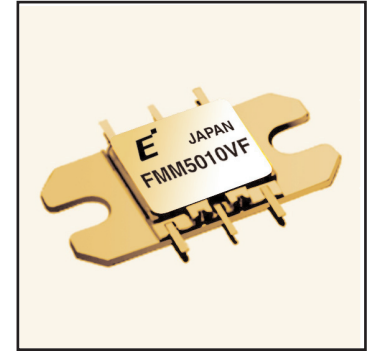


FEATURES

- High Output Power: 21.0dBm (typ.)
- High Linear Gain: 25dB (typ.)
- Low In/Out VSWR
- Impedance Matched $Z_{in}/Z_{out} = 50\Omega$
- Small Hermetic Metal-Ceramic Package (VF)



DESCRIPTION

The FMM5010VF is a power amplifier designed for VSAT applications as a driver or output stage in the 14.0 to 14.5 GHz band.

Eudyna's stringent Quality Assurance Program assures the highest reliability and consistent performance.

ABSOLUTE MAXIMUM RATINGS (Ambient Temperature $T_a=25^\circ\text{C}$)

Item	Symbol	Rating	Unit
DC Input Voltage	V_{DD}	12	V
DC Input Voltage	V_{GG}	-7	V
Input Power	P_{in}	5	dBm
Storage Temperature	T_{stg}	-55 to +125	$^\circ\text{C}$
Operating Case Temperature	T_{op}	-40 to +85	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (Ambient Temperature $T_a=25^\circ\text{C}$)

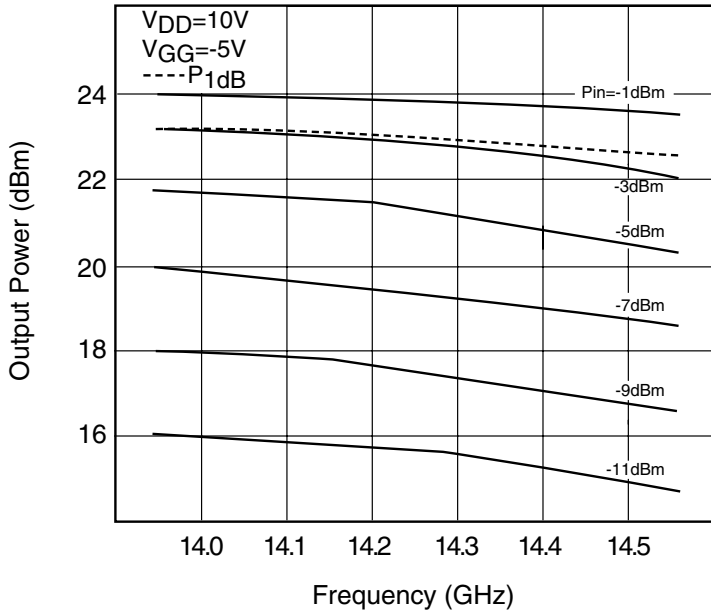
Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Frequency Range	f		14.0	~	14.5	GHz
Output Power at 1dB G.C.P.	P_{1dB}		19.0	21.0	-	dBm
Linear Gain	G		22.0	25.0	-	dB
Gain Flatness	ΔG	$V_{DD} = 10V$ $V_{GG} = -5V$ $f = 14.0 \text{ to } 14.5 \text{ GHz}$	-	1.0	1.5	dB
Input VSWR	$VSWR_i$		-	1.7:1	2:1	-
Output VSWR	$VSWR_o$		-	2:1	2.3:1	-
DC Input Current	I_{DD}		-	100	150	mA
DC Input Current	I_{GG}	$V_{DD} = 10V$ $V_{GG} = -5V$	-	5	10	mA

CASE STYLE: VF

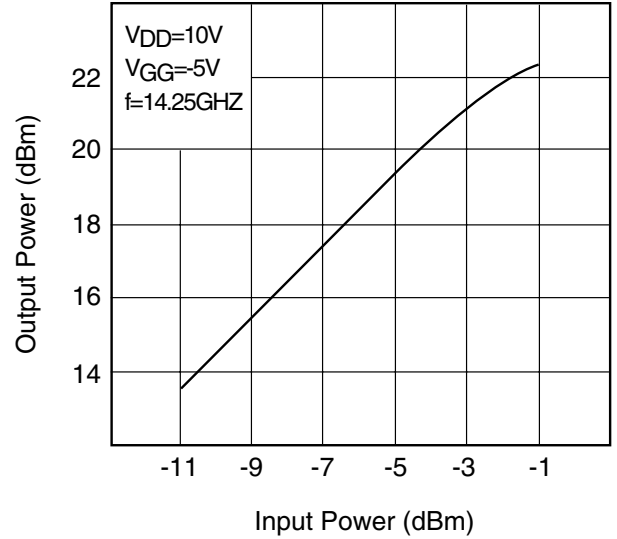
FMM5010VF

GaAs MMIC

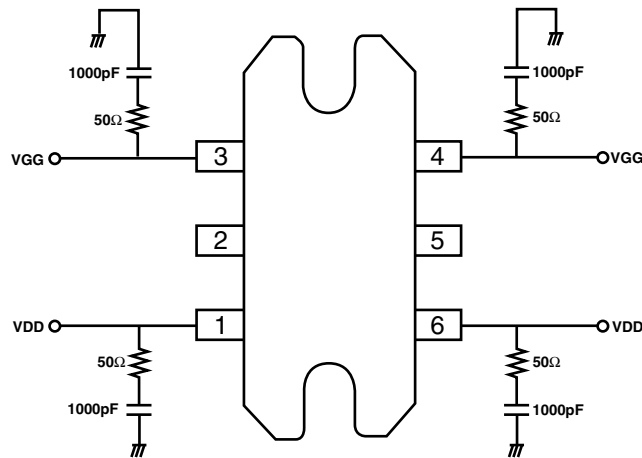
OUTPUT POWER vs. FREQUENCY

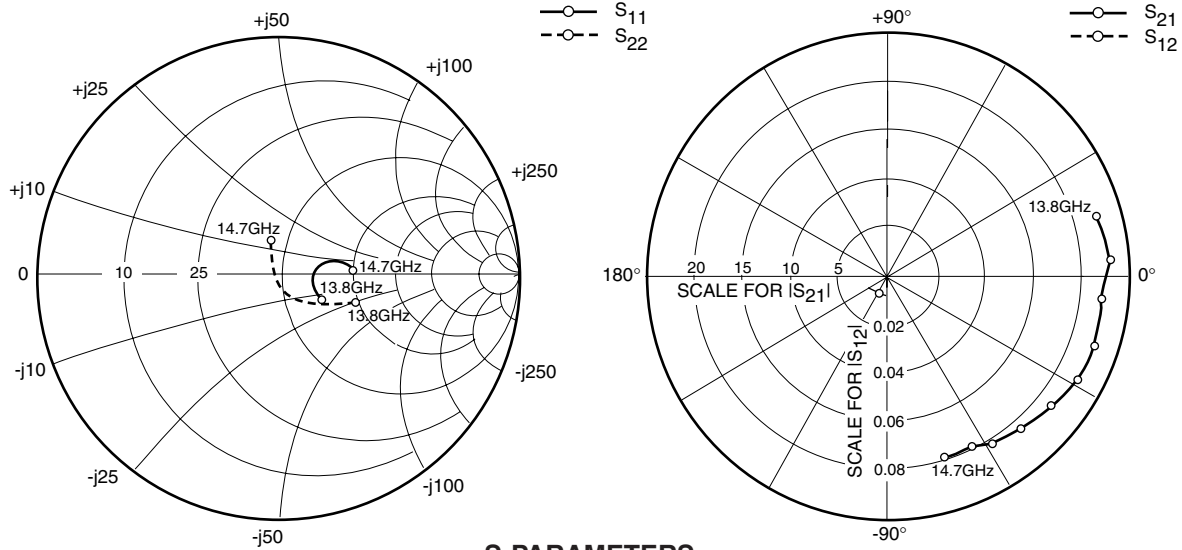


OUTPUT POWER vs. INPUT POWER



Recommended Bias Circuit

