .....	8
Lossy Foam .....	9
Reticulated Foam .....	10
Pyramidal Foam .....	11



ISO 9001: 2008  
CERTIFIED

RoHS  
COMPLIANT



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Microwave Absorbers

Leader Tech's absorbing products are utilized to attenuate microwave energy from 500 MHz to greater than 40 GHz. The unwanted electromagnetic energy is converted into a miniscule amount of heat.

Absorbers are composed of either iron-infused silicone or carbon-coated polyurethane foam. Greatest performance is achieved when absorber thickness is comparable to a quarter of the wavelength of the offending frequency.

ABSORBER COMPARISON CHART						
Parameters	Tuned	Cavity Resonance	Low Profile	Lossy	Reticulated	Pyramidal
Binder	Silicone	Silicone	Silicone	Polyurethane Foam	Polyurethane Foam	Polyurethane Foam
Filler	Iron	Iron	Iron	Carbon	Carbon	Carbon
Moisture Resistant	Yes	Yes	Yes	No	No	No
Attenuation Level	Excellent	Very Good	Fair	Good	Good	Good
Design Flexibility	Very Good	Very Good	Excellent	Good	Fair	Fair
Standard Format	Sheet	Sheet	Roll	Sheet	Sheet	Sheet
Die/Kiss Cut Option	Yes	Yes	Yes	Yes	Yes	No
Cost	\$\$	\$\$	\$\$	\$	\$	\$
Lead Time	Very Good	Excellent	Excellent	Excellent	Excellent	Excellent

**FORMAT OPTIONS: SHEET - DIE CUT - KISS CUT**



Leader Tech offers Sample Kits to help you determine the appropriate material for your application. Contact a Sales Representative at [sales@leadertechinc.com](mailto:sales@leadertechinc.com) to receive one today!

## ABSORPTION EFFICIENCY

Attenuation (dB)	Percent Absorbed	Attenuation (dB)	Percent Absorbed
-1	20.57%	-21	99.21%
-2	36.90%	-22	99.37%
-3	49.88%	-23	99.50%
-4	60.19%	-24	99.60%
-5	68.38%	-25	99.68%
-6	74.88%	-26	99.75%
-7	80.05%	-27	99.80%
-8	84.15%	-28	99.84%
-9	87.41%	-29	99.87%
-10	90.00%	-30	99.90%
-11	92.06%	-31	99.92%
-12	93.69%	-32	99.94%
-13	94.99%	-33	99.95%
-14	96.02%	-34	99.96%
-15	96.84%	-35	99.97%
-16	97.49%	-36	99.97%
-17	98.00%	-37	99.98%
-18	98.42%	-38	99.98%
-19	98.74%	-39	99.99%
-20	99.00%	-40	99.99%

**\*\*The amount of attenuation received is based on a logarithmic unit used to describe the ratio of power received versus power transmitted.  $dB = 10\log_{10}(P_1/P_0)$**







## NARROWBAND

**Tuned** – In addition to our off the shelf Tuned absorber series (1-18 GHz), Leader Tech can customize absorbers for discrete frequencies (1.3 GHz, 6.5 GHz, 10.9 GHz, etc.) by modifying the thickness and formulation at no additional cost. Tuned absorbers offer the highest amount of performance, providing an average of 20-30 dB of attenuation.

