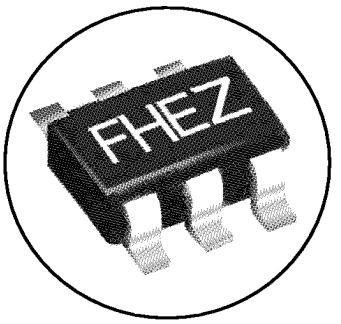
FMM5024ML

800MHz MMIC Driver Amplifier

DESCRIPTION

The FMM5024ML is a MMIC driver amplifier with gain control and is designed for applications in the 800 to 1000 MHz band. The driver amplifier includes two amplifier stages and a variable attenuator.



ML PACKAGE

FEATURES

- High Gain: 26dB (typ.)
- High Gain Control Range: 50dB (typ.)
- Low Adjacent Channel Power: -55dBc (max.)
- Low Current Consumption: 40mA (max.)
- Small Size: 6 pin **Plastic** package for SMT applications
- Tape and Reel available

ABSOLUTE MAXIMUM RATINGS (Ambient Temperature Ta=25°C)

Parameter	Symbol	Rating	Unit
Supply Voltage*	V_{DD1}	6.0	V
	V_{DD2}	6.0	V
Gain Control Voltage	V_{GC}	0 to +4.0	V
Input Power	P_{in}	0	dBm
Storage Temperature	T_{stg}	-55 to +125	°C
Case Temperature	T_{opt}	-30 to +85	°C

*Maximum recommended supply voltage is 4.2V

ELECTRICAL CHARACTERISTICS (Ambient Temperature Ta=25°C)

Item	Symbol	Condition(1,4)	Limit			Unit
			Min.	Typ.	Max.	
Small Signal Gain	Gain	Pin = -20dBm	23	26	-	dB
Output Power	Pout	Pin = -13.0dBm	9.0	12	-	dBm
Adjacent Channel Leakage Power	PACP	Pout = 8.0dBm PDC condition (3)	-	-63	-55	dBc
Gain Control	G-con	V_{GC} = 0.5 to 2.0V Pin = -20dBm	40	50	-	dB
Current Consumption	I_{ddt} (2)	Pout = 8.0dBm	-	35	40	mA
	I_{gc}	V_{GC} = 2.0V	-	0.1	1.0	mA

Note: 1. V_{DD1} = 3.0V, V_{DD2} = 3.5V, V_{GC} = 2.0V, f = 956MHz.

2. Iddt = Idd1 + Idd2.

3. PDC Condition: $\pi/4$ - DQPSK Signal
   Base Band Filter: R-Nyquist (α=0.5)
   Pattern: PN9, Bit Rate: 42Kbps.
   Band Width: 21 KHz
   50 KHz offset

4. Electrical characteristics are measured as shown in Figure 1.

5. When the device is operated in the burst mode, sequentially apply V_{DD1} and then V_{DD2}.

6. Electrical characteristics are assured on a lot basis by sample testing at an AQL = 0.1%, Level II. Any lot failure shall be 100% retested.

7. The package marking "FHEP" shows the part number, year and month of manufacturer.
   Where: "FH" indicates the part number (FMM5024ML)
   "E" indicates the year (1997)
   "Z" indicates the month (December)

