

How Linearity is Measured

Non Linearity – any material that distorts the signal's voltage/current relationship in a way that creates PIM

Test Lead

IM products

PIM

PIM

PIM

PIM

PIM

Reducing IM3 reduces all IM products

- Inject two CW test signals at a known magnitude
- Measure 3rd order intermodulation product (IM3)
- IM3 “characterizes” the linearity of the system

How PIM is Measured

The PIM Test Set applies two precise test signals and measures the PIM at a third frequency (one that is likely to interfere).

3rd Order PIM (Interferer to GSM Uplink)

P-GSM-900 UL

890

915

935

960

985 MHz

2 x f_a - f_b

2 x f_a - f_b

Interferer

Test Signal

Test Signal

Non Interferer

We measure the PIM that impacts us

Ignore this one (Out of Band)

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