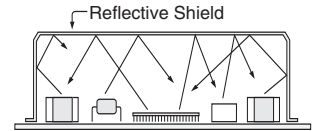


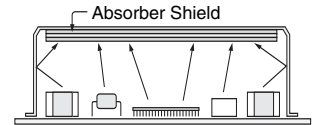
electromagnetic radio wave absorbers

Radio frequencies emanating from electronic components such as the printed circuit board sketch at the right are addressed in three ways: sometimes no shielding is required; a reflective shield in the form of a local cover for the components, or the entire electronic enclosure can be fitted up as a shield; an absorber pad shield which soaks up the RF and converts it to imperceptible heat energy.

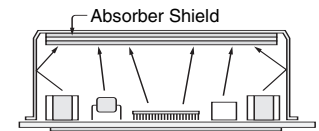
The latter Absorber Shield method deals with the unwanted RF energy right at the source and prevents re-radiation and reflection of the signals so that neighboring components are unaffected; also, second, third and fourth order harmonics are nullified or greatly minimized.



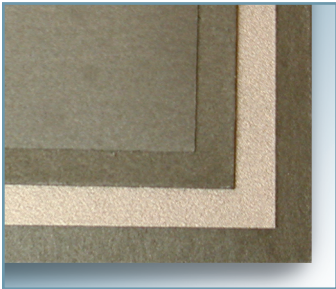
Typical shielding approach allows reflected radiation to affect neighboring components.



Noise absorber approach assimilates radiated frequencies and converts to imperceptible heat energy.



Absorbers shown in use below and above Printed Circuit Board.



EMC wave absorber

40MHz TO 5GHz: EA SERIES. The EA series is a high frequency noise absorber in a range of formulations addressing 40MHz to 5GHz radiations from electronic components. It has a multi-layered structure of screened coating matrixes adjusted for discrete impedance matching to absorb electromagnetic waves at various peak frequencies depending on which of the seven different constructions is used.

applications:

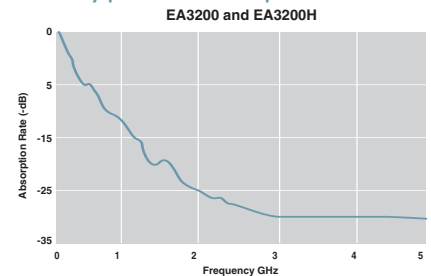
PCB's, PCB components, electronic enclosures, shielded boxes, all microprocessor based electronic, EDP, telecom, scientific, medical, architectural shielding, RF test chambers, shielded facilities

extra wideband series

40MHz TO 5GHz @ 3.2GHz PEAK. This all-around universal wideband formula is available in a standard temperature type and a high temperature type (up to 200°C). Excellent performance from 40MHz to 5GHz.

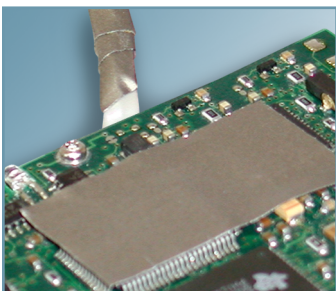
Material Characteristic	Measure
Frequency range	40 MHz - 5 GHz
Peak frequency	3.2 GHz
Temperature range	-20°C to 100°C and -10°C to 200°C (high temp)
Flammability rating	UL94-V0
Adhesive: standard temp.	0°F to 180°F <i>-18°C to 83°C</i> ASTM D-3575
high temp.	50°F to 312°F <i>10°C to 200°C</i> ASTM D-3575
tack	8.4 p.s.i. (stainless steel standard) ASTM D-3575
	8.3 p.s.i. (stainless steel high temperature) ASTM D-3575
shear	300+ hrs. @ 2 p.s.i. @ 22°C ASTM D-3575
Dimensions: standard	8.25" W x 15.75" L x .004" max. <i>209,6 x 400,0 x 0,10</i>
maximum	3'-0" W x 65'-0" L x .004" max <i>1,0 x 20,0 M x 0,10</i>

typical absorption rate



PART No.	Width	Length*	Thickness	Frequency Range	Peak Frequency – Attenuation
EA3200	8.25 <i>209,6</i>	15.75 <i>400,0</i>	.005 <i>0,13</i>	40 MHz to 5 GHz	3.2 GHz @ -31.3 dB
EA3200H (hi temp)	8.25 <i>209,6</i>	15.75 <i>400,0</i>	.005 <i>0,13</i>	40 MHz to 5 GHz	3.2 GHz @ -31.3 dB

