Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!


## Contact us

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Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

# 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**

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ISO 9001: 2008 CERTIFIED

RoHS COMPLIANT

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 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. $dB = 10\log_{10}(P_1/P_0)$

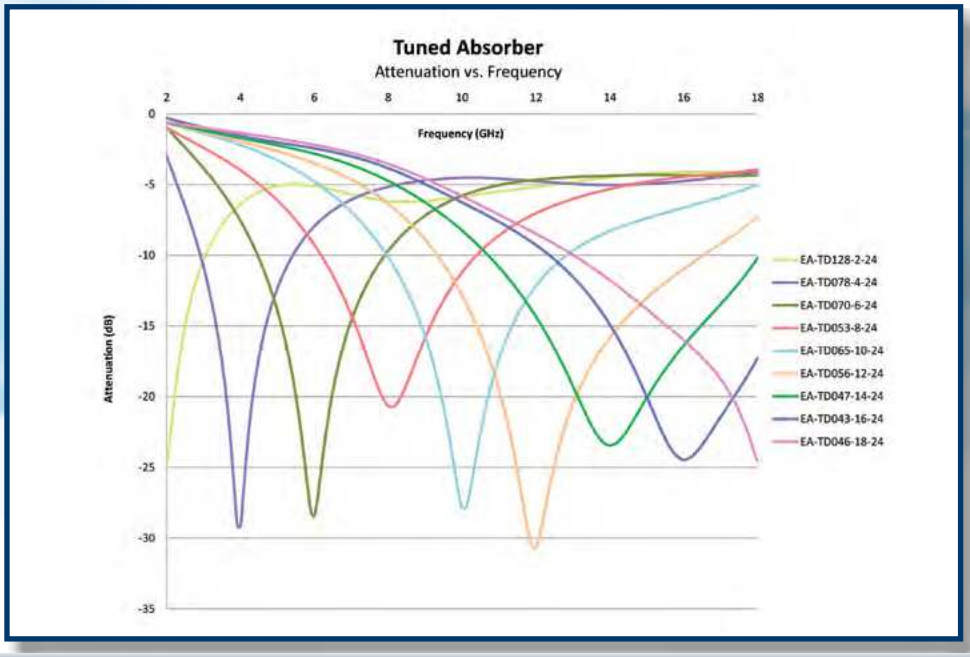
## NARROWBAND

**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 |

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.


Phone: 866.832.4364  Fax: 813.855.3291  Web: www.leadertechinc.com

## 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

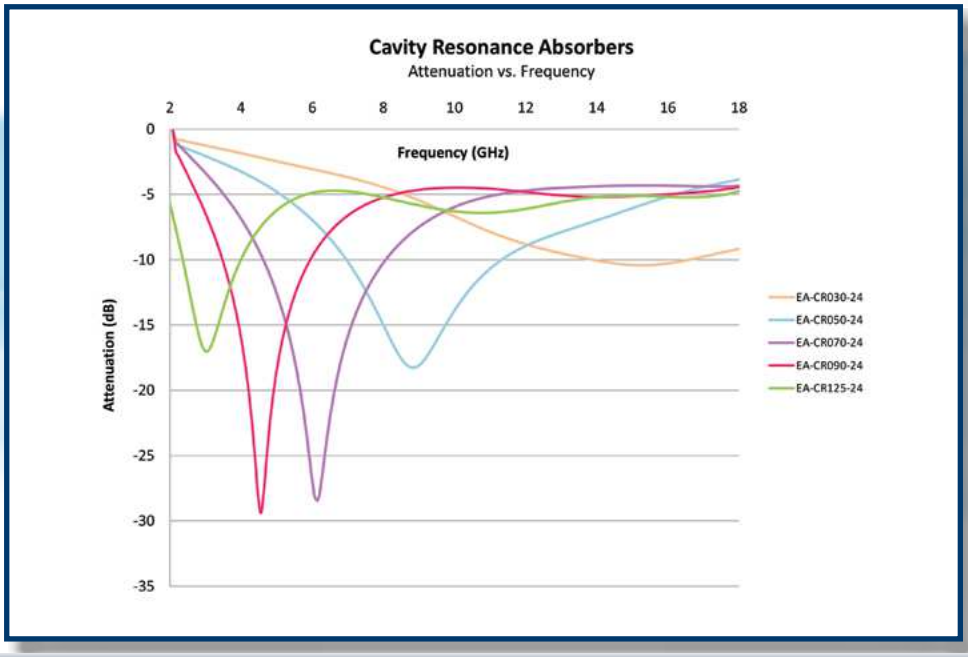
### Common Applications:

