



RFI-EMI metalized fabric conductive tape applications

Cable shielding, enclosure seams, shielded room joints, PCB component shields, irregular surface/component shields, alternative to custom die-cut shielding gaskets or sections.

A very effective approach for one of the most common enclosure shielding problems – the “cable shield-to-connector” termination. (The other most common problems are the “connector-to connector” and the “connector-to I/O bulkhead” leakages, both of which are very effectively solved by using our metalized fabric connector gaskets made from the same material as this tape – see “RFI-EMI Shielding Gaskets” section.)

Construction is a CuNi conductive metalized polyester fabric with conductive acrylic adhesive and release liner backer.



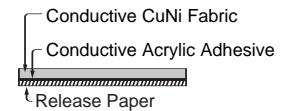
spiral-wrap cable shielding



enclosure seams

characteristics

Characteristics	Measure
Material	Polyester w/CuNi metalization and conductive acrylic adhesive backing w/ release liner
Surface Resistivity	0.03 - 0.05 Ω /lin.in.
Impedance	69dB @ 100MHz; 62dB @ 500MHz
Adhesion (peel)	50 oz/in. (54N/100mm)
Service Temperature	-40°F to 212°F (-40°C to 100°C)



Part Number	Width	Thickness	Length	Resistivity	Impedance
ST005PCN50	.500 12,7	.005 0,13	85.0 ft. rolls	0.03 - 0.05	69db @ 100 MHz
ST005PCN100	1.000 25,4	.005 0,13	25,0m	ohms/lin.in.	62db @ 500 MHz

technical information

Cable shields should be terminated by way of full circumferential contact with the inside of the conductive connector shield. This termination should never be done by way of a drain wire to a connector pin, or by way of a pigtail wire from the shield to the enclosure. Either method subordinates to the (example) 20nH per inch inductance of a (typical) one-inch wire and the resultant inadequate impedance of only 40 ohms @ 300MHz.

Avoid locating cables, shielded or otherwise, near seams or slots in the enclosure. RF radiation from such an aperture occurs due to its slot antenna effect and, because of its short distance, will couple to the shield (or cable) and re-radiate from there. This is a very common occurrence, and it defeats the purpose of the shielding effort.

Cable shields must be properly terminated at both ends. Avoid braided shields (leak between individual braids) and metalized mylar type (form a leaky spiral slot when wrapped on a cable). They all leak through the obvious discontinuation in their surfaces especially when applied to sensitive (antenna-like) cable configurations.