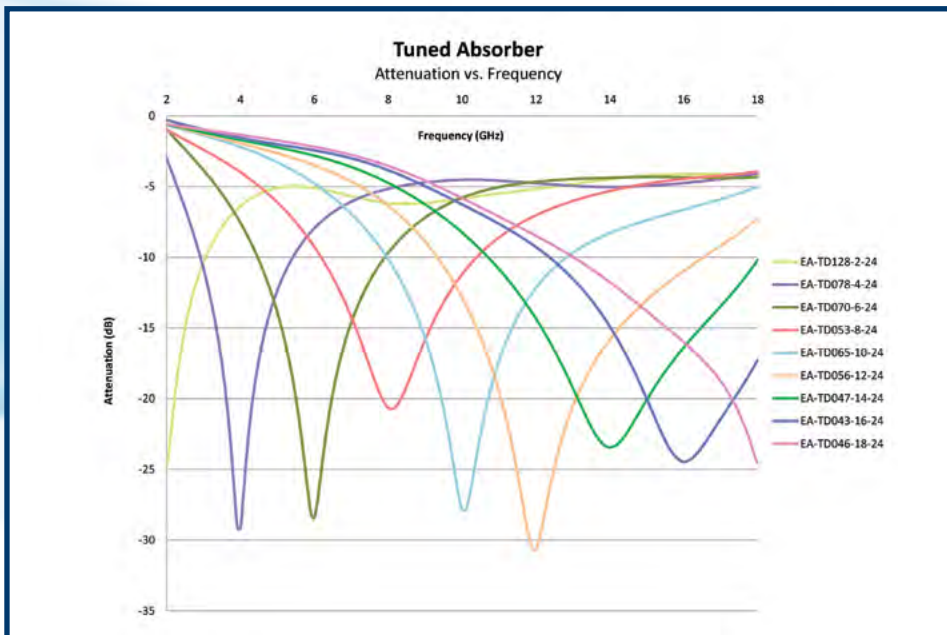
TUNED

Part Number	PSA	Base	Thickness (in.)	Frequency
EA-TD165-1-XX	Yes	Silicone	0.165	1 GHz
EA-TD128-2-XX	Yes	Silicone	0.128	2 GHz
EA-TD095-3-XX	Yes	Silicone	0.095	3 GHz
EA-TD078-4-XX	Yes	Silicone	0.078	4 GHz
EA-TD081-5-XX	Yes	Silicone	0.081	5 GHz
EA-TD070-6-XX	Yes	Silicone	0.070	6 GHz
EA-TD062-7-XX	Yes	Silicone	0.062	7 GHz
EA-TD053-8-XX	Yes	Silicone	0.053	8 GHz
EA-TD072-9-XX	Yes	Silicone	0.072	9 GHz
EA-TD065-10-XX	Yes	Silicone	0.065	10 GHz
EA-TD060-11-XX	Yes	Silicone	0.060	11 GHz
EA-TD056-12-XX	Yes	Silicone	0.056	12 GHz
EA-TD051-13-XX	Yes	Silicone	0.051	13 GHz
EA-TD047-14-XX	Yes	Silicone	0.047	14 GHz
EA-TD045-15-XX	Yes	Silicone	0.045	15 GHz
EA-TD043-16-XX	Yes	Silicone	0.043	16 GHz
EA-TD041-17-XX	Yes	Silicone	0.041	17 GHz
EA-TD046-18-XX	Yes	Silicone	0.046	18 GHz

**CUSTOMIZABLE!**

EA-TD165-1-XX

Note: XX = sheet size, available in 12" x 12" and 24" x 24" XX = 12 for 12" x 12" XX = 24 for 24" x 24"



\*See common applications on page 7.

## NARROWBAND

**Cavity Resonance** – Off the shelf absorber that targets specific frequency increments when exact frequency is unknown. Cavity resonance absorbers typically provide 15-25 dB of attenuation.

### Features & Properties

- Magnetically loaded silicone
- High Reflection Loss when mounted to a conductive surface
- Operating Temp: -60 F to 375 F (-51 C to 191 C)
- Flammability Rating : UL94 V-0
- Hardness: Shore A 60-80
- Halogen Free