- 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"

## 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

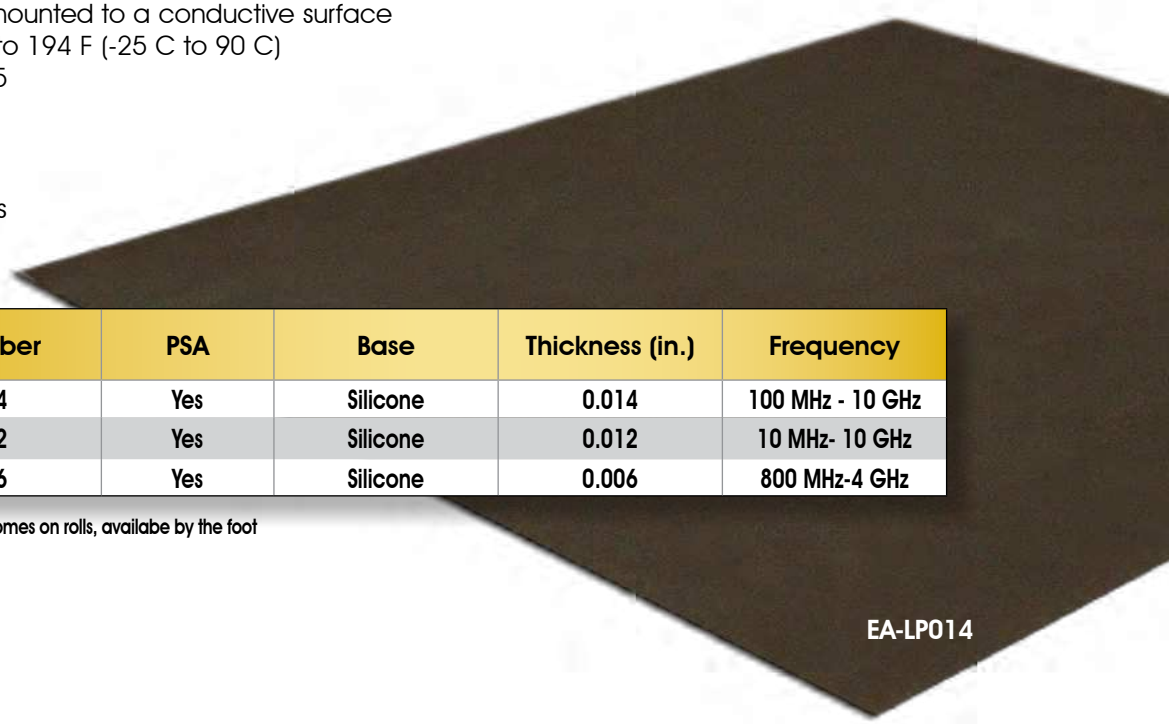
### Common Applications:

- Inside EMI Shields
- Mobile & Digital Devices

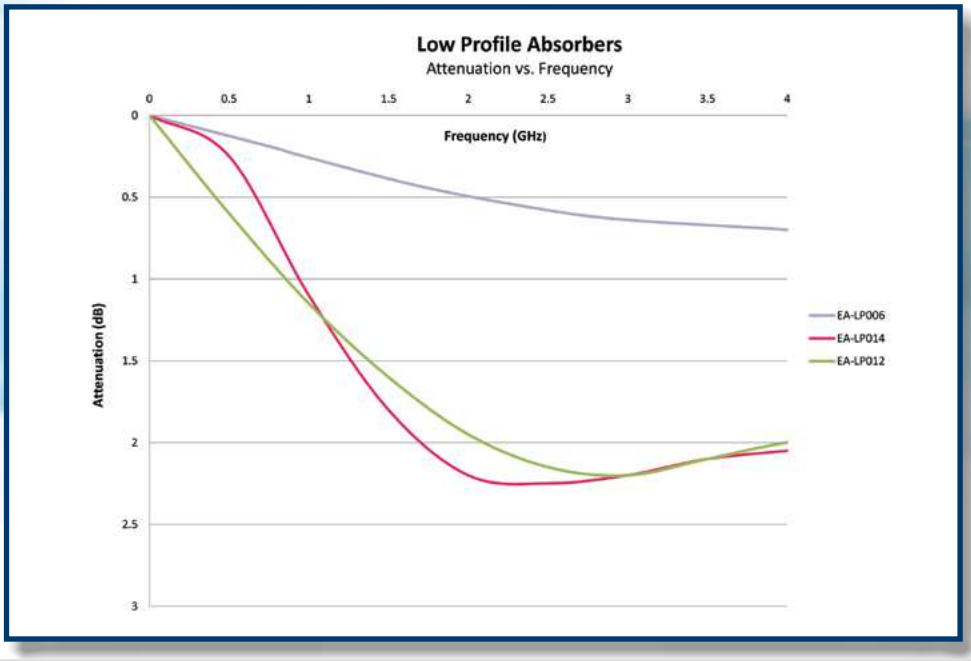
LOW PROFILE

| 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, availabe by the foot



EA-LP014





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## WIDEBAND

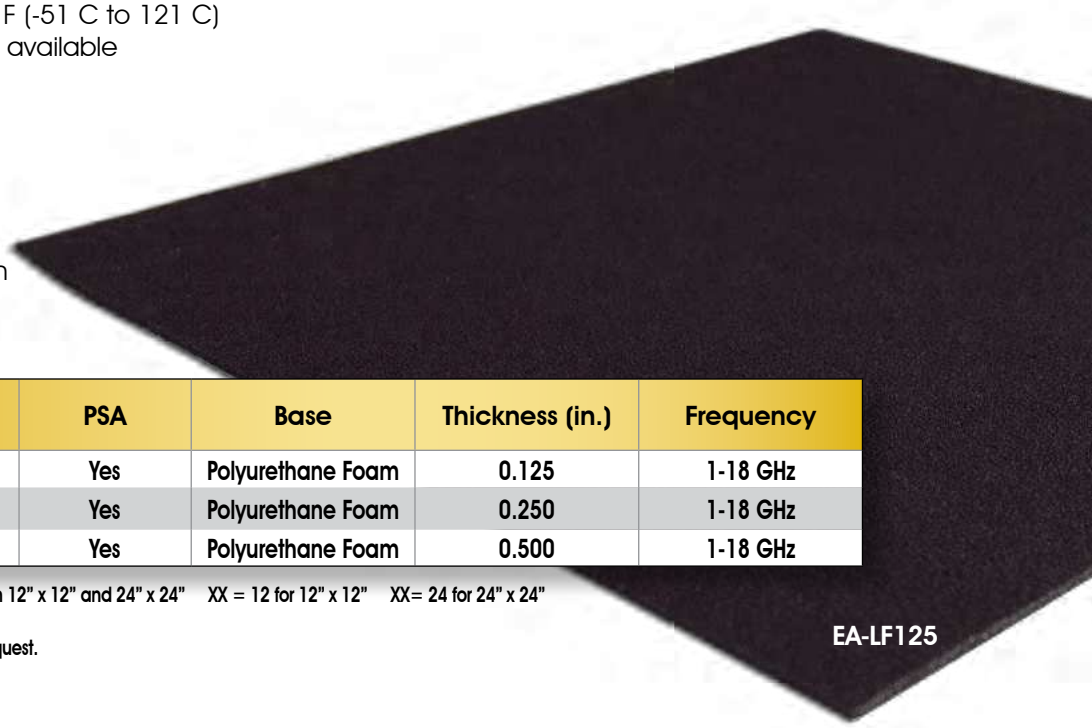
**Lossy Foam** – Lowest cost solution for attenuating a wide range of frequencies.

### 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



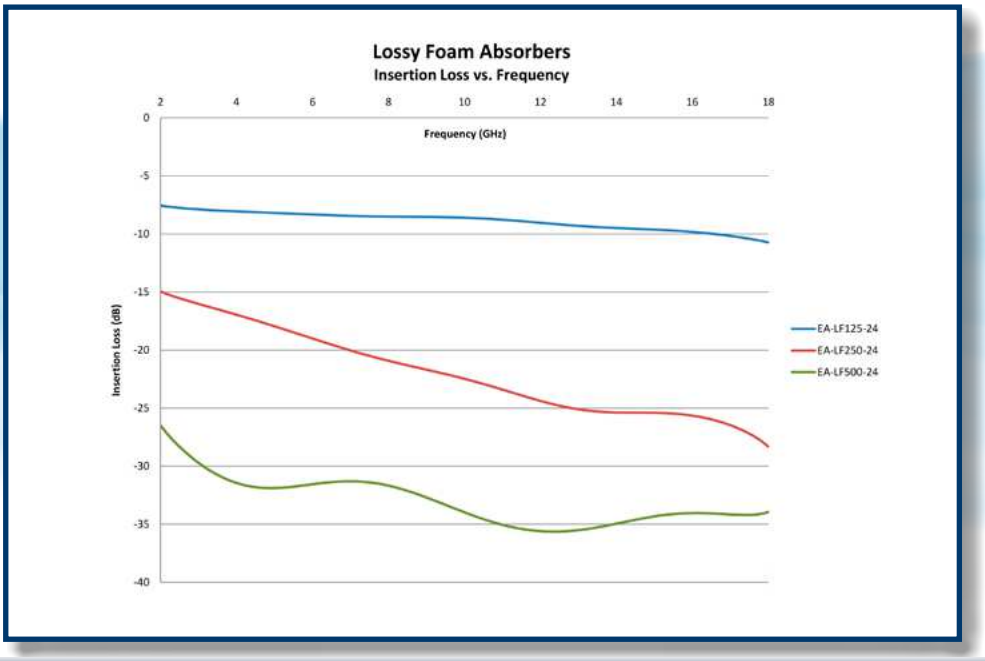
EA-LF125

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.



## 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

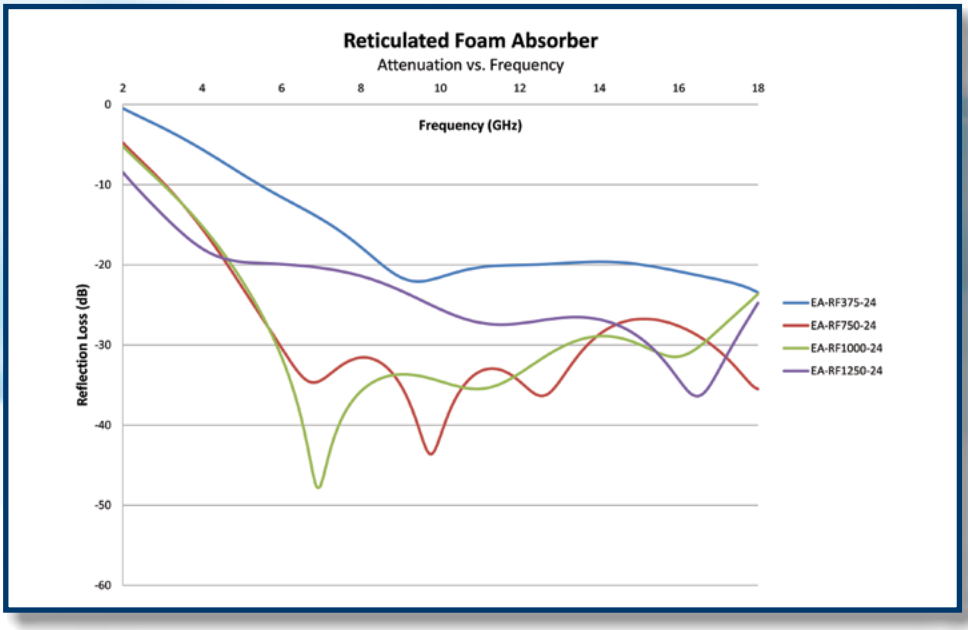
### Common Applications:

