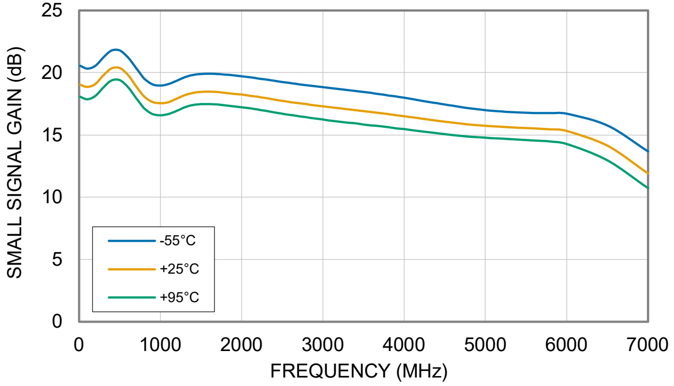
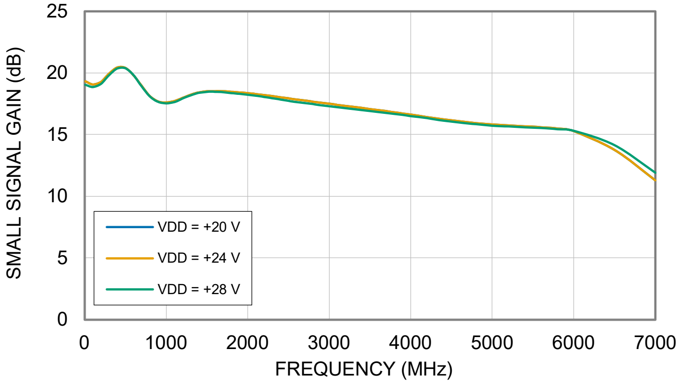
Typical Performance Curves

Note: The following data was taken on Mini-Circuits Characterization Test Board TB-GNA-63-5WCX+ with external bias-T (Figure 2). All data taken at nominal condition of V_{DD} = +28 V and I_{DD} = 400 mA unless noted otherwise. V_G was adjusted at each voltage and temperature level to achieve I_{DD} = 400 mA.

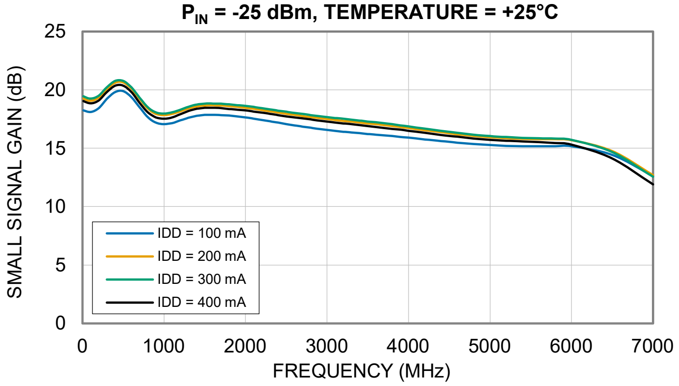
SMALL SIGNAL GAIN vs. TEMPERATURE
P_{IN} = -25 dBm



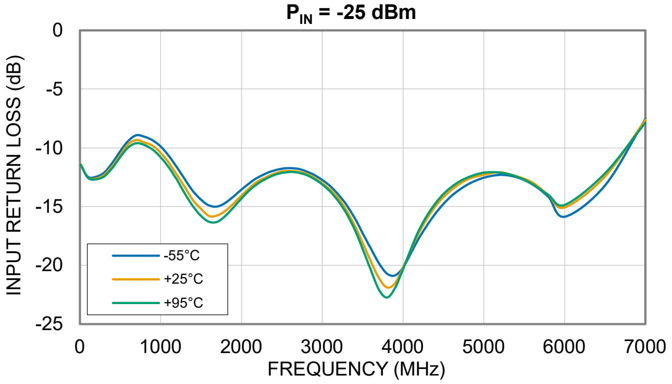
SMALL SIGNAL GAIN vs. DEVICE VOLTAGE (V_{DD})
P_{IN} = -25 dBm, TEMPERATURE = +25°C



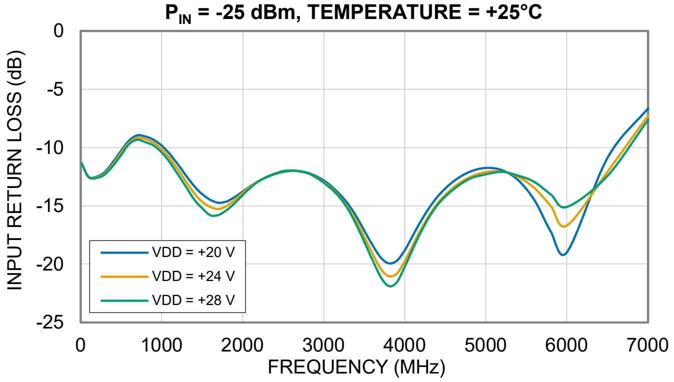
SMALL SIGNAL GAIN vs. DEVICE CURRENT (I_{DD})
P_{IN} = -25 dBm, TEMPERATURE = +25°C



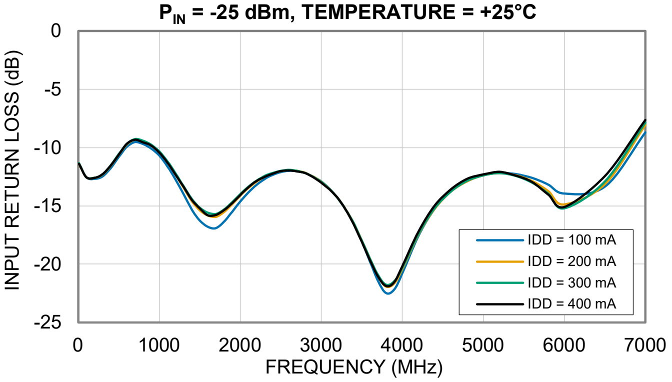
INPUT RETURN LOSS vs. TEMPERATURE
P_{IN} = -25 dBm



INPUT RETURN LOSS vs. DEVICE VOLTAGE (V_{DD})
P_{IN} = -25 dBm, TEMPERATURE = +25°C



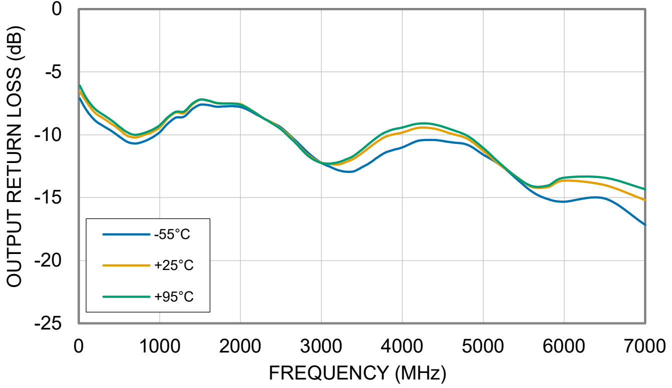
INPUT RETURN LOSS vs. DEVICE CURRENT (I_{DD})
P_{IN} = -25 dBm, TEMPERATURE = +25°C