### Common Applications:

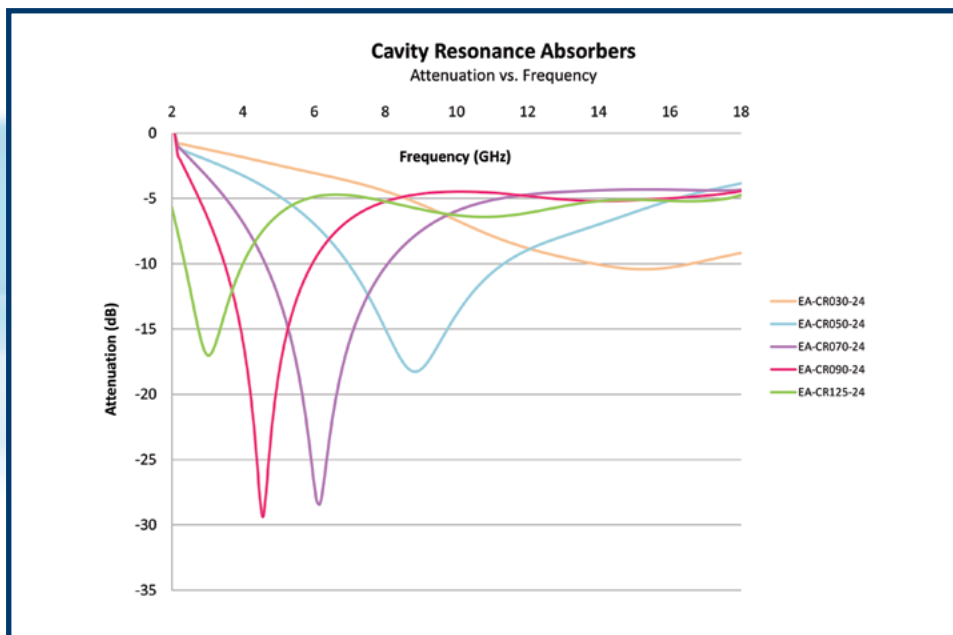
- Antenna Cross Talk Reduction
- Radar Cross Section Reduction
- Instrument Housings
- Aircraft Seals/Ducts
- Cavity Resonance
- Inside EMI Shields
- Traveling, Creeping, Surface Wave Reduction

# CAVITY RESONANCE

Part Number	PSA	Base	Thickness (in.)	Frequency
EA-CR020-XX	Yes	Silicone	0.020	14-18 GHz
EA-CR030-XX	Yes	Silicone	0.030	13-17 GHz
EA-CR040-XX	Yes	Silicone	0.040	9-12 GHz
EA-CR050-XX	Yes	Silicone	0.050	6-11 GHz
EA-CR060-XX	Yes	Silicone	0.060	5-9 GHz
EA-CR070-XX	Yes	Silicone	0.070	4-7 GHz
EA-CR080-XX	Yes	Silicone	0.080	3-7 GHz
EA-CR090-XX	Yes	Silicone	0.090	2-5 GHz
EA-CR100-XX	Yes	Silicone	0.100	2-5 GHz
EA-CR125-XX	Yes	Silicone	0.125	1-3 GHz

Note: XX = sheet size, available in 12" x 12" and 24" x 24" XX = 12 for 12" x 12" XX= 24 for 24" x 24"

EA-CR020





## WIDEBAND

**Low Profile** – Slender, flexible absorber that can easily be added to an array of applications with little or no design modification.

### Features & Properties

- Magnetically loaded silicone
- High Power Loss when mounted to a conductive surface
- Operating Temp: -13 F to 194 F (-25 C to 90 C)
- Hardness: Shore A 75-85

