

## Guards Against CONDUCTED and RADIATED Interference

- Suppress High Frequency EMI, Harmonics, Transients and Oscillations
- Shield Against Broadband EMI Radiation, Stray Magnetic Fluxes and Coupling



The new EMI Suppressant Tubing provides a simple, low cost Efficient means for suppressing unwanted EMI. This unique product can be slipped over standard wires and cables (insulated or uninsulated) and suppresses both conducted and radiated interference. Completely flexible and lightweight, it can be used in temperature environments from  $-55^{\circ}$  to  $+250^{\circ}\text{C}$  without any electrical or mechanical degradation.

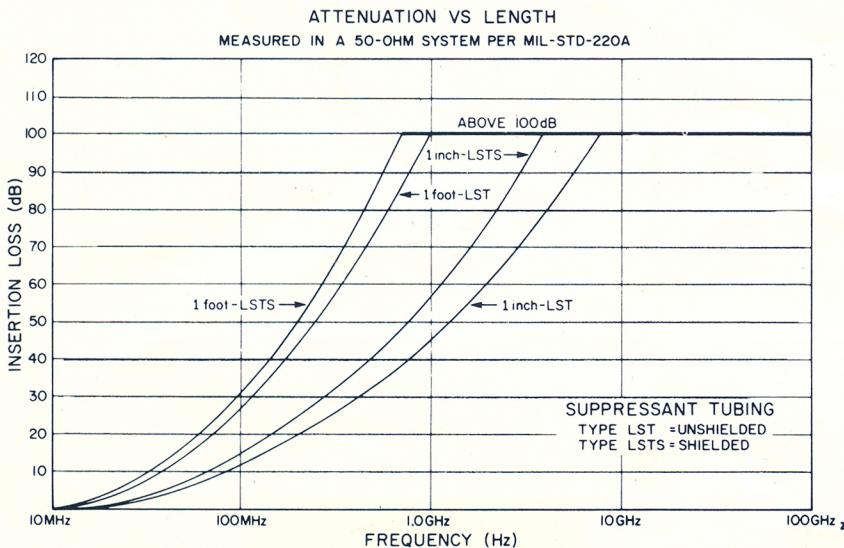
Suppressant Tubing will provide shielding from low frequency electrostatic interference, magnetic fields and will not cause DC or low frequency AC losses. It is capable of Handling RF power exceeding 10 watts CW per inch and is available either shielded or unshielded.

### SIZES AVAILABLE

Part No.	Inside Diameter (Inches)	Outside Diameter (Inches)	Tolerance on I.D. & O.D. (Inches)
LST-040	.040	.130	$\pm .006$
LST-050	.050	.140	$\pm .007$
LST-060	.060	.150	$\pm .008$
LST-080	.080	.170	$\pm .010$
LST-100	.100	.200	$\pm .011$
LST-125	.125	.225	$\pm .011$
LST-150	.150	.250	$\pm .011$
LST-175	.175	.300	$\pm .011$
LST-200	.200	.325	$\pm .011$
LST-225	.225	.350	$\pm .011$
LST-250	.250	.375	$\pm .011$
LST-275	.275	.400	$\pm .011$
LST-300	.300	.450	$\pm .012$
LST-325	.325	.475	$\pm .012$
LST-350	.350	.500	$\pm .012$
LST-375	.375	.525	$\pm .012$
LST-400	.400	.550	$\pm .013$
LST-425	.425	.575	$\pm .013$
LST-450	.450	.600	$\pm .013$
LST-475	.475	.650	$\pm .013$
LST-500	.500	.700	$\pm .013$
LST-625	.625	.800	$\pm .015$
LST-750	.750	1.000	$\pm .015$
LST-1000	1.000	1.250	$\pm .015$
LST-1125	1.125	1.375	$\pm .015$
LST-1250	1.250	1.500	$\pm .015$

- \*Note: 1. Shipped any length desired.  
 2. Specify **LST** for unshielded tubing.  
 3. Specify **LSTS** for shielded tubing.  
 4. Other sizes quoted upon request.