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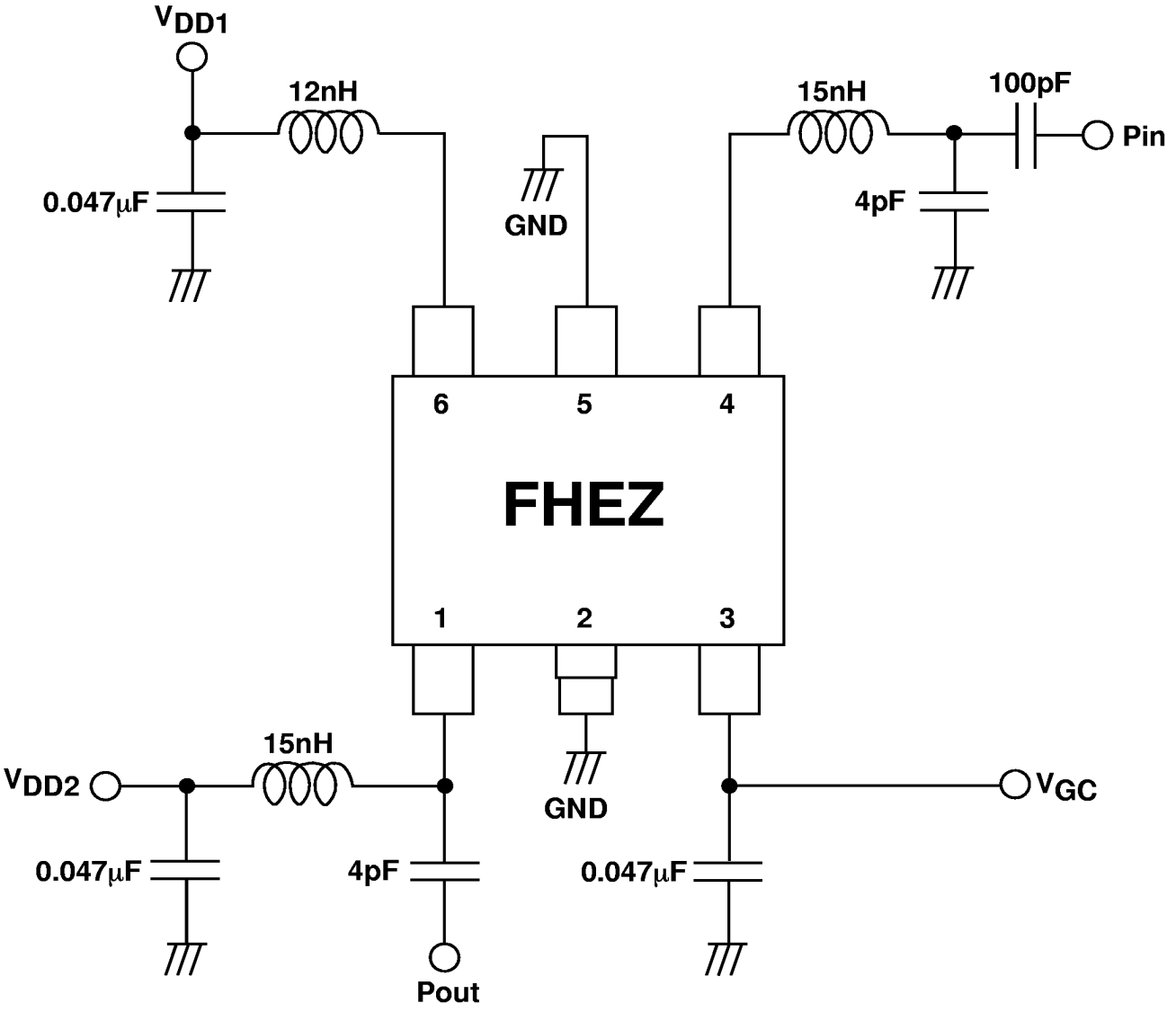
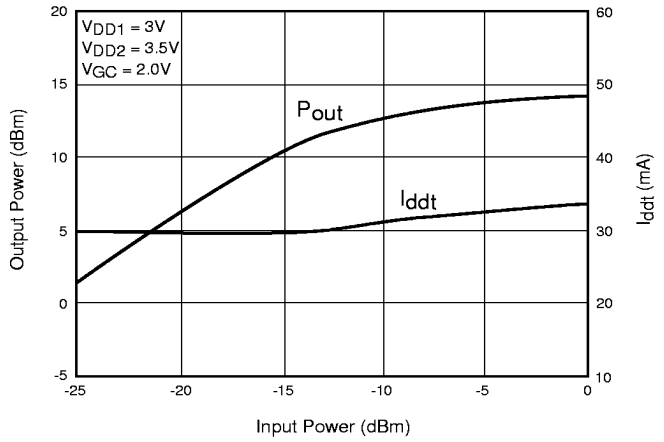
December 1997

