

# Product Note #005

## HMMC-5032 Driven by a HMMC-5618

- Power; Gain
- Intermodulation Distortion (IMD)

October 1998

### Description

Measured data is presented showing the HMMC-5033 driving an HMMC-5032. A demonstration circuit was assembled using a 2.4mm connectorized package. Losses are estimated at 0.7 dB on the input, and 0.5 dB on the output. The package losses are not removed from the presented data. Both MMICs were biased at 4.5V. Biasing the HMMC-5033 at 5.0V resulted in only slight improvement.

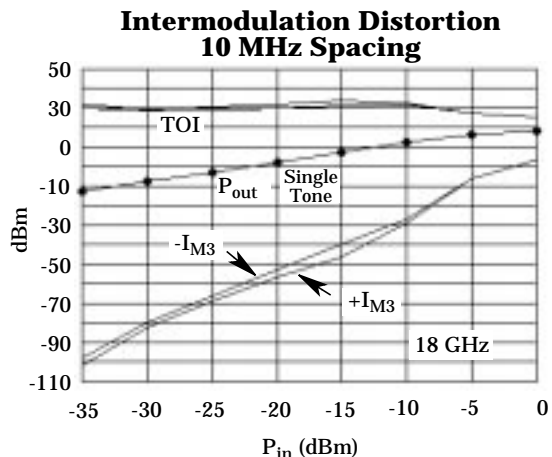
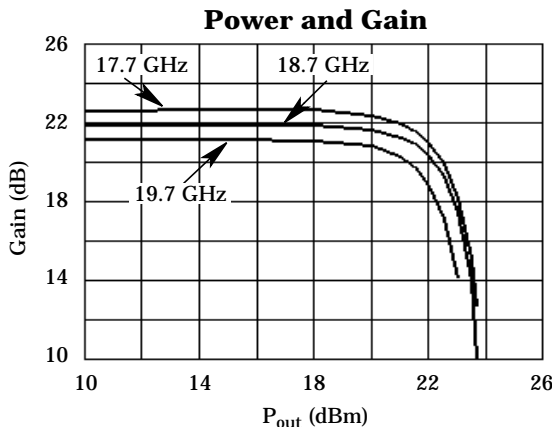
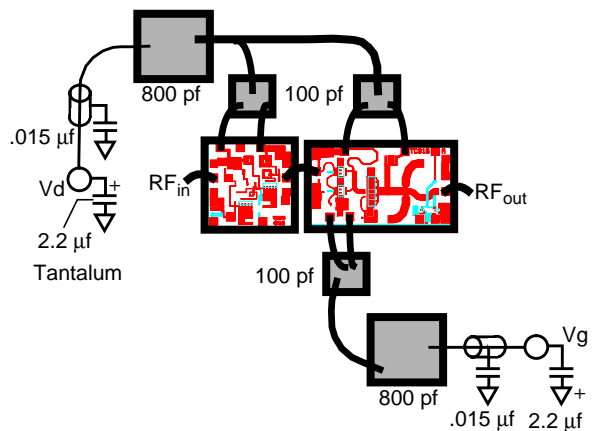
Third order intercept (TOI) is calculated for any point using the relationship:

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

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.

### Demonstration Circuit Biasing and Bypass



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:**