### ATTENUATION CURVES



### MICROWAVE ABSORBERS

Also available in sheet form in thicknesses of  $\frac{1}{32}$ ",  $\frac{1}{16}$ ",  $\frac{3}{32}$ ",  $\frac{1}{8}$ ",  $\frac{3}{16}$ " and  $\frac{1}{4}$ ".

The sheets can be used to line walls of enclosures and for free space use. Also for wave guides and antenna elements, for covering or wrapping radiating elements, for modifying surface currents, as terminations, reflectors and other microwave applications.

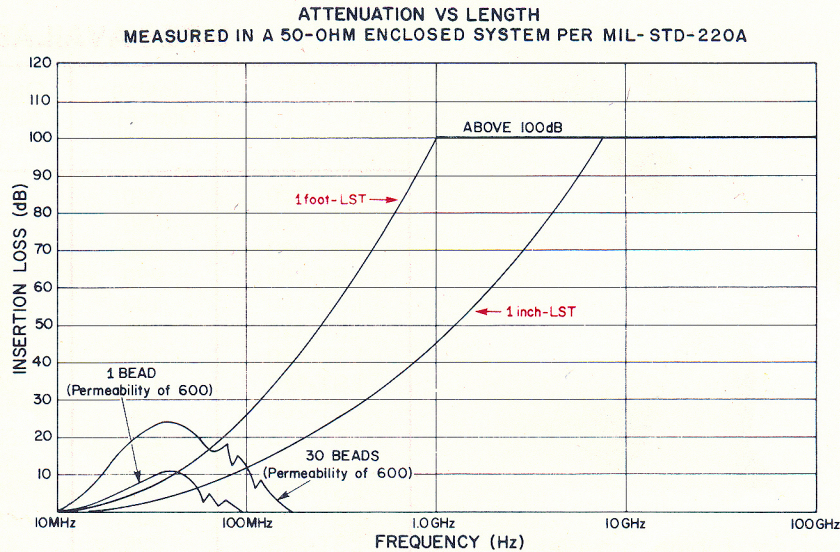
The sheets have high loss especially in the Gigahertz range, and are highly dissipative.

They can be cut with scissors so they may be fitted to odd shapes.

## COMPARISON OF EMI SUPPRESSANT TUBING WITH BEADS

The new EMI suppressant tubing introduces a breakthrough in the field of RFI/EMI suppression. When conventional EMI filters could not be used practically, ferrite beads were used to obtain some measure of suppression. EMI suppressant tubing offers many superior qualities when compared to the ferrite beads.

### ATTENUATION CURVES



	FERRITE BEADS	EMI SUPPRESSANT TUBING
<b>Saturation</b>	Saturation at less than 5 amperes. Therefore limited to line currents below this value.	No saturation at any current. Performance remains constant at any line current.
<b>Loss</b>	Various losses at DC and at oper. freq. of 60, 400 & 1000 Hz.	No losses at DC or at any oper. freq.
<b>Resonance</b>	Resonate at relatively low freq. in the 1-100 MHz range. Beyond resonant freq. attenuation drops off sharply.	No resonant freq. Attenuation increases with frequency.
<b>Attenuation</b>	Increasing number of beads beyond a small number provides little attenuation increase. Resonant frequency is only shifted and attenuation drops off sharply after resonant frequency.	Attenuation is proportional to length and rises with frequency.
<b>Permeability</b>	Bead permeability is maximized. This limits their attenuation characteristics beyond 50 MHz. Due to high permeability beads becoming lossy resistors and attenuation is not smooth.	Low permeability with high DC resistivity. This is necessary for maximum smooth attenuation from 10 MHz to 100 GHz.
<b>Flexibility/Radiation Shielding</b>	Ferrite beads are rigid, when more than one bead is used the gaps between beads cannot effectively prevent RF radiation. Ferrite beads will radiate high frequencies.	Flexible and pliable. Can be applied with no gaps or spaces. Can be used as an RF shield.



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