- 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"





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## WIDEBAND

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

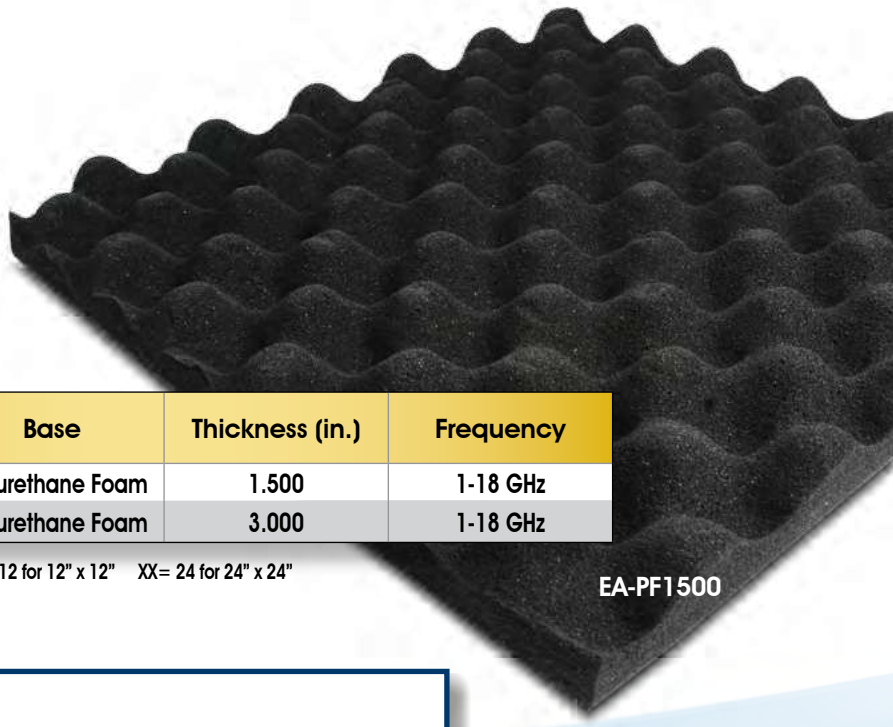
### Features & Properties

- 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

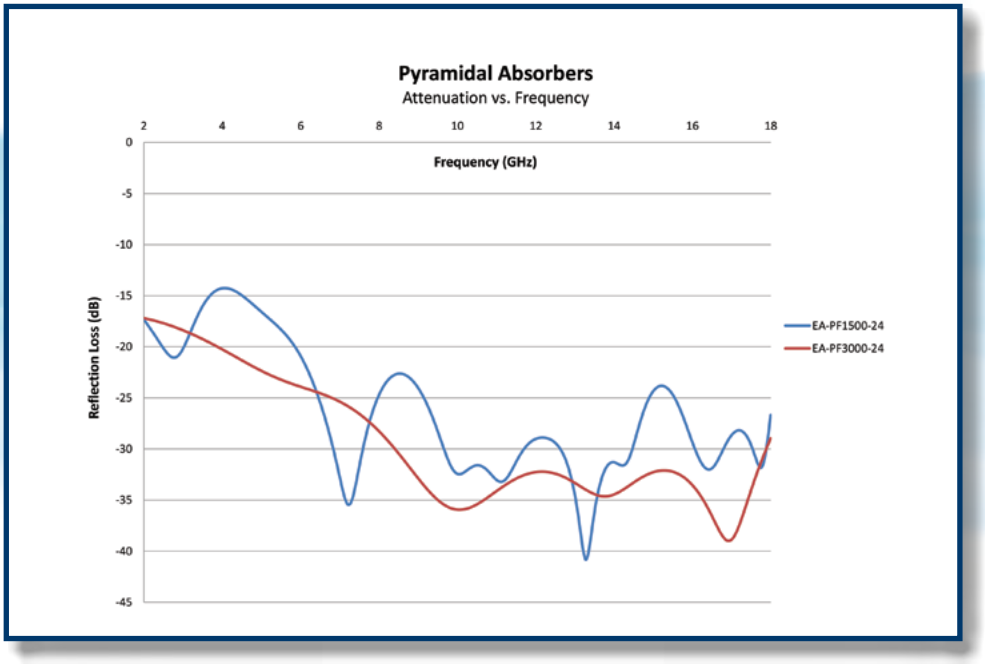
PYRAMIDAL



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"



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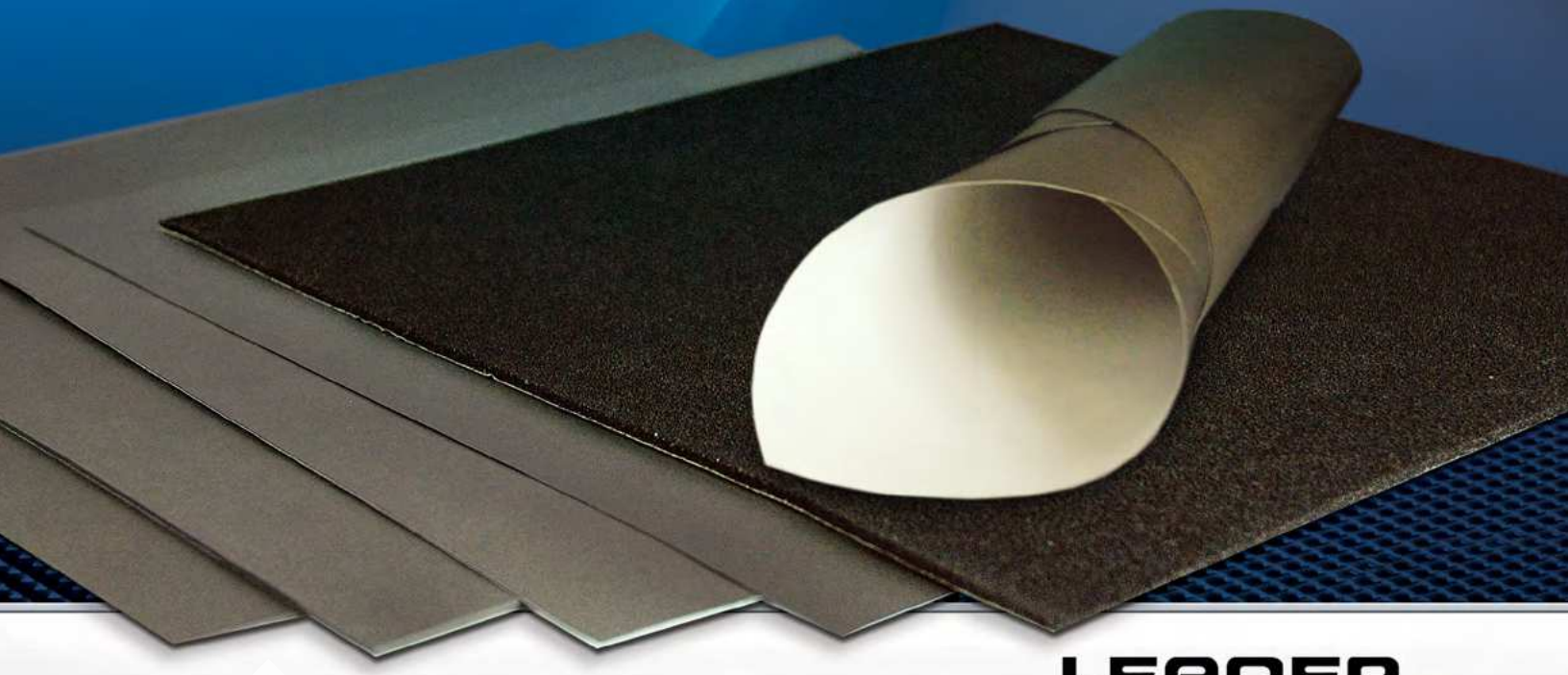
*A passion in all we do*



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