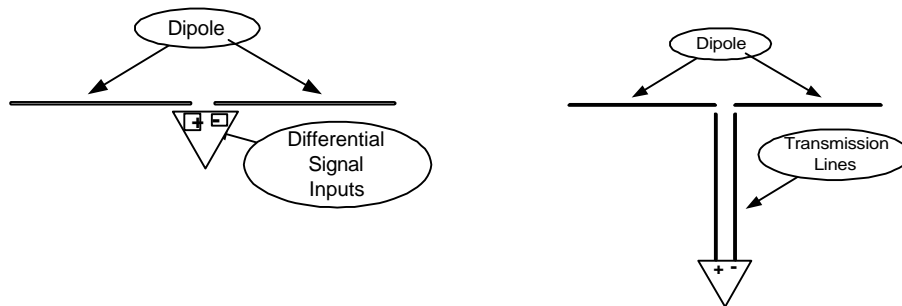


FOCUSED WAVE TECHNOLOGY

*Increasing Radio Range
Increasing Bandwidth
Integrated Active Antenna*

Increased radio range is available by using differential signal (DS) paths. Integrated wireless system, microwave monolithic circuits, and radio frequency integrated circuits (herein collectively referred to as RFIC) often have a differential signal input structure and the DS paths are *not used*, with a reduction in radio range of up to 4:1!

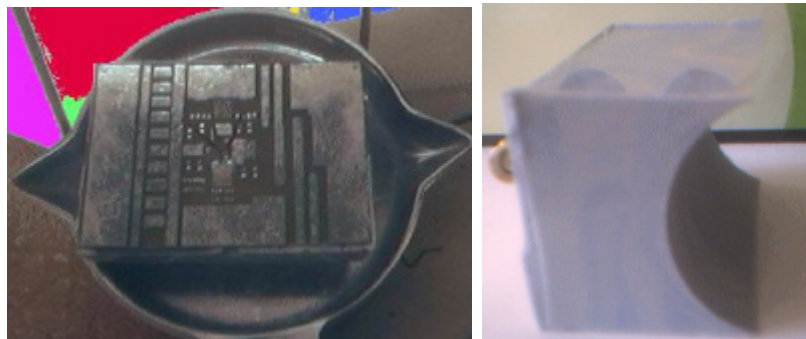
Ideally, an elemental dipole suspended in free space with the RFIC placed between the two-dipole ends provides the best radio range. The idealized case may be *realized* by use of a dielectric to support the dipole elements. The DS path is maintained by connecting (using a transmission line) to an RFIC as shown.



Integrating an RFIC, the dipole and a substrate offers several degrees of freedom in controlling the radio range. FWT antennas offer a unique and powerful tool for your communications solutions. FWT antennas offer a true differential antenna structure, as well as an integral substrate, providing *a direct electrical-antenna interconnection*.

Evaluation boards are placed onto the substrate (depicted below) and reference designs provided insuring the highest level of system performance. Reference designs can be placed onto a complete functional module. Highly integrated RFIC's benefit from highly integrated packaging, differential signal path use, and close proximity with a reduction in cables and connectors. FWT antenna offers all of these attributes. Therefore, extending radio range, insuring system performance while simultaneously reducing cost.

***ANY REFERENCE DESIGNS ON AN EVALUATION BOARD
ARE NOW
AVAILABLE ON ACTIVE ANTENNAS***



The FWT antennas have a significantly smaller footprint than traditional antennas. In fact the FWTCG working group, manufactures devices have 1/8 the volume of most current product. Our conformal, focusing dielectric, controls the radio range and antenna beam shape. A substrate is available to optimally locate, while providing a differential signal path, to RFIC and wireless system devices.

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