What is claimed is:

1. A structure, comprising: a pair of structure members separated by a gap, each one of the pair of structure members having a microwave transmission line; an interconnect structure disposed in the gap, the interconnect structure comprising: a fill-structure having opposing sides in direct contact with the opposing sides of a first one of the pair of structure members and a second one of the pair of structure member; and, an interconnecting microwave transmission line disposed on the fill-structure electrically interconnecting the microwave transmission line of the first one of the pair of structure members to the microwave transmission line of the second one of the pair of structure members.

2. The structure recited in claim 1 wherein the interconnect structure includes an electrically conductive member disposed over a signal line of the interconnecting microwave transmission.

3. The structure recited in claim 1 wherein the interconnect structure includes an electrically conductive layer disposed between the fill-structure and the interconnecting microwave transmission line.

4. The structure recited in claim 3 wherein the interconnect structure includes an electrically conductive member disposed over a signal line of the interconnecting microwave transmission line.

5. The structure recited in claim 2 wherein the interconnecting microwave transmission line includes a signal conductor and a ground conductor and wherein the electrically conductive member is electrically connected to the ground conductor.

6. The structure recited in claim 5 wherein the interconnect structure includes an electrically conductive layer disposed between the fill-structure and the interconnecting microwave transmission line and wherein the conductive layer is electrically connected to the electrically conductive member and to the ground conductor.



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7. The structure recited in claim 5 wherein the electrically conductive member is disposed over the signal conductor and electrically connected to the ground conductor.

8. The structure recited in claim 7 wherein the interconnect structure includes an electrically conductive layer disposed between the fill-structure and the interconnecting microwave transmission line and wherein the conductive layer is electrically connected to the electrically conductive member and to the ground conductor.

9. The structure recited in claim 8 the interconnect structure includes a dielectric layer disposed between the electrically conductive layer and the interconnecting microwave transmission line.

10. The structure recited in claim 9 including an electrical conductor disposed on a bottom of the interconnect structure and wherein the electrically conductive member is electrically connected to the electrical conductor disposed on the bottom of the interconnect structure.

11. The structure recited in claim 10 wherein the electrical conductor disposed on the bottom of the interconnect structure comprises a heat spreader.

12. The structure recited in claim 10 including an electrical interconnecting layer disposed on outer sides of the fill material to electrical connect the conductor disposed on the bottom of the interconnect structure to the electrically conductive member.

13. A method for forming a structure, comprising: providing a pair of structure members on a support, with the pair of structure members being separated by a gap, each one of the pair of structure members having a microwave transmission line; providing an interconnect structure in the gap, the interconnect structure being formed by a method comprising: forming a fill-structure comprising disposing an insulating material in the gap with such material filling in the gap to fill the gap and flowing in direct contact with the opposing sides of a first one of the pair of structure members and a second one of the pair of structure member; and, forming an interconnecting microwave transmission line on the fill-structure electrically interconnecting the microwave transmission line of the first one of the pair of structure members to the microwave transmission



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line of the second one of the pair of structure members.

14. The method recited in claim 13 including forming an electrically conductive member disposed over a signal line of the interconnecting microwave transmission.

15. The method recited in claim 13 wherein the interconnecting microwave transmission line is printed by dispense, jet or filament onto the fill-structure.

16. The method recited in claim 13 including forming by dispense, jet or filament a dielectric layer over a signal line of the interconnecting microwave transmission line.

17. The method recited in claim 14 wherein the electrically conductive member is printed by dispense, jet or filament over the dielectric layer.

18. The method recited in claim 17 including forming an electrical interconnecting layer on outer sides of the fill material to electrical connect the conductor disposed on a conductor on a bottom of the interconnect structure to the electrically conductive member.

19. A method for forming a structure, comprising: providing a pair of structure members on a support, with the pair of structure members being separated by a gap, each one of the pair of structure members having a microwave transmission line; forming an interconnect structure in the gap comprising using 3D printing.



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