

RoHS Compliant & Pb Free Product

MC1-AN002

- Documents: Microwave Cell Application Note: Transmitter Applications

Unlimited Possibilities!

MicroWaveCells' cells are designed and can be extended to any dimension and any shape the customer wants by using the single cell base and single base joint. The half cell base can be added for the side input or output launch. The following example shows how a block diagram selects cell PCB and corresponding cell mechanics to build your desired system in days.

Fig.1 shows a suggested transmitter block diagram. Its first stage includes the modulator, and the 2nd stage the up-converter with the combination of many filters, attenuators, couplers, detectors, amplifiers and two synthesizers. For bias and control convenience, it also includes two 1x5 DC management cells for the convenience of fewer control lines. The output microwave filter is a customer's 1x2 cell size filter. At input, two half cell side launch SMA cells are used and at output, a transition cell of vertical SMA/SMB/SMC cell is used. On the synthesizer side, one 1x2 size and a 2x3 size of synthesizers are picked.

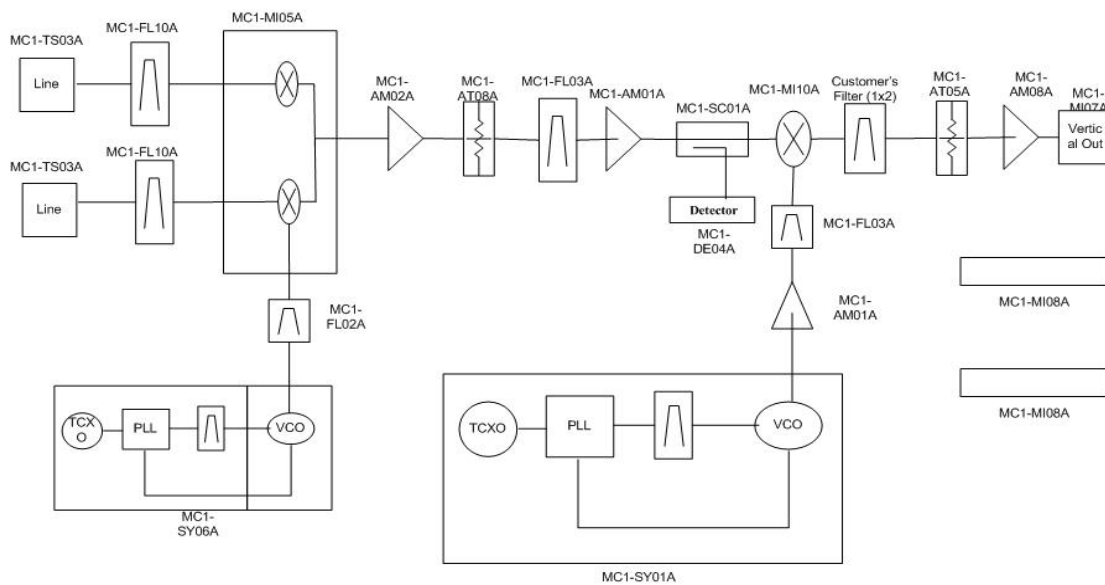


Fig.1: Block diagram of a transmitter and corresponding selected cells

Fig.2 and Fig.3 show the PCB cells and their corresponding dynamic mechanical cell connection. Fig.4 and Fig.5 show the front and back side of the integrated transmitter. For the convenience of the test, the standoff is used.

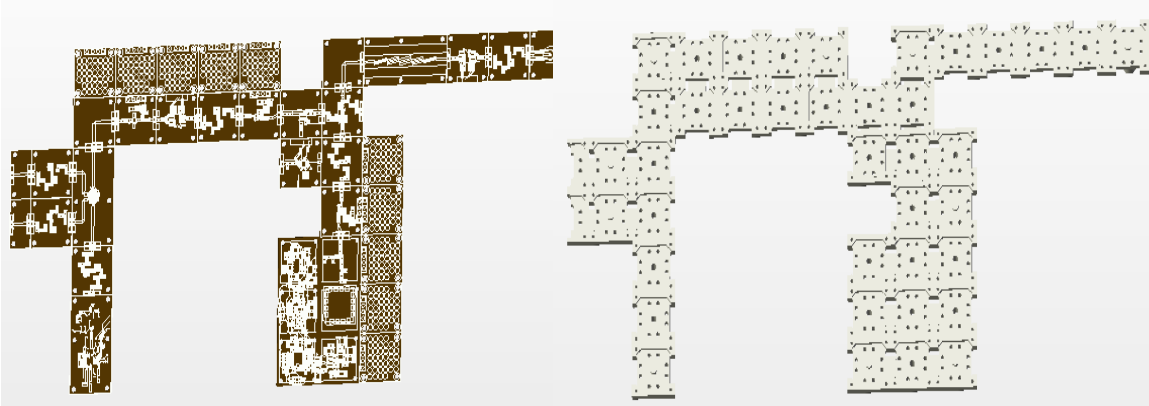


Fig.2: PCB cells

Fig.3: Mechanical cell

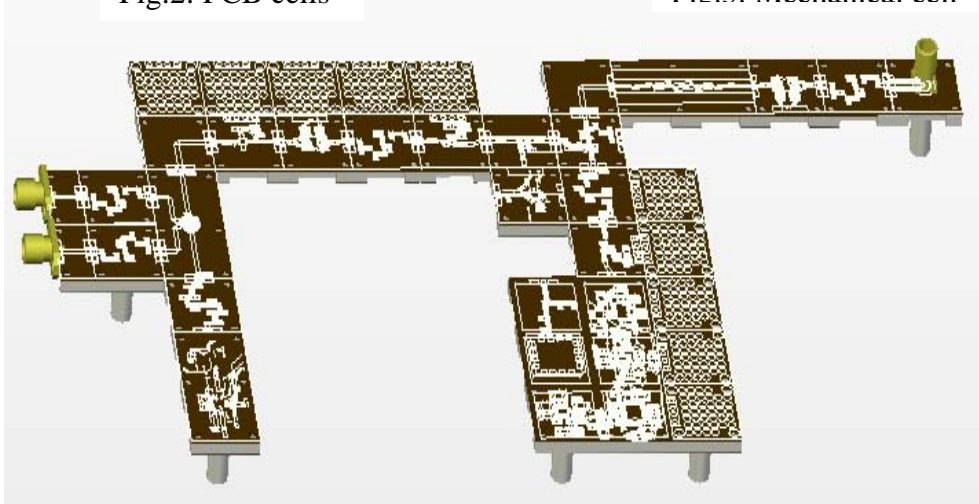


Fig.4: Integrated Transmitter (Front Side)



Fig.5: Integrated transmitter (Back side)

For the customer's easy integration and low cost consideration, MicroWaveCells also offers a 5x5 array mechanical cell; with the array joint cell, customers can quickly build the same transmitter in less amount of time and money. Fig.6 is a single 5x5 mechanical cell and an array joint and Fig.7 shows the same transmitter by using 5x5 array cells.

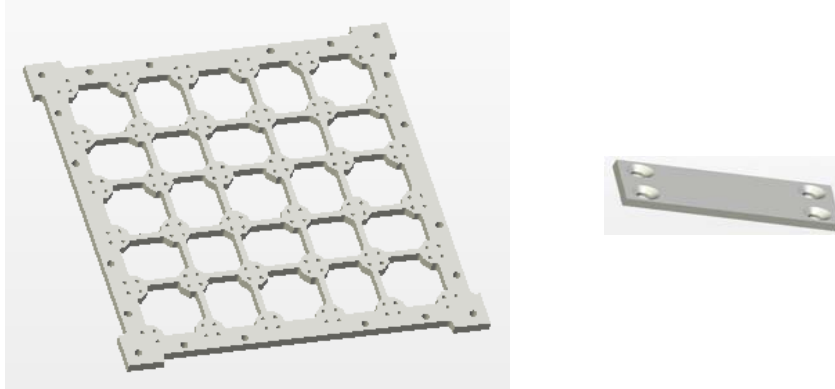


Fig.6: Array cell and array joint

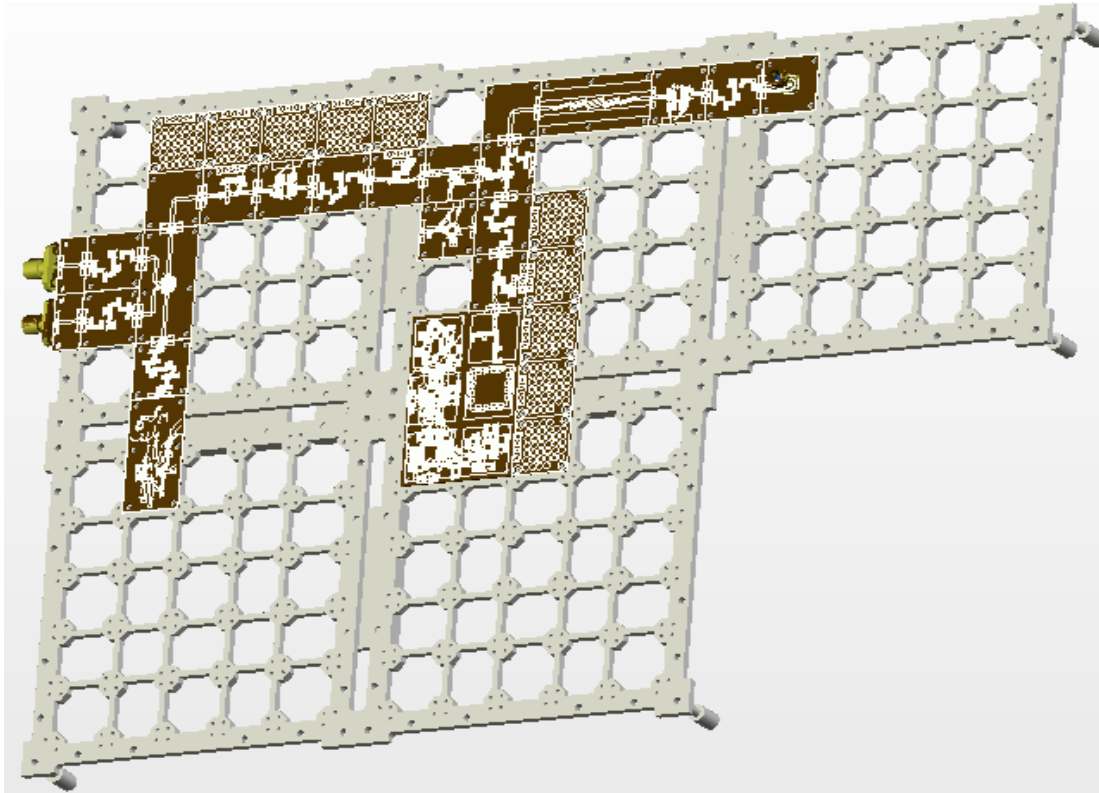


Fig.7: Transmitter using array cells

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