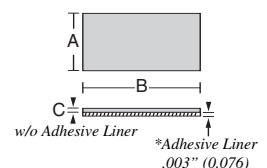
*Available in standard rolls 8.25" 210mm x 65'-0" 20M



shielding patches®

FOR PCB COMPONENTS AND WIRE CIRCUITS. A quick and easy way to gain 1 to 2 dB without invasive circuit changes. The EA3200H RF absorber matrix provides a measurable effect from 40MHz to 5GHz depending on frequency, existing circuit load, and area covered by the patch®. Peak performance is at 3.2GHz to 5.0GHz.

Installs simply by removing protective adhesive liner. Convenient 6.00" x 8.00" (152 x 203mm) sheets with (24) patches per sheet.



PART No.	A	B	C	Frequency – Attenuation
EA3200H-SP12	1.00 <i>25,4</i>	1.937 <i>49,2</i>	.005 <i>0,13</i>	40MHz - 5GHz: peak @ 3.2GHz @ -31.2dB

*"H" signifies high temperature version. See specifications above.



standard series – 50 MHz to 1 GHz

Material Characteristic		Measure
Frequency range		50 MHz - 1 GHz
Peak frequency choices		100, 300, 400, 500 or 800 MHz
Temperature range		-20°C to 100°C
Flammability rating		UL94-V0
Adhesive:	temperature	0°F to 180°F <i>-18°C to 83°C</i> ASTM D-3575
	tack	8.4 p.s.i. (stainless steel) ASTM D-3575
	shear	300+ hrs. @ 2 p.s.i. @ 22°C ASTM D-3575
Dimensions:	standard	15.75" W x 15.75" L x .020" max. <i>400,0 x 400,0 x 0,50</i>
	maximum	3'-0" W x 65'-0" L x .020" max <i>1,0 x 20,0 M x 0,50</i>

PART No.	Width	Length*	Thickness	Frequency Range	Peak Frequency – Attenuation
EA100	15.75 <i>400,0</i>	15.75 <i>400,0</i>	.002 <i>0,05</i>	-5 dB min. @ 50 MHz to 1 GHz	100 MHz @ -17.3 dB
EA300	15.75 <i>400,0</i>	15.75 <i>400,0</i>	.007 <i>0,18</i>	-5 dB min. @ 50 MHz to 1 GHz	300 MHz @ -17.6 dB
EA400	15.75 <i>400,0</i>	15.75 <i>400,0</i>	.012 <i>0,30</i>	-5 dB min. @ 50 MHz to 1 GHz	400 MHz @ -17.2 dB
EA500	15.75 <i>400,0</i>	15.75 <i>400,0</i>	.020 <i>0,50</i>	-5 dB min. @ 50 MHz to 1 GHz	500 MHz @ -17.8 dB
EA800	15.75 <i>400,0</i>	15.75 <i>400,0</i>	.014 <i>0,36</i>	-5 dB min. @ 50 MHz to 1 GHz	800 MHz @ -17.9 dB

*Available in standard rolls 15.75 400mm x 65'-0" 20M

typical absorption rate by part number

The following data displays the insertion loss characteristics of each formula of absorber material by part number. Of particular interest in engineering a given application is the peak absorption frequency and its correlation to the part number nomenclature; i.e., the peak frequency of the EA300 material is 300MHz. Of course, any of the formulations can be used for neighboring frequencies – in the case of EA300, a logical selection can be made for 200MHz or 400MHz situations.

Note that laminations of multiple part numbers will effectively yield a combination of results.

EMC standard series: typical absorption rate by part number

