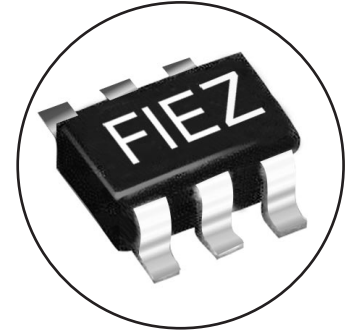


DESCRIPTION

The FMM5025ML is a MMIC driver amplifier that includes two amplifier stages and a variable attenuator. This new product is uniquely suited for Personal Digital Cellular (PDC) applications in the 1.5GHz band.

FEATURES

- High Gain: 23dB (typ.)
- High Gain Control Range: 40dB (typ.)
- Low Adjacent Channel Power: -55dBc (max.)
- Low Current Consumption: 68mA (max.)
- Small Size: 6 pin **Plastic** package for SMT applications
- Tape and Reel available



ML PACKAGE

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
Operating 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	P _{in} = -20dBm	20	23	-	dB
Adjacent Channel Leakage Power	PACP	P _{out} =11dBm PDC condition (3)	-	-65	-55	dBc
Gain Control	G-con	V _{GC} = 0.5 to 2.0V P _{in} = -20dBm	35	40	-	dB
Current Consumption	I _{ddt} (2)	P _{out} =11dBm	-	54	68	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 = 1441MHz.

2. I_{ddt} = I_{dd1} + I_{dd2}.

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

4. Electrical characteristics are measured as shown in Figure 1

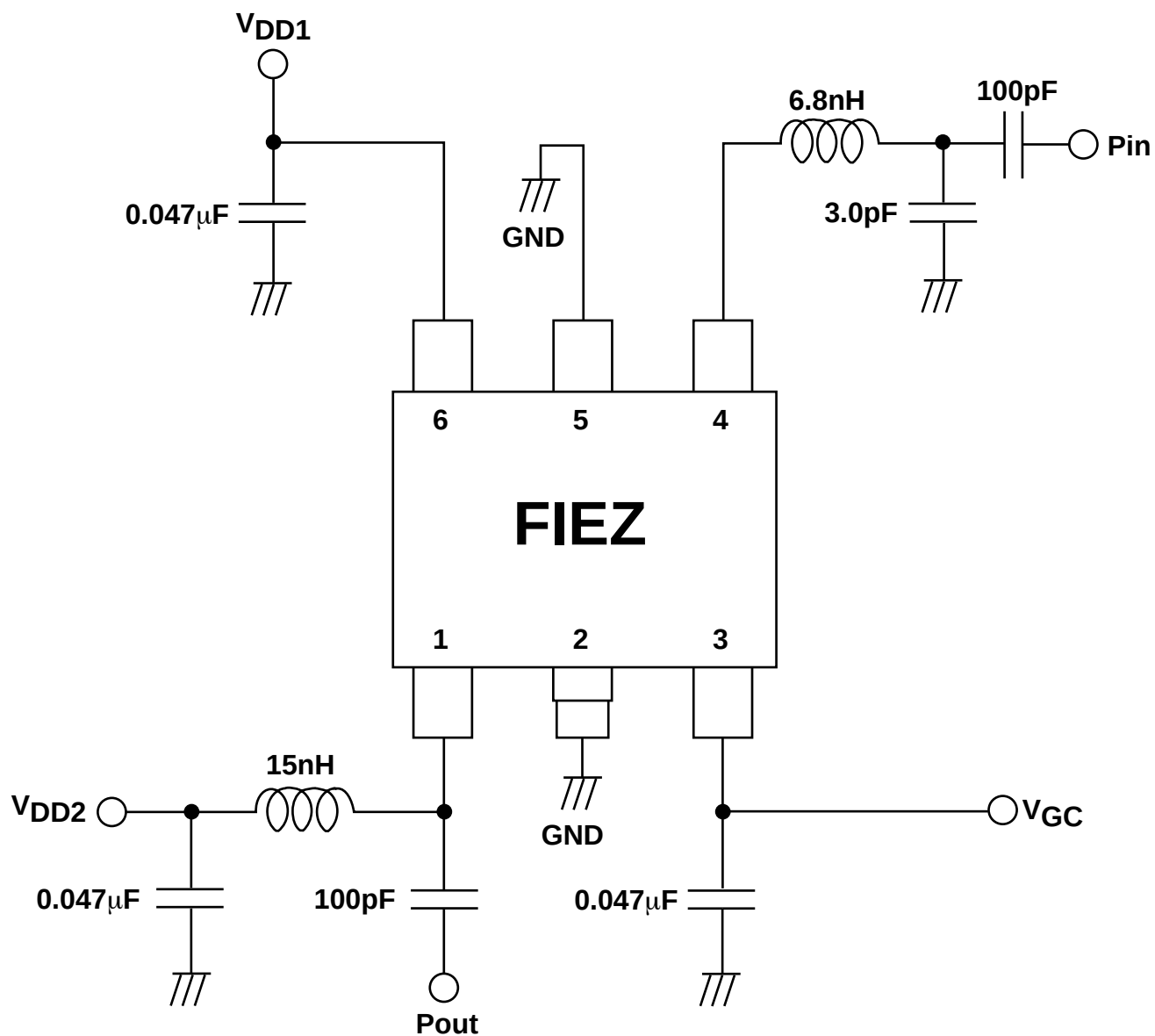
5. When the device is operated in the burst mode, sequentially apply V_{DD1} and then V_{DD2}.

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.

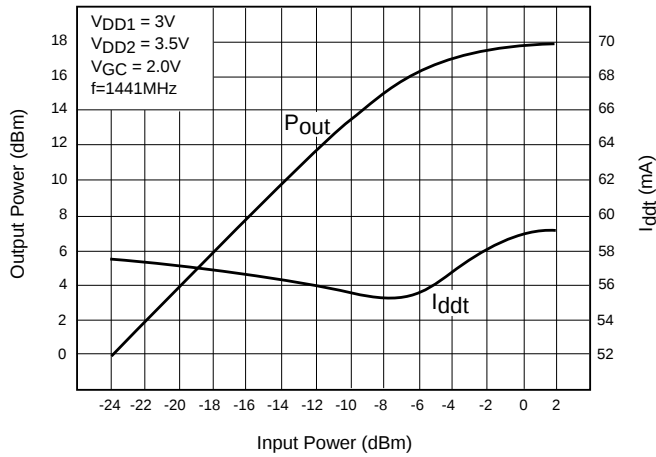
7. The package marking "FIEZ" shows the part number, year and month of manufacturer.

Where: "FI" indicates the part number (FMM5025ML)
"E" indicates the year (1997)
"Z" indicates the month (December)

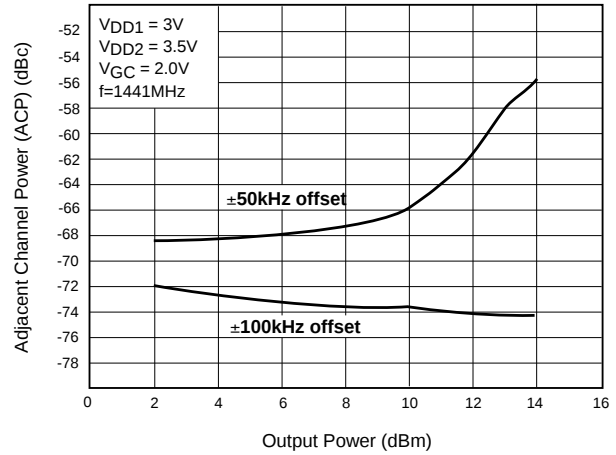
Figure 1. External Measurement Circuit



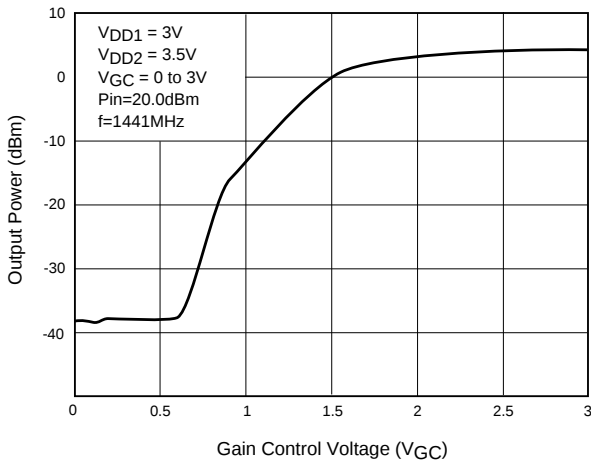
OUTPUT POWER & I_{ddt} vs. INPUT POWER



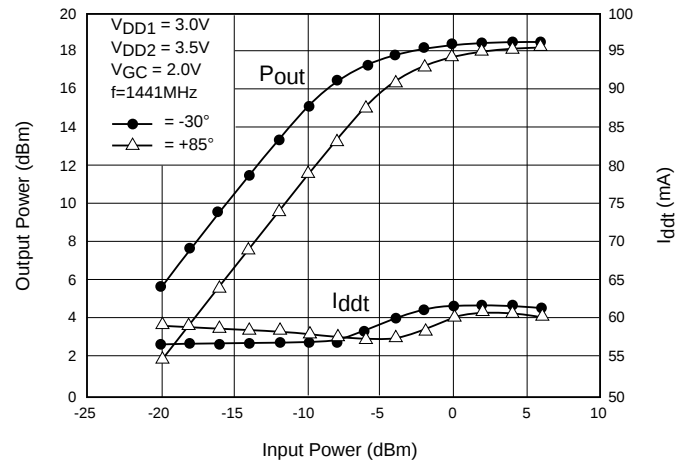
OUTPUT POWER vs. ACP



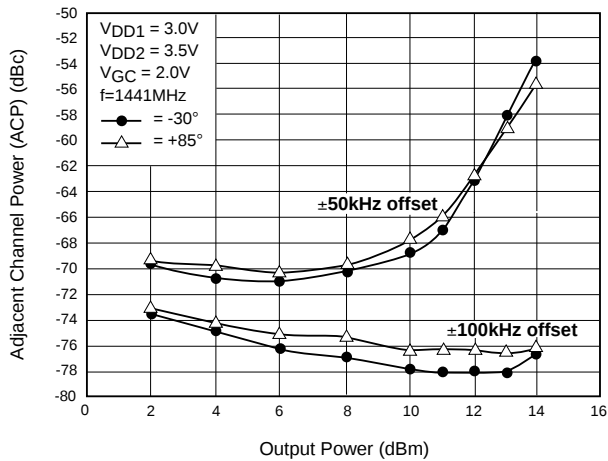
OUTPUT POWER vs. V_{GC}



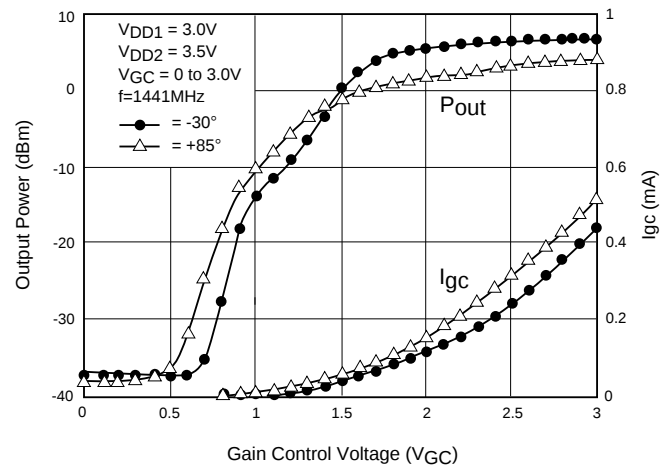
OUTPUT POWER & I_{ddt} vs. INPUT POWER



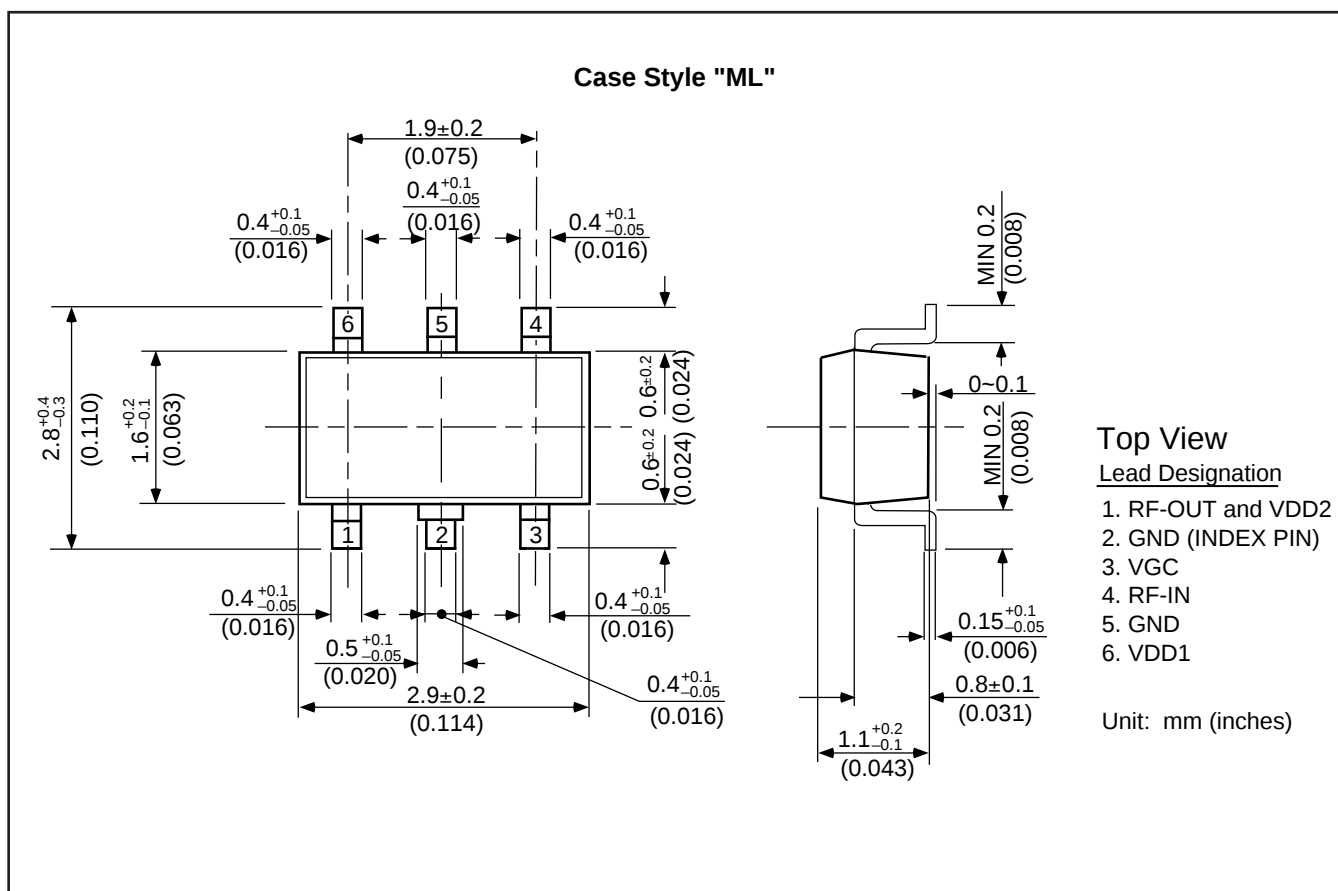
ACP vs. OUTPUT POWER



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



1.5GHz MMIC Driver Amplifier



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- Do not alter the form of this product into a gas, powder, or liquid through burning, crushing, or chemical processing as these by-products are dangerous to the human body if inhaled, ingested, or swallowed.
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