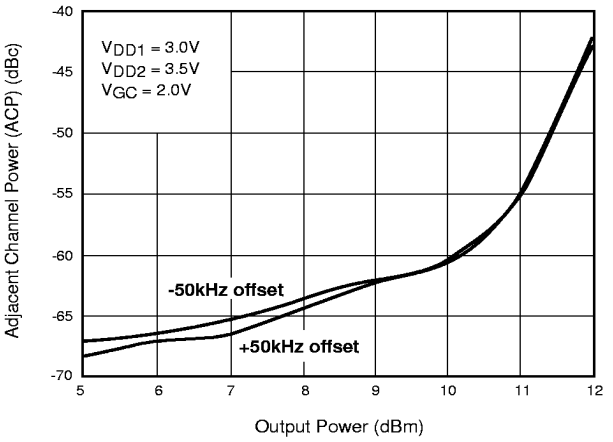
Figure 1. External Measurement Circuit



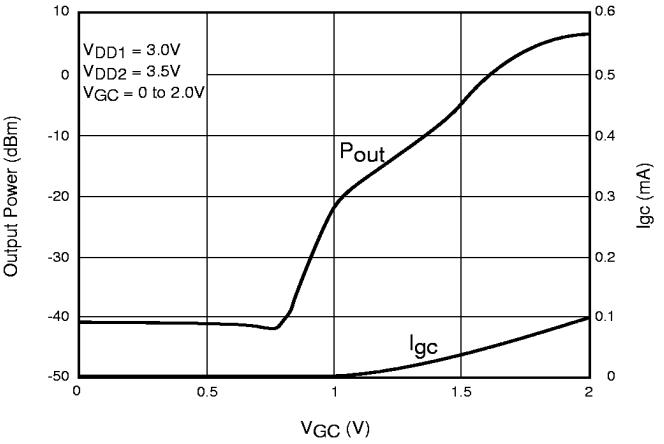
OUTPUT POWER & Iddt vs. INPUT POWER



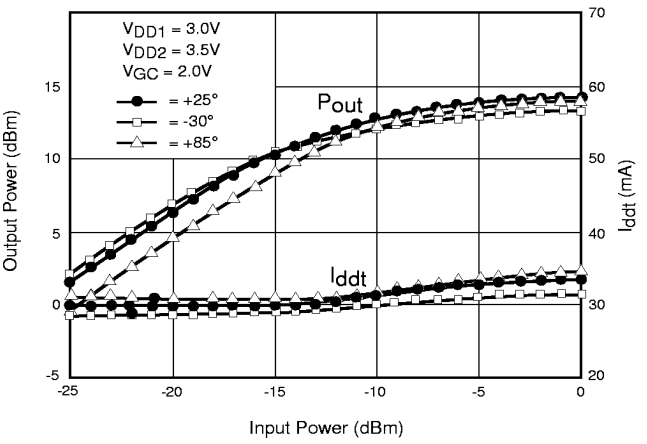
ACP vs. OUTPUT POWER



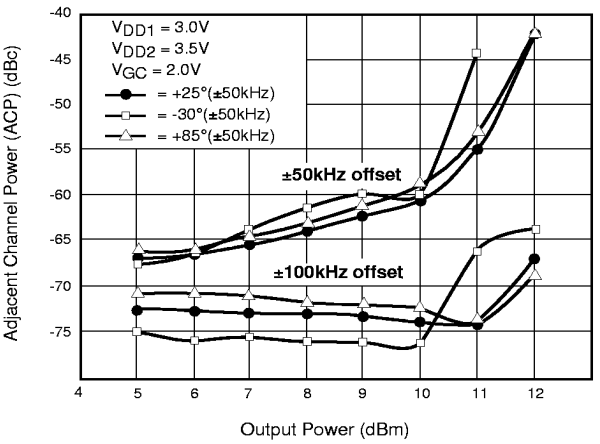
OUTPUT POWER & I_{gc} vs. V_{GC}



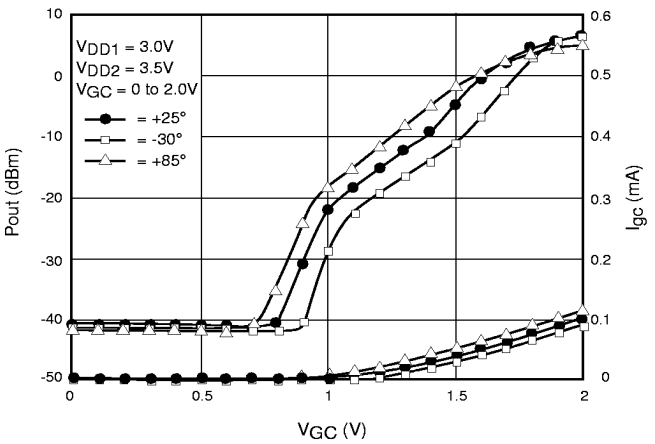
OUTPUT POWER & Iddt vs. INPUT POWER



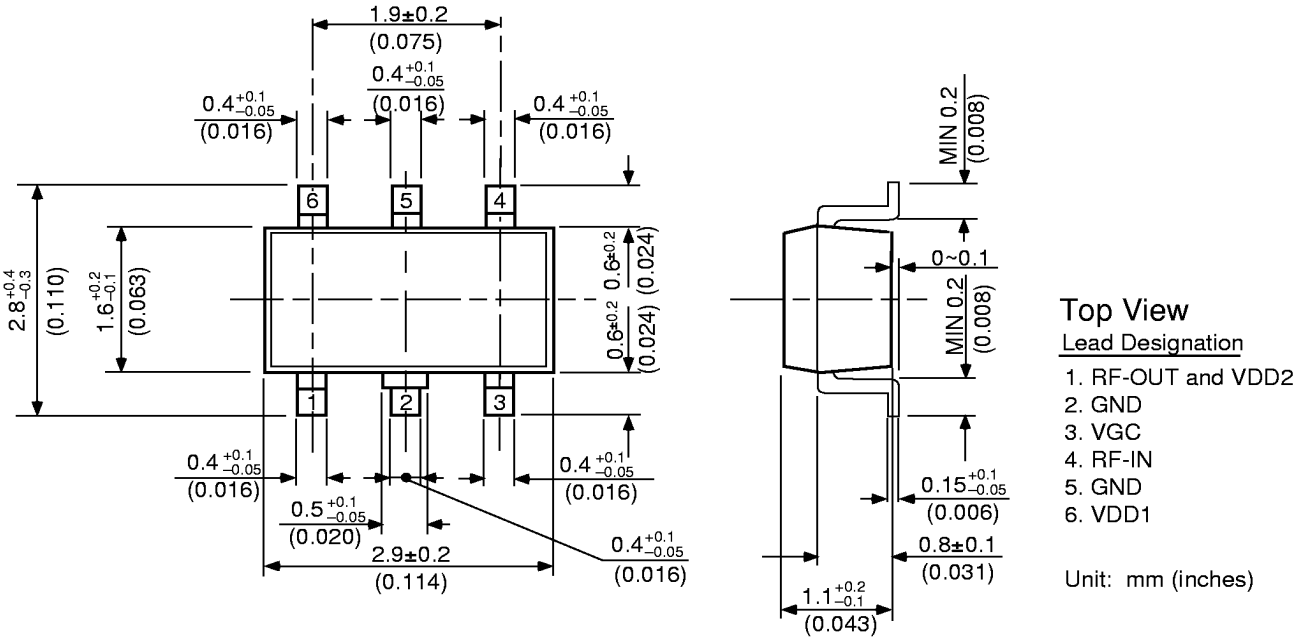
ACP vs. OUTPUT POWER



OUTPUT POWER & I_{gc} vs. V_{GC}



Case Style "ML"



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