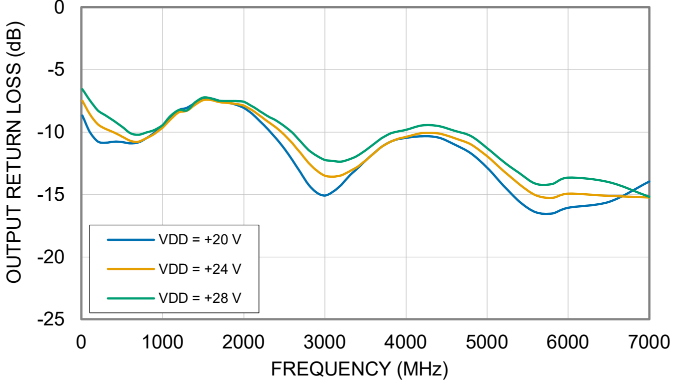
Typical Performance Curves

Note: The following data was taken on Mini-Circuits Characterization Test Board TB-GNA-63-5WCX+ with external bias-T (Figure 2). All data taken at nominal condition of V_{DD} = +28 V and I_{DD} = 400 mA unless noted otherwise. V_G was adjusted at each voltage and temperature level to achieve I_{DD} = 400 mA.

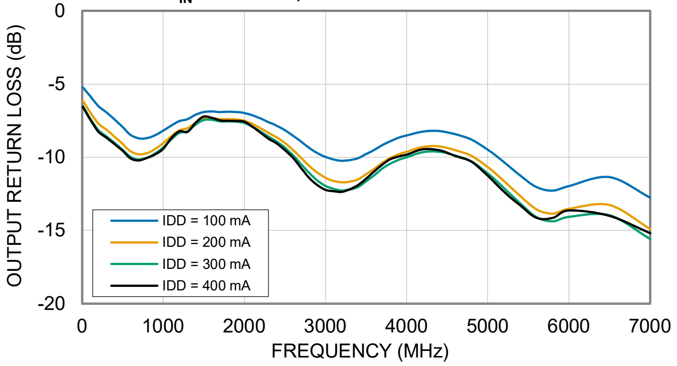
OUTPUT RETURN LOSS vs. TEMPERATURE
P_{IN} = -25 dBm



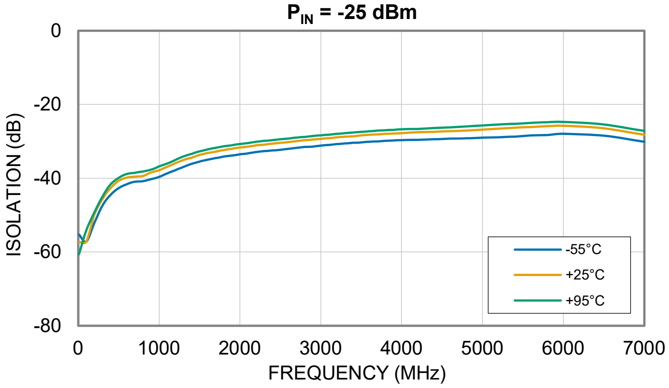
OUTPUT RETURN LOSS vs. DEVICE VOLTAGE (V_{DD})
P_{IN} = -25 dBm, TEMPERATURE = +25°C



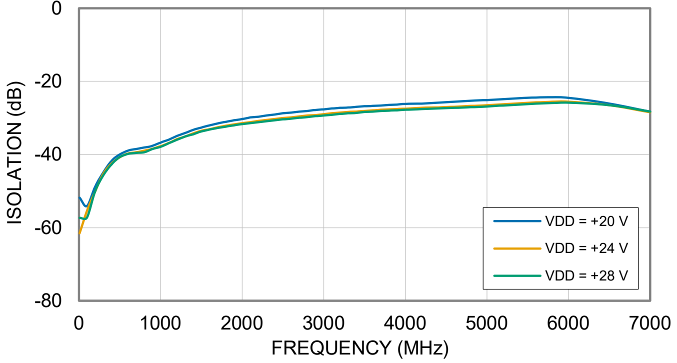
OUTPUT RETURN LOSS vs. DEVICE CURRENT (I_{DD})
P_{IN} = -25 dBm, TEMPERATURE = +25°C



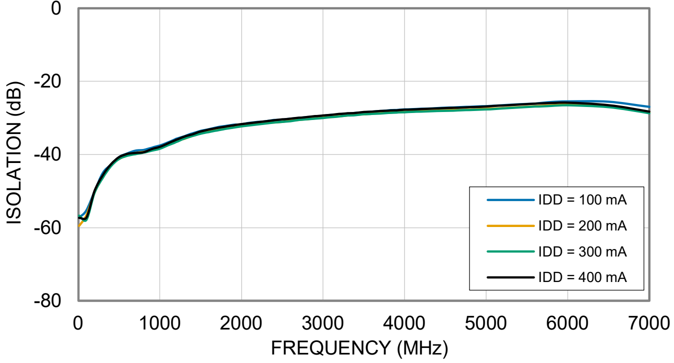
ISOLATION vs. TEMPERATURE
P_{IN} = -25 dBm



ISOLATION vs. DEVICE VOLTAGE (V_{DD})
P_{IN} = -25 dBm, TEMPERATURE = +25°C



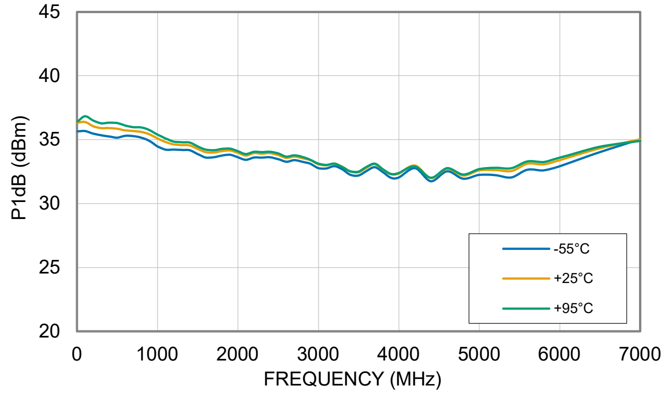
ISOLATION vs. DEVICE CURRENT (I_{DD})
P_{IN} = -25 dBm, TEMPERATURE = +25°C



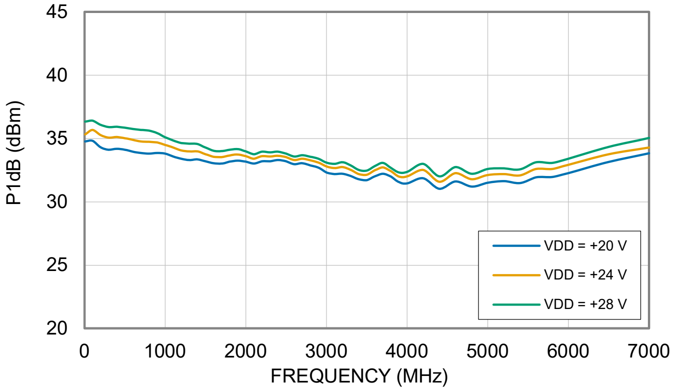
Typical Performance Curves

Note: The following data was taken on Mini-Circuits Characterization Test Board TB-GNA-63-5WCX+ with external bias-T (Figure 2). All data taken at nominal condition of V_{DD} = +28 V and I_{DD} = 400 mA unless noted otherwise. V_G was adjusted at each voltage and temperature level to achieve I_{DD} = 400 mA.

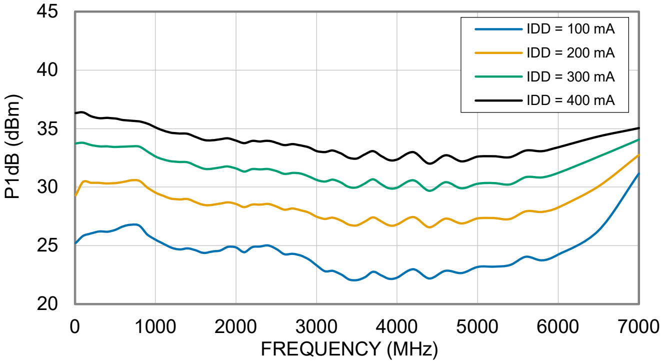
P1dB vs. TEMPERATURE



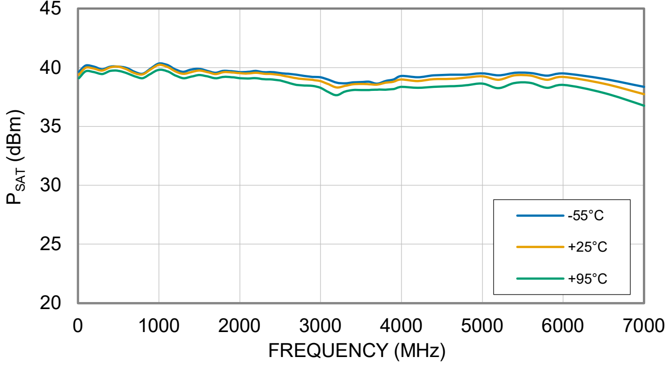
P1dB vs. DEVICE VOLTAGE (V_{DD})
TEMPERATURE = +25°C



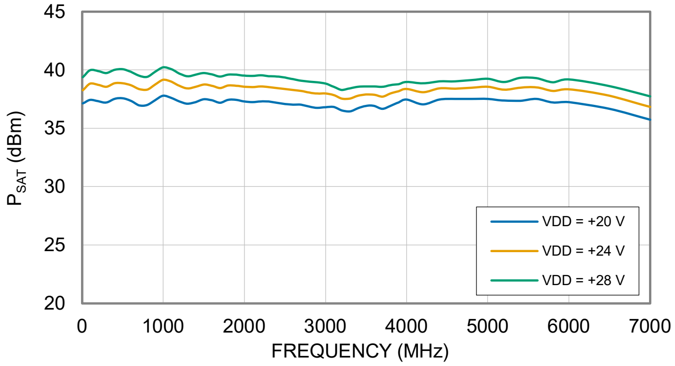
P1dB vs. DEVICE CURRENT (I_{DD})
TEMPERATURE = +25°C



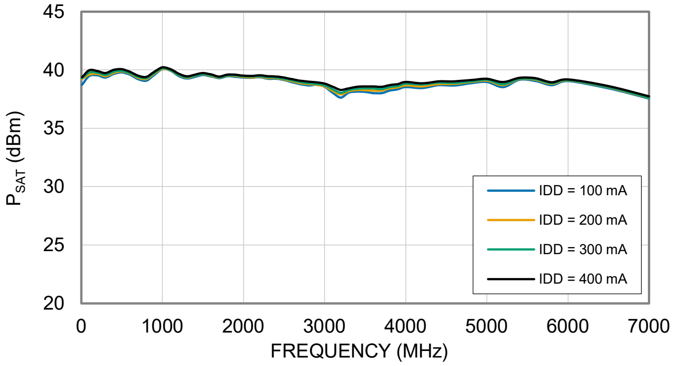
P_{SAT} vs. TEMPERATURE



P_{SAT} vs. DEVICE VOLTAGE (V_{DD})
TEMPERATURE = +25°C



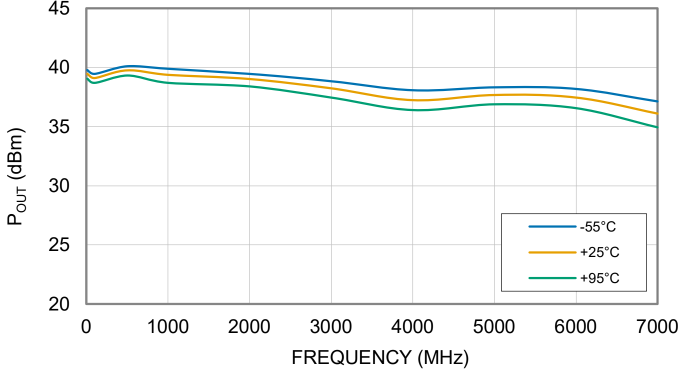
P_{SAT} vs. DEVICE CURRENT (I_{DD})
TEMPERATURE = +25°C



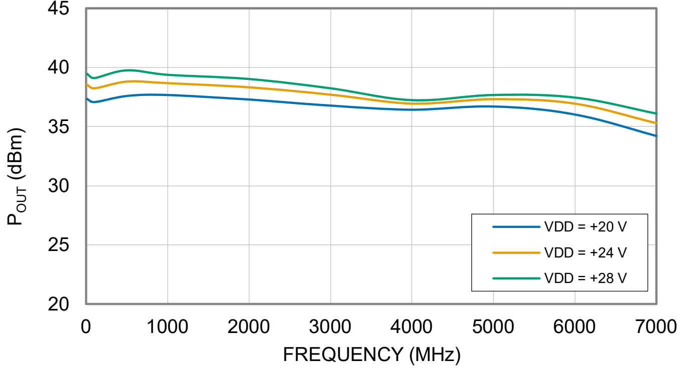
Typical Performance Curves

Note: The following data was taken on Mini-Circuits Characterization Test Board TB-GNA-63-5WCX+ with external bias-T (Figure 2). All data taken at nominal condition of V_{DD} = +28 V and I_{DD} = 400 mA unless noted otherwise. V_G was adjusted at each voltage and temperature level to achieve I_{DD} = 400 mA.

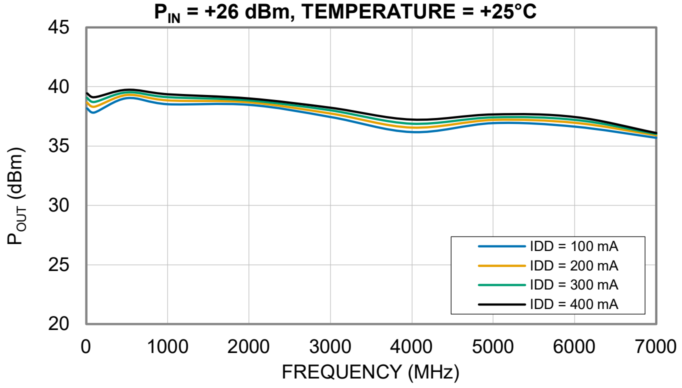
P_{OUT} vs. TEMPERATURE
P_{IN} = +26 dBm



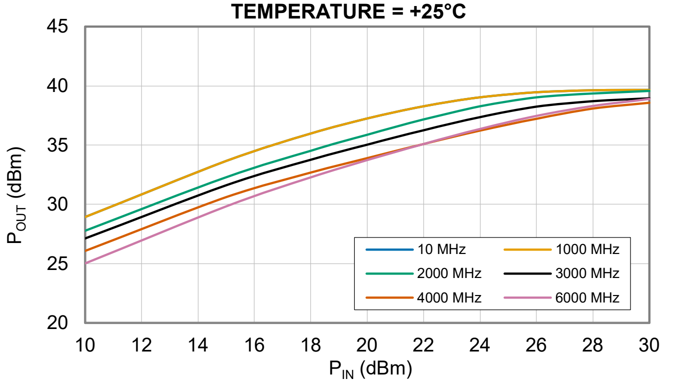
P_{OUT} vs. DEVICE VOLTAGE (V_{DD})
P_{IN} = +26 dBm, TEMPERATURE = +25°C



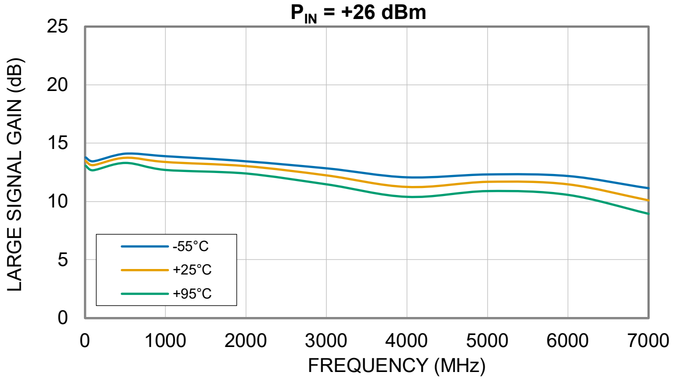
P_{OUT} vs. DEVICE CURRENT (I_{DD})
P_{IN} = +26 dBm, TEMPERATURE = +25°C



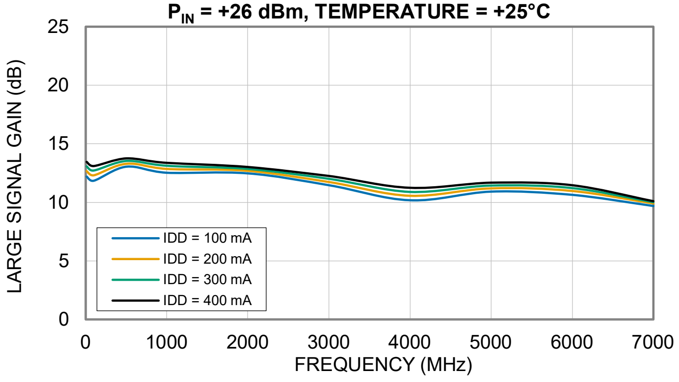
P_{OUT} vs. P_{IN}
TEMPERATURE = +25°C



LARGE SIGNAL GAIN vs. TEMPERATURE
P_{IN} = +26 dBm

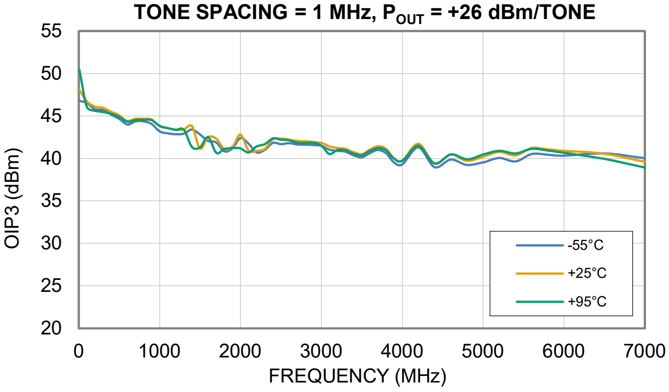


LARGE SIGNAL GAIN vs. DEVICE CURRENT (I_{DD})
P_{IN} = +26 dBm, TEMPERATURE = +25°C

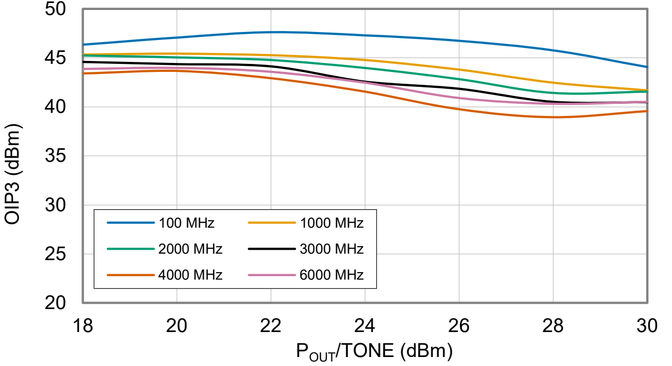


Typical Performance Curves

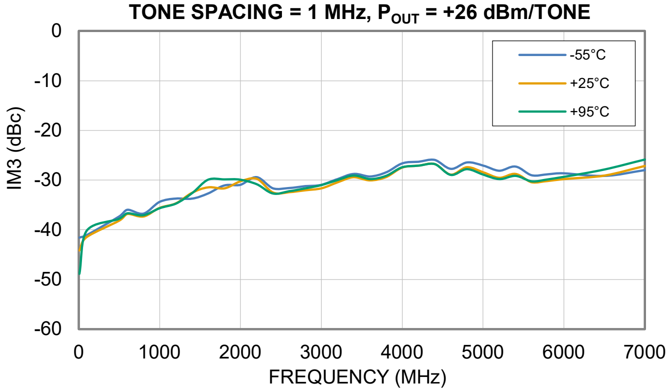
Note: The following data was taken on Mini-Circuits Characterization Test Board TB-GNA-63-5WCX+ with external bias-T (Figure 2). All data taken at nominal condition of V_{DD} = +28 V and I_{DD} = 400 mA unless noted otherwise. V_G was adjusted at each voltage and temperature level to achieve I_{DD} = 400 mA.



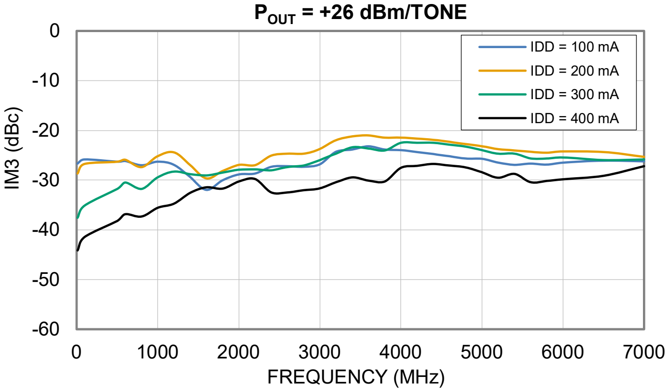
OIP3 vs. TEMPERATURE
TONE SPACING = 1 MHz, P_{OUT} = +26 dBm/TONE



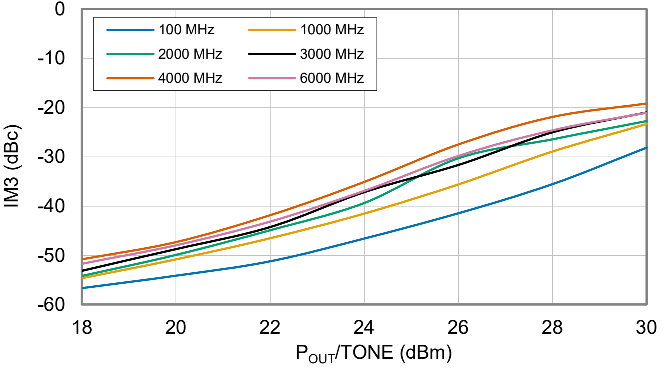
OIP3 vs. P_{OUT}
TONE SPACING = 1 MHz, TEMPERATURE = +25°C



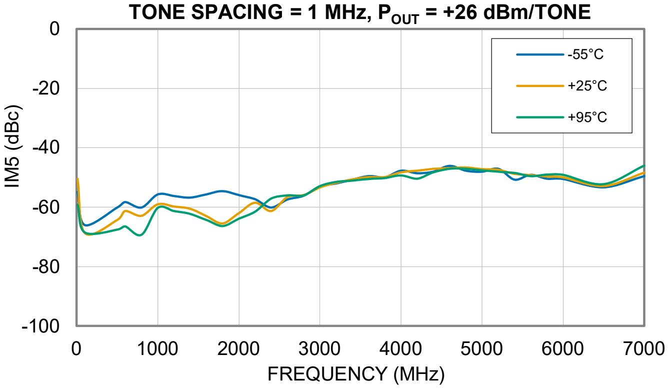
IM3 vs. TEMPERATURE
TONE SPACING = 1 MHz, P_{OUT} = +26 dBm/TONE



IM3 vs. DEVICE CURRENT (I_{DD})
TONE SPACING = 1 MHz, TEMPERATURE = +25°C,
P_{OUT} = +26 dBm/TONE



IM3 vs. P_{OUT}
TONE SPACING = 1 MHz, TEMPERATURE = +25°C

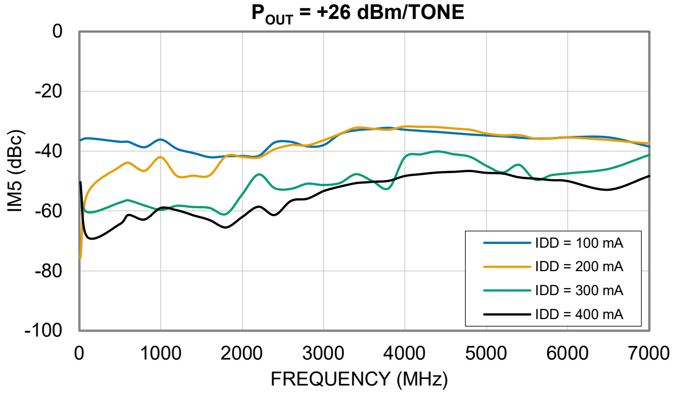


IM5 vs. TEMPERATURE
TONE SPACING = 1 MHz, P_{OUT} = +26 dBm/TONE

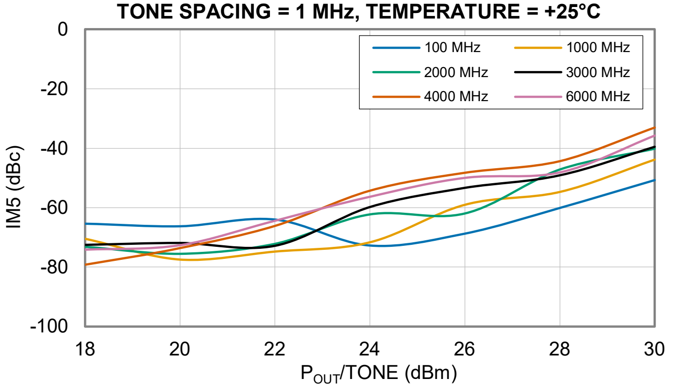
Typical Performance Curves

Note: The following data was taken on Mini-Circuits Characterization Test Board TB-GNA-63-5WCX+ with external bias-T (Figure 2). All data taken at nominal condition of V_{DD} = +28 V and I_{DD} = 400 mA unless noted otherwise. V_G was adjusted at each voltage and temperature level to achieve I_{DD} = 400 mA.

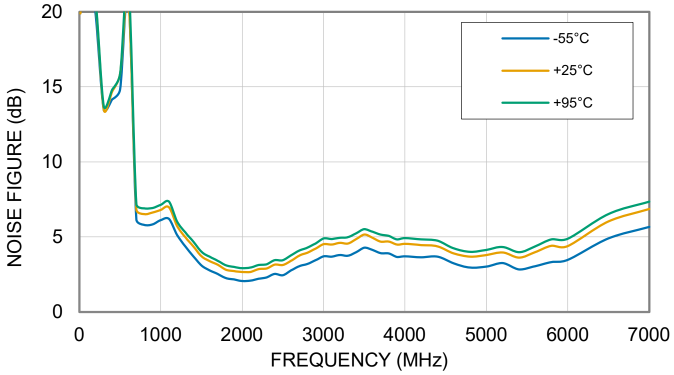
IM5 vs. DEVICE CURRENT (I_{DD})
TONE SPACING = 1 MHz, TEMPERATURE = +25°C,
P_{OUT} = +26 dBm/TONE



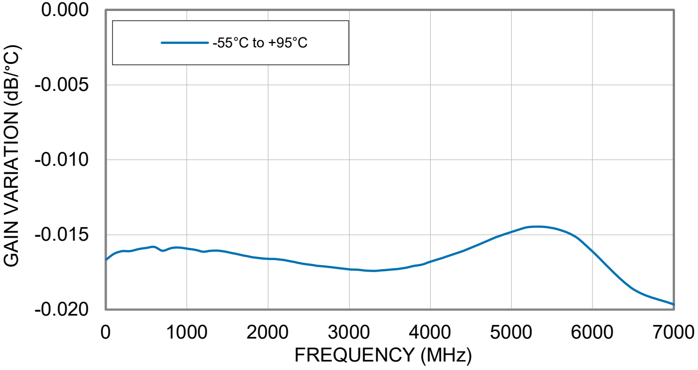
IM5 vs. P_{OUT}
TONE SPACING = 1 MHz, TEMPERATURE = +25°C



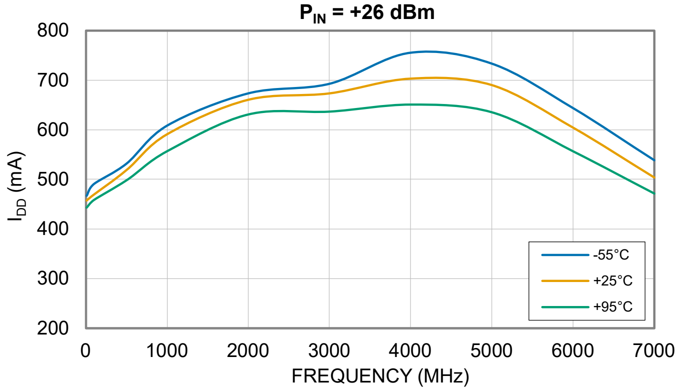
NOISE FIGURE vs. TEMPERATURE



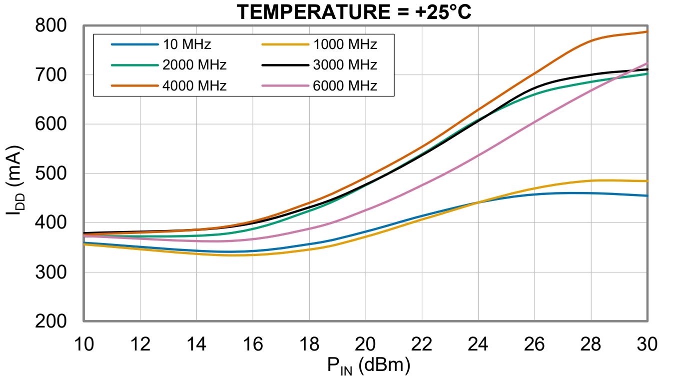
GAIN VARIATION vs. TEMPERATURE
P_{IN} = -25 dBm



I_{DD} vs. TEMPERATURE
P_{IN} = +26 dBm

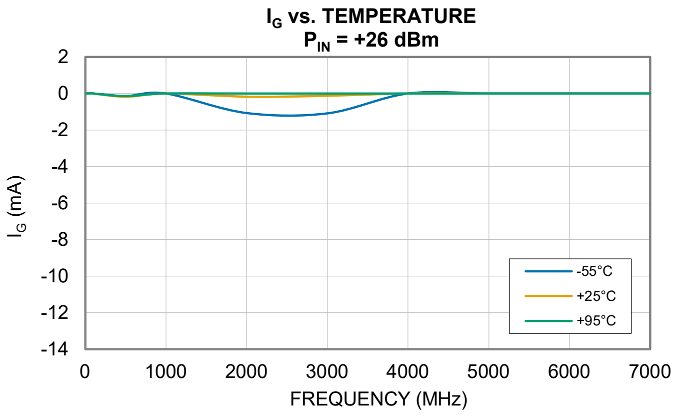


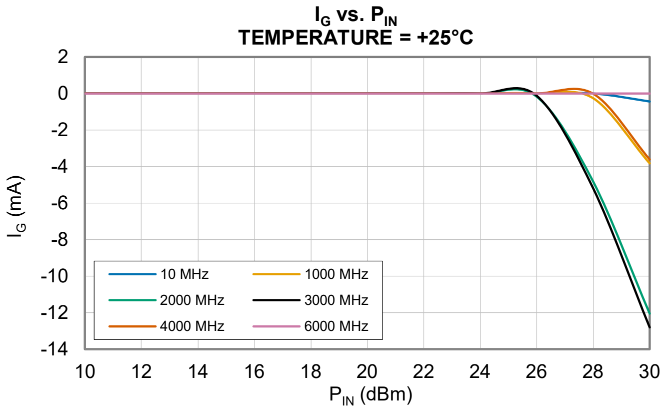
I_{DD} vs. P_{IN}
TEMPERATURE = +25°C

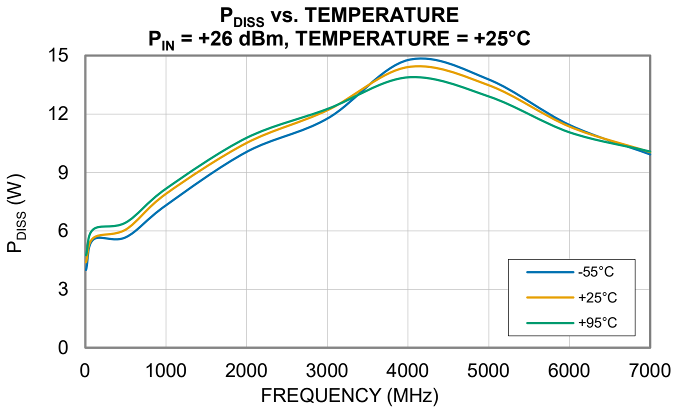


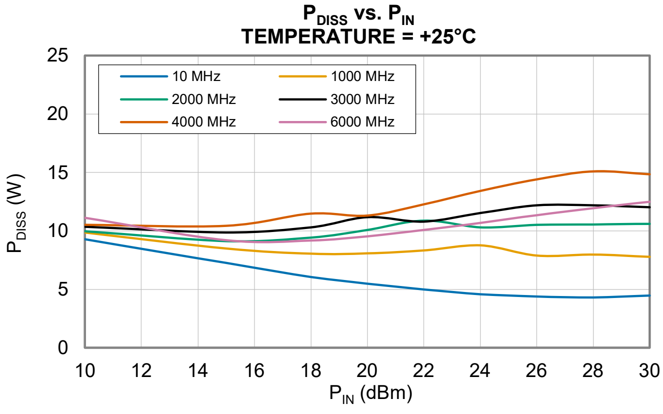
Typical Performance Curves

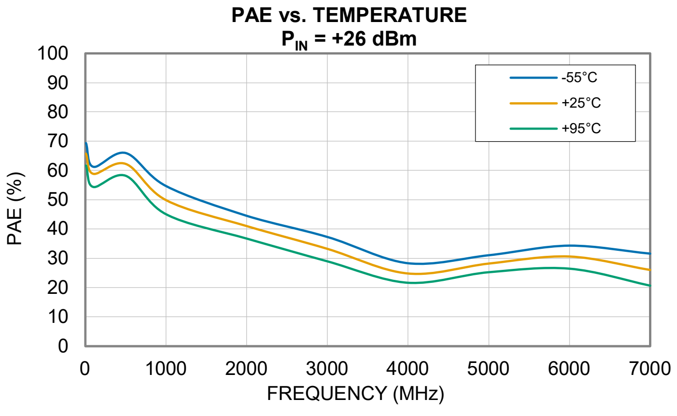
Note: The following data was taken on Mini-Circuits Characterization Test Board TB-GNA-63-5WCX+ with external bias-T (Figure 2). All data taken at nominal condition of V_{DD} = +28 V and I_{DD} = 400 mA unless noted otherwise. V_G was adjusted at each voltage and temperature level to achieve I_{DD} = 400 mA.

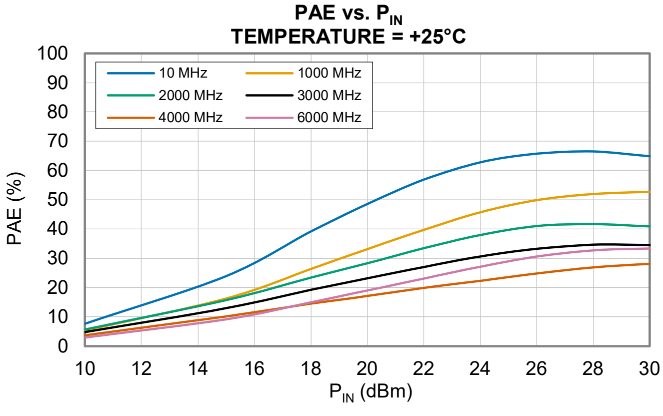








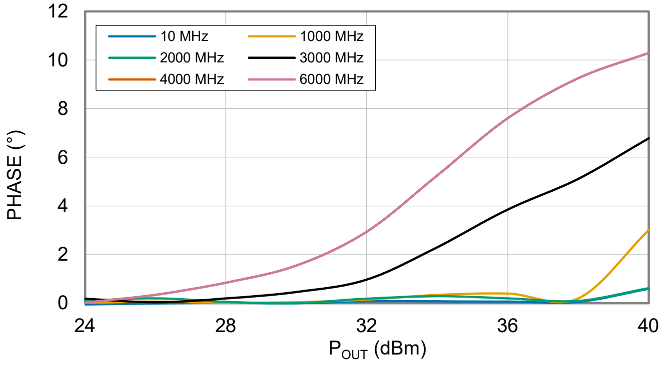




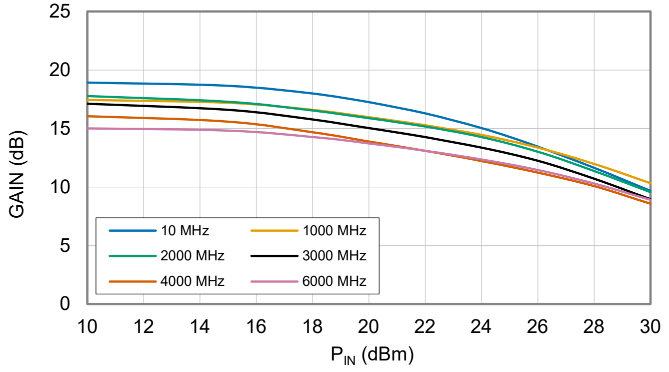
Typical Performance Curves

Note: The following data was taken on Mini-Circuits Characterization Test Board TB-GNA-63-5WCX+ with external bias-T (Figure 2). All data taken at nominal condition of V_{DD} = +28 V and I_{DD} = 400 mA unless noted otherwise. V_G was adjusted at each voltage and temperature level to achieve I_{DD} = 400 mA.

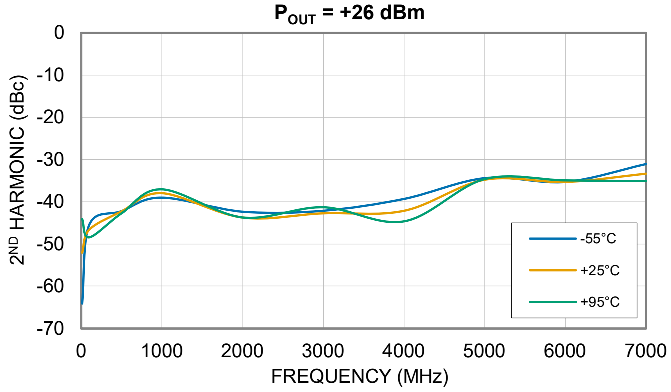
AM-PM
TEMPERATURE = +25°C



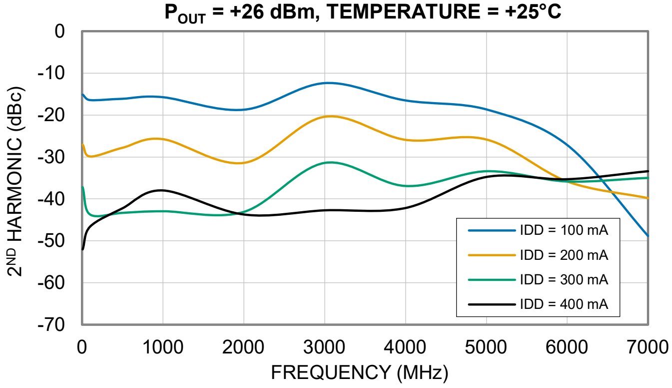
GAIN vs. P_{IN}
TEMPERATURE = +25°C



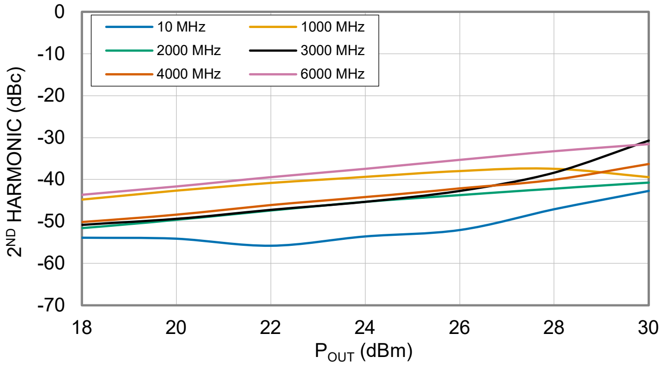
2^{ND} HARMONIC vs. TEMPERATURE
P_{OUT} = +26 dBm



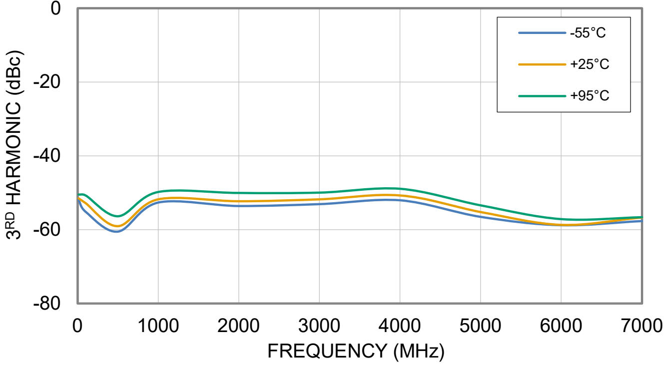
2^{ND} HARMONIC vs. DEVICE CURRENT (I_{DD})
P_{OUT} = +26 dBm, TEMPERATURE = +25°C



2^{ND} HARMONIC vs. P_{OUT}
TEMPERATURE = +25°C

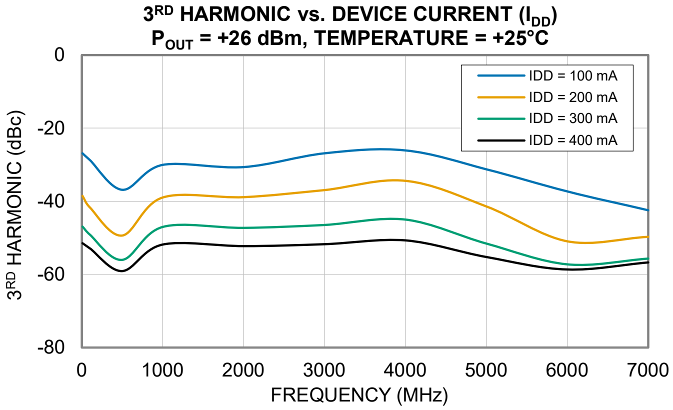


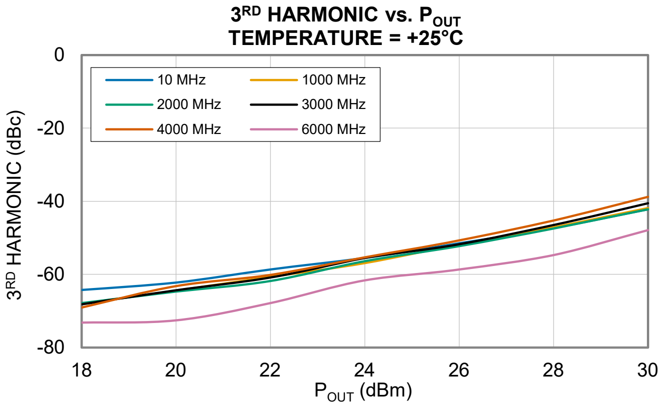
3^{RD} HARMONIC vs. TEMPERATURE
P_{OUT} = +26 dBm



Typical Performance Curves

Note: The following data was taken on Mini-Circuits Characterization Test Board TB-GNA-63-5WCX+ with external bias-T (Figure 2). All data taken at nominal condition of V_{DD} = +28 V and I_{DD} = 400 mA unless noted otherwise. V_G was adjusted at each voltage and temperature level to achieve I_{DD} = 400 mA.

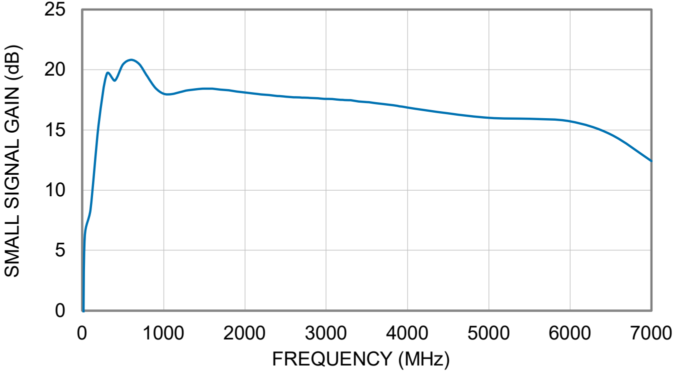




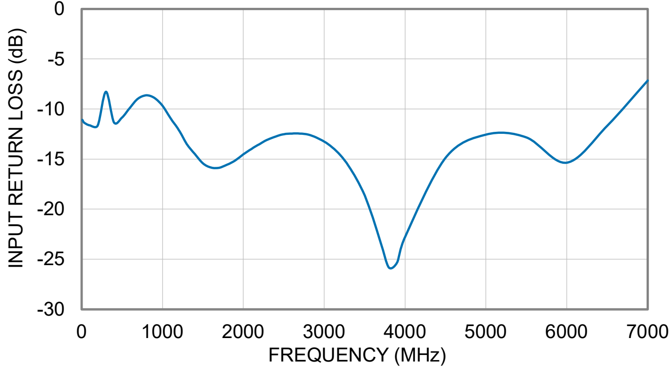
Typical Performance Curves

Note: The following data was taken on Mini-Circuits Characterization Test Board TB-GNA-63-5WCX+ (Figure 3). All data taken at nominal condition of V_{DD} = +28 V, I_{DD} = 400 mA, and Temperature = +25°C unless noted otherwise. V_G was adjusted to achieve I_{DD} = 400 mA.

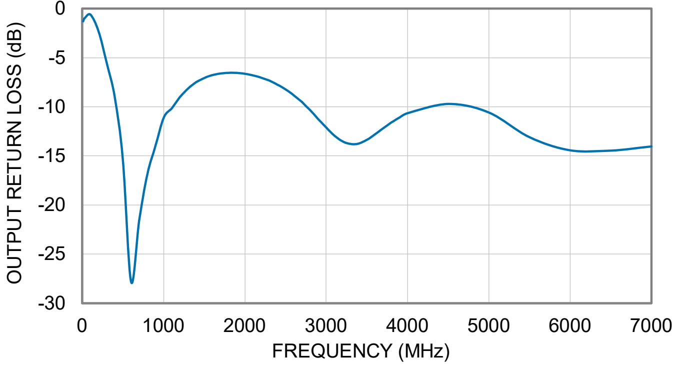
SMALL SIGNAL GAIN vs. FREQUENCY
P_{IN} = -25 dBm, TEMPERATURE = +25°C



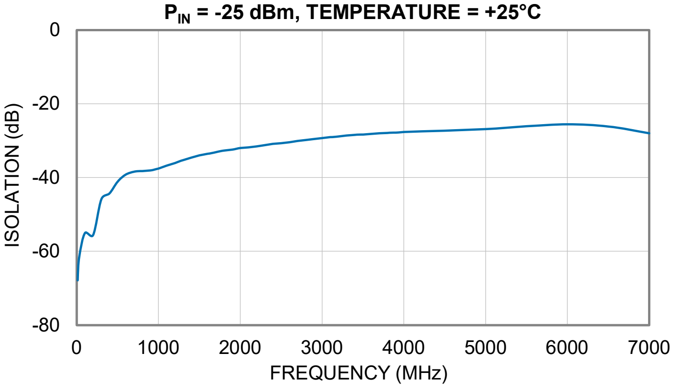
INPUT RETURN LOSS vs. FREQUENCY
P_{IN} = -25 dBm, TEMPERATURE = +25°C



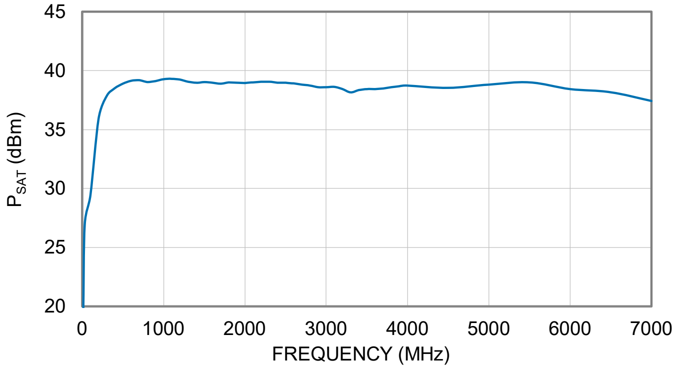
OUTPUT RETURN LOSS vs. FREQUENCY
P_{IN} = -25 dBm, TEMPERATURE = +25°C



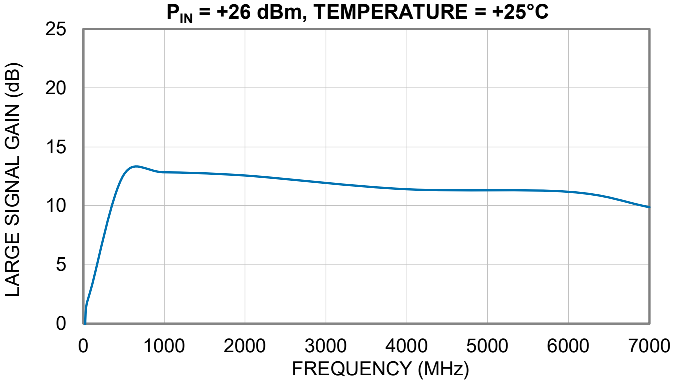
ISOLATION vs. FREQUENCY
P_{IN} = -25 dBm, TEMPERATURE = +25°C



P_{SAT} vs. FREQUENCY
TEMPERATURE = +25°C



LARGE SIGNAL GAIN vs FREQUENCY
P_{IN} = +26 dBm, TEMPERATURE = +25°C



Typical Performance Curves

Note: The following data was taken on Mini-Circuits Characterization Test Board TB-GNA-63-5WCX+ (Figure 3). All data taken at nominal condition of V_{DD} = +28 V, I_{DD} = 400 mA, and Temperature = +25°C unless noted otherwise. V_G was adjusted to achieve I_{DD} = 400 mA.