



PREDICTIVE ASSESSMENT FOR THE INTER-MODULATION POWER IN AN ELECTRONIC SET-UP

Technological advantages

- Reliable and accurate assessment of the inter-modulation powers.
- Reduced set of required measurements.
- No need to use the equipment full power.
- Inter-modulation power predicted on ranges that have not been measured.

Invention synthesis

The invention deals with the predictive assessment of the inter-modulation powers in an electronic device with non-linear components with at least an input signal (on at least 2 frequencies) and an output signal. The inter-modulation is characterized by the appearance of new frequencies in the output signal. At least one power measurement in the output signal component is required. Values for the inter-modulation power are evaluated based on predictive functions. These functions possess an even part obtained from the multiplication of an even function and a function composed of an odd function and a function based on series.

Potential applications

- All active/passive non-linear electronic devices : amplifier, connectors, wave guide, antenna for the emission and/or reception...
- Emission / reception communication devices with several modulated signals (especially for long range).

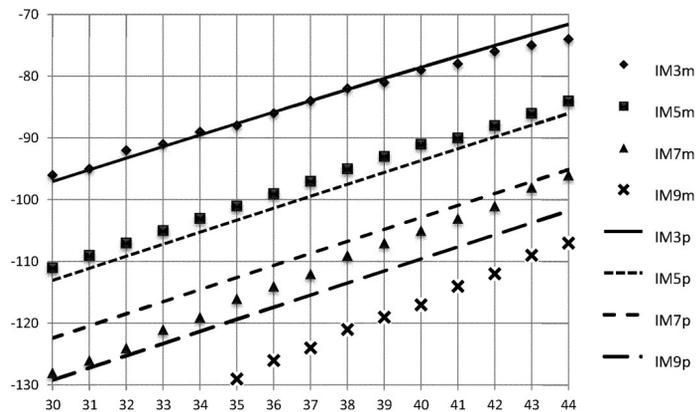


Figure showing measured and modeled inter-modulation powers using predictive functions according to this invention

Commercial benefits

- This predictive process may be used on remote inaccessible electronic devices such as satellited in orbit.
- Large cost reductions : reduced needs for measurements, does not require to use the equipment full power.

Patented invention - under license.