

Product Note #006

HMMC-5033

Intermodulation Distortion

Revision A

October 1998

Description

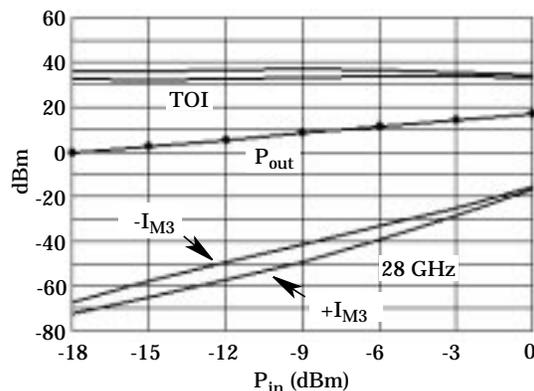
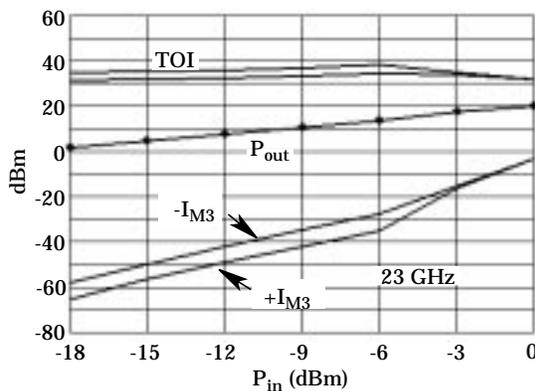
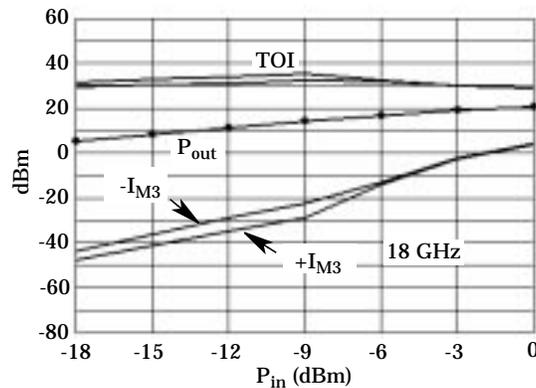
Intermodulation Distortion (IMD) plots for the HMMC-5033 at 18, 23, and 28 GHz represent a summary of measurements taken at MWTC's Measurement Service Center. Data was taken on-wafer on multiple devices. Bias is standard data sheet bias: $V_{d1} = 3.5V$, $V_{d2} = 5V$, $I_{d2} = 460\text{ mA}$, $I_{d1} = \text{Self Bias} \sim 240\text{ mA}$. P_{in} and P_{out} represent the power in one of two equal amplitude carriers, separated by 10 MHz.

Third order intercept (TOI) is calculated for any point using the relationship:

$$TOI = P_{out} - dBc/2$$

dBc is defined as the amplitude difference between a single tone carrier and the intermodulation product, where the carrier amplitude is the 0 dB reference.

Additional data may be available through MWTC's Application Engineering at 707-577-3120.



Note: This product note provides supplemental information not included in the product data sheet. The purpose of supplemental data is to provide the end user with useful product-specific information to aid in the design process. The information provided does not represent or imply additional product specifications. Every attempt has been made to provide accurate data on typical products.

Notes: