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FROM: C NEUMEYER
SUBJECT: ANOTHER REVISION TO GROUND PLANE CONNECTOR DESIGN
Reference:

[1] 13-010222-CLN-01, "Revised Design for OH Ground Plane Connector"

The design called out in the reference called for a layer of Kapton over the high resistance bands, and then for the flexible braid to extend over approximately 200° of the circumference, overlapping the Kapton and high resistance bands. The G-10 spacer then covers the remaining 160° of the circumference. A more reliable, but just as effective, design has the flexible braid running 160° of the circumference and the G-10 spacer 200° . The reason is that the Kapton is not as mechanically robust as the G-10 and could be punctured by parts of the braid or other foreign material as the clamp is tightened down initially or during thermal cycling. This new design hereby supercedes the prior one.

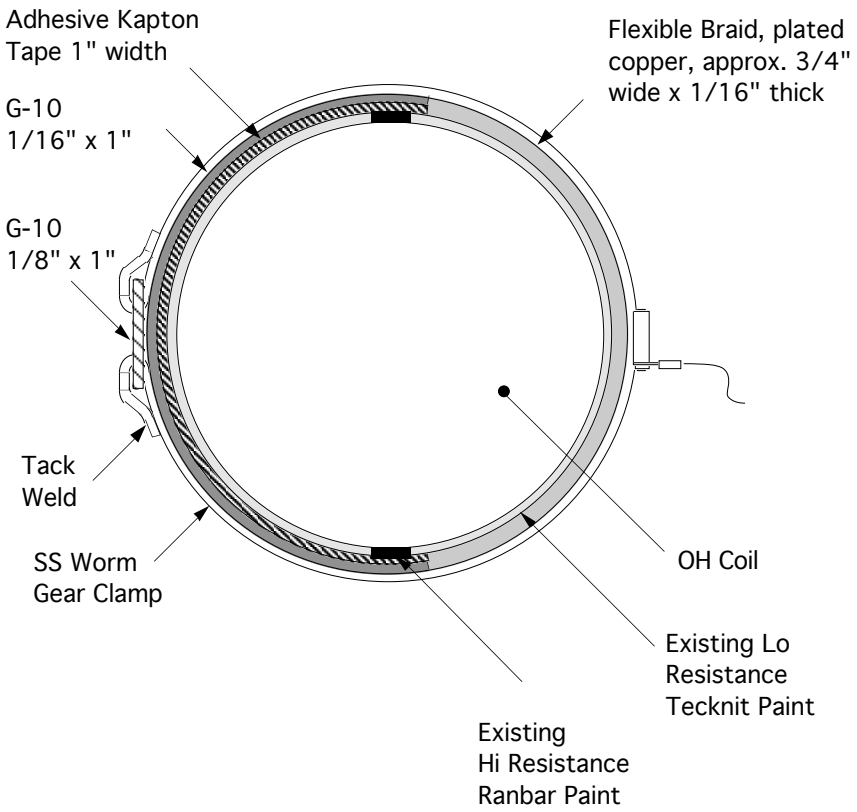

Figure 1 – Revised OH Ground Plane Connector

A description, from the inside working outwards, is as follows:

1) Adhesive Kapton tape, 1" width, is applied over approximately 200° of the circumference, covering one of the regions of the existing low resistance Tecknit paint and the two bands of high resistance Ranbar paint.
2) A flexibile braid, plated copper, approx. 3/4" wide x 1/16" thick, is applied covering one of the regions of the existing low resistance Tecknit paint and part of the Kapton tape applied in step 1), over approximately 160° of the circumference.
3) A 1/16" thick G-10 spacer is applied over the remaining 200° of the circumference, and secured via an all stainless steel worm gear hose clamp, which has been modified to include a toroidal break by cutting the banding and bending tabs back, securing through a slotted piece of 1/8" x 1" G-10, and tack welding to hold in place.
4) A wire pigtail is attached via a lug under the screw head of the hose clamp.
5) A total of four such connectors are required, two on top to service the two ground plane halves, and two on the bottom.

cc:

J Chrzanowski
L Dudek
T Meighan
M Ono
S Ramakrishnan
A Von Halle
M Williams

NSTX File