### Common Applications:

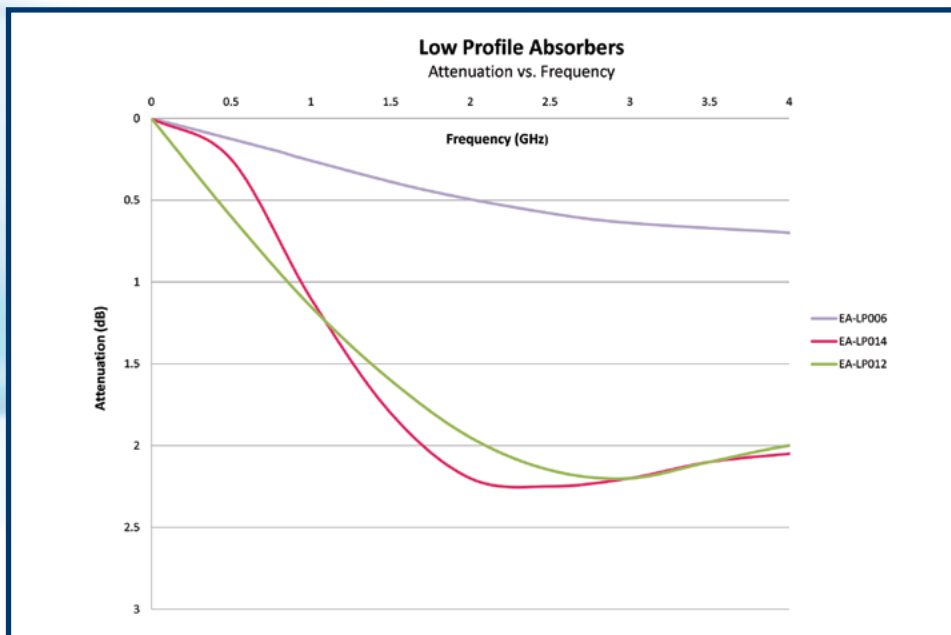
- Inside EMI Shields
- Mobile & Digital Devices

**LOW  
PROFILE**

Part Number	PSA	Base	Thickness (in.)	Frequency
EA-LP014	Yes	Silicone	0.014	100 MHz - 10 GHz
EA-LP012	Yes	Silicone	0.012	10 MHz- 10 GHz
EA-LP006	Yes	Silicone	0.006	800 MHz-4 GHz

\*Low Profile Material comes on rolls, available by the foot

EA-LP014





## WIDEBAND

**Lossy Foam** – Lowest cost solution for attenuating a wide range of frequencies.

### Features & Properties

- Dielectrically loaded polyurethane foam
- High insertion loss when mounted to a nonconductive surface
- Operating Temp: -60 F to 250 F (-51 C to 121 C)
- Flammability Rating: UL94-HF1 available
- Halogen Free

### Common Applications:

- Antenna Isolation
- Sidelobe/Backlobe Reduction
- EMI Reduction
- Radar Cross Section Reduction
- Test Boxes

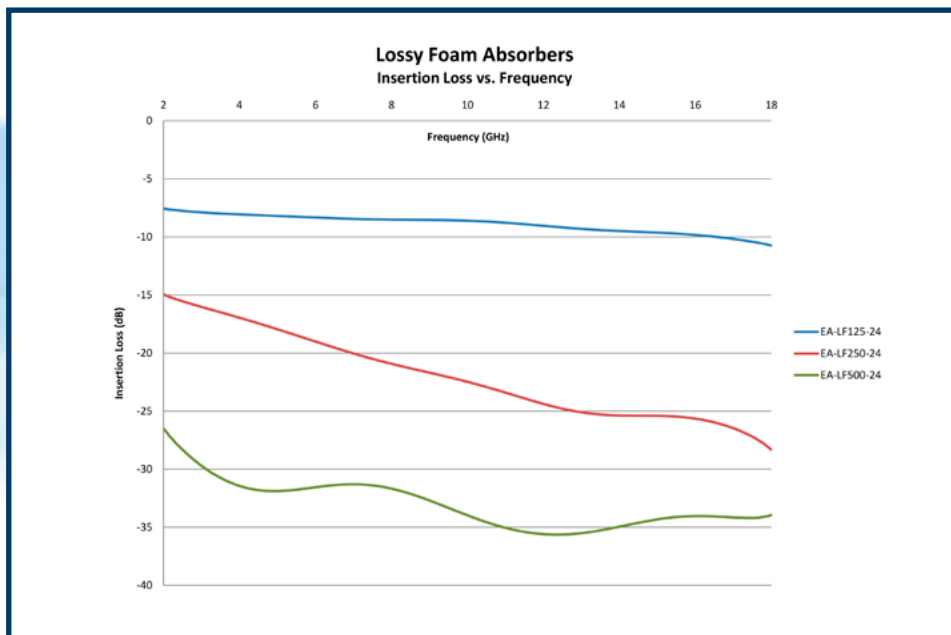
## LOSSY FOAM

Part Number	PSA	Base	Thickness (in.)	Frequency
EA-LF125-XX	Yes	Polyurethane Foam	0.125	1-18 GHz
EA-LF250-XX	Yes	Polyurethane Foam	0.250	1-18 GHz
EA-LF500-XX	Yes	Polyurethane Foam	0.500	1-18 GHz

Note: XX = sheet size, available in 12" x 12" and 24" x 24" XX = 12 for 12" x 12" XX = 24 for 24" x 24"

\*Thicker material available by request.

EA-LF125





## WIDEBAND

**Reticulated Foam** – Open-cell, light weight, low cost solution which can be used as an air filter as well as an EMI absorber.

### Features & Properties

- Dielectrically loaded polyurethane foam
- High reflection loss when mounted to a conductive surface
- Operating Temp: -60 F to 250 F (-51 C to 121 C)
- Flammability Rating: UL94-HF1 available
- Halogen Free

### Common Applications:

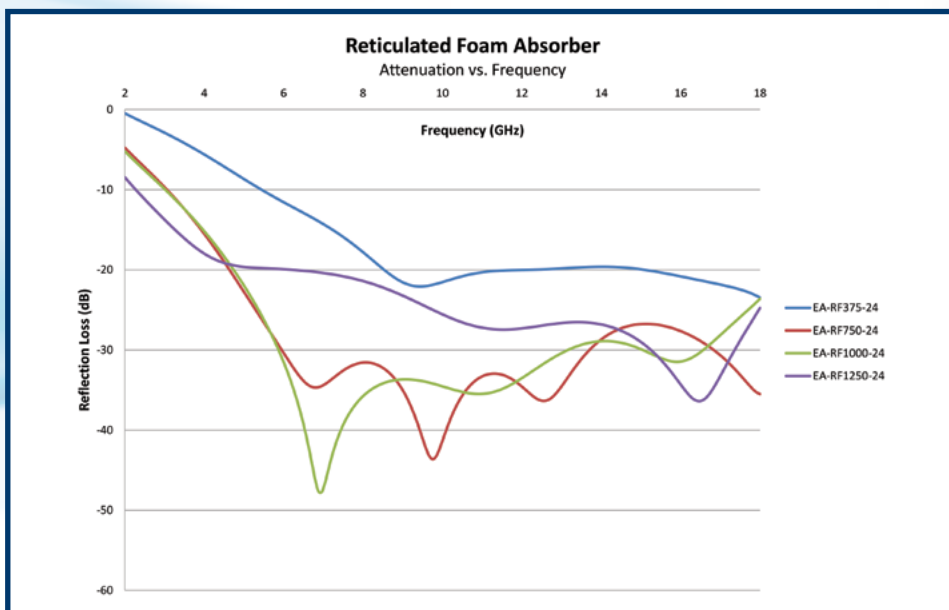
- Antenna Isolation
- Sidelobe/Backlobe Reduction
- EMI Reduction
- Radar Cross Section Reduction
- Test Boxes



RETICULATED

Part Number	PSA	Base	Thickness (in.)	Frequency
EA-RF375-XX	Yes	Polyurethane Foam	0.375	1-18 GHz
EA-RF500-XX	Yes	Polyurethane Foam	0.500	1-18 GHz
EARF750-XX	Yes	Polyurethane Foam	0.750	1-18 GHz
EA-RF1000-XX	Yes	Polyurethane Foam	1.000	1-18 GHz
EA-RF1250-XX	Yes	Polyurethane Foam	1.250	1-18 GHz

Note: XX = sheet size, available in 12" x 12" and 24" x 24" XX = 12 for 12" x 12" XX= 24 for 24" x 24"





## WIDEBAND

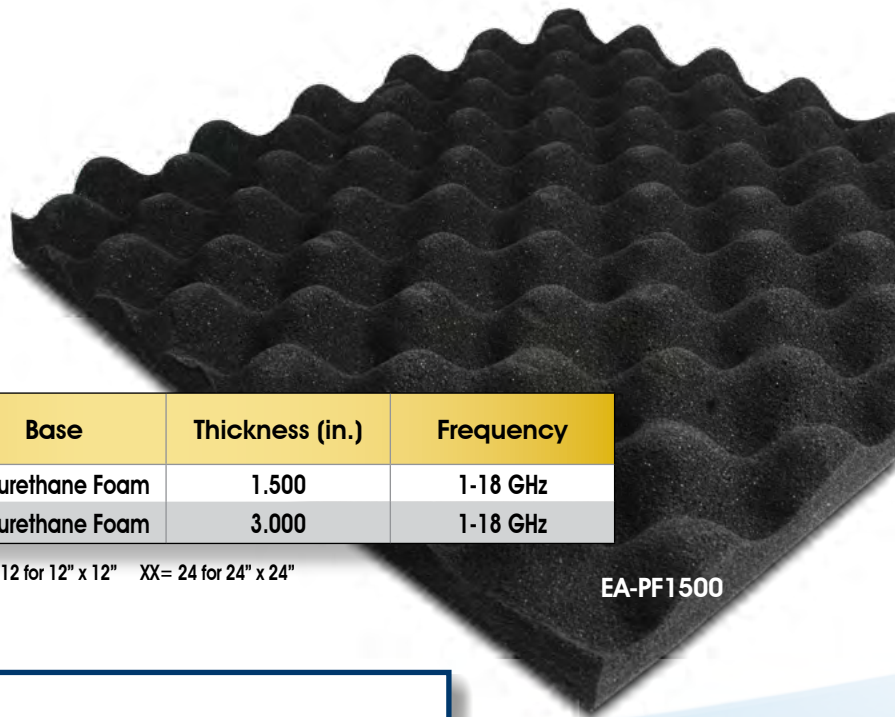
**Pyramidal Foam** - Gradual transition of impedance through the cones provides excellent reflection loss, specifically when applied to the walls of anechoic chambers.

### Features & Properties

- Dielectrically loaded polyurethane foam
- High reflection loss when mounted to a conductive surface
- Operating Temp: -60 F to 250 F (-51 C to 121 C)
- Flammability Rating: UL94-HF1 available
- Halogen Free

### Common Applications:

- Antenna Isolation
- Sidelobe/Backlobe Reduction
- EMI Reduction
- Radar Cross Section Reduction
- Test Boxes

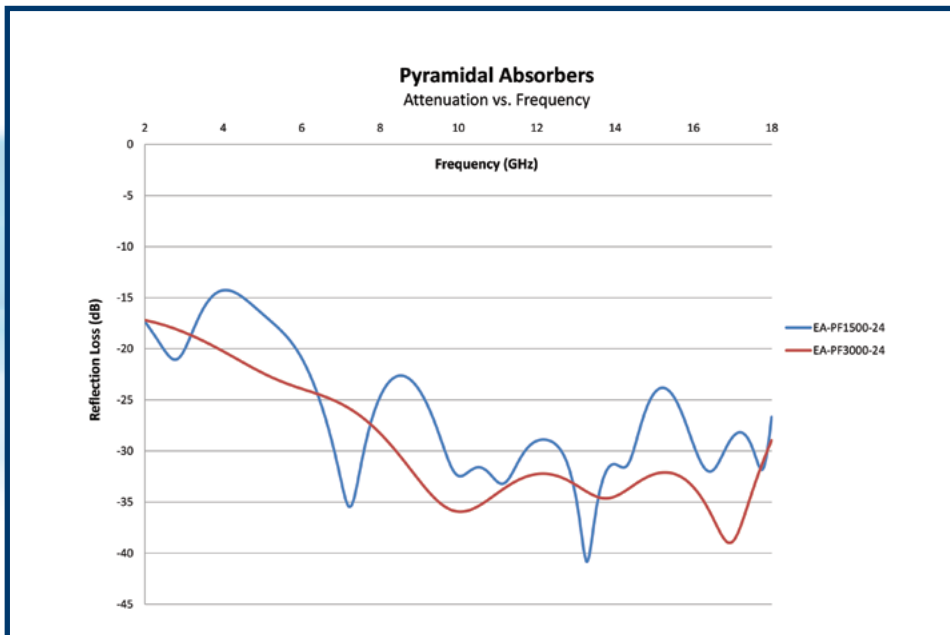


EA-PF1500

Part Number	PSA	Base	Thickness (in.)	Frequency
EA-PF1500-XX	Yes	Polyurethane Foam	1.500	1-18 GHz
EA-PF3000-XX	Yes	Polyurethane Foam	3.000	1-18 GHz

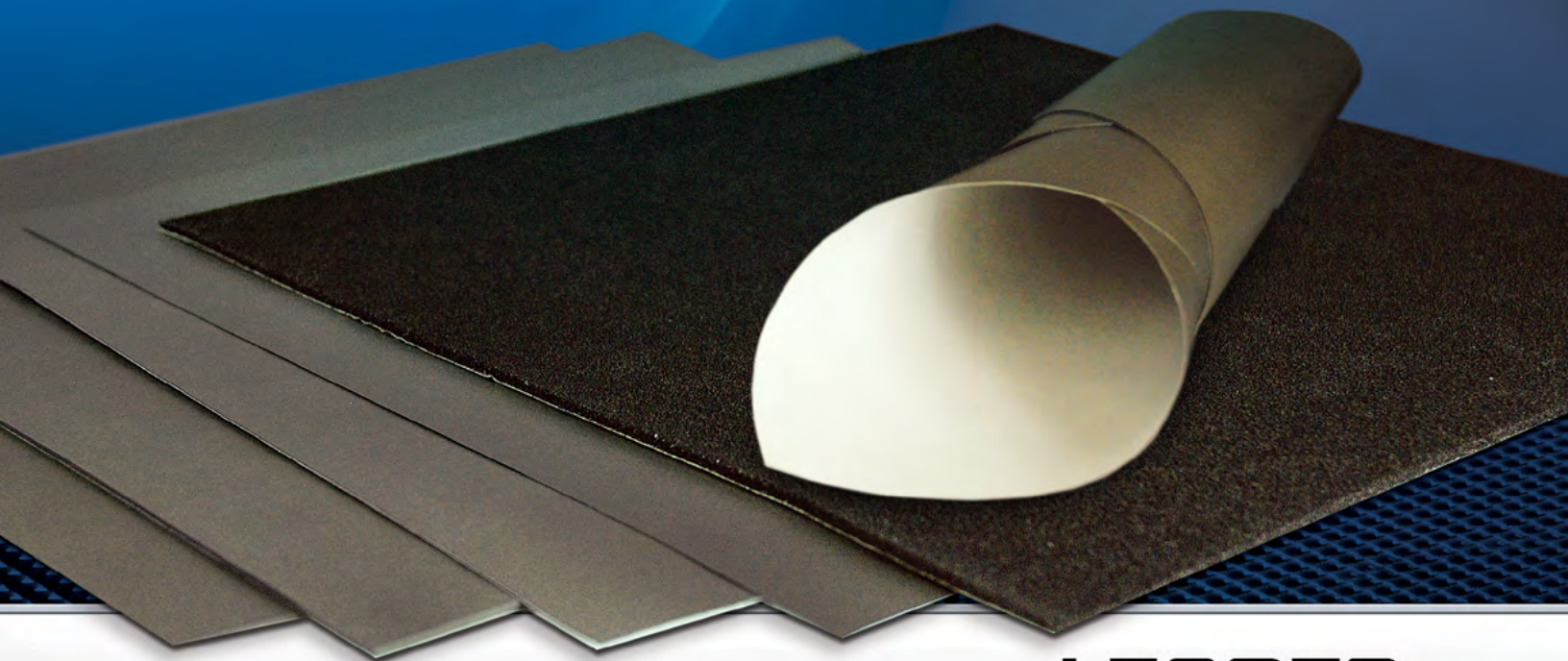
Note: XX = sheet size, available in 12" x 12" and 24" x 24" XX = 12 for 12" x 12" XX= 24 for 24" x 24"

**PYRAMIDAL**



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*A passion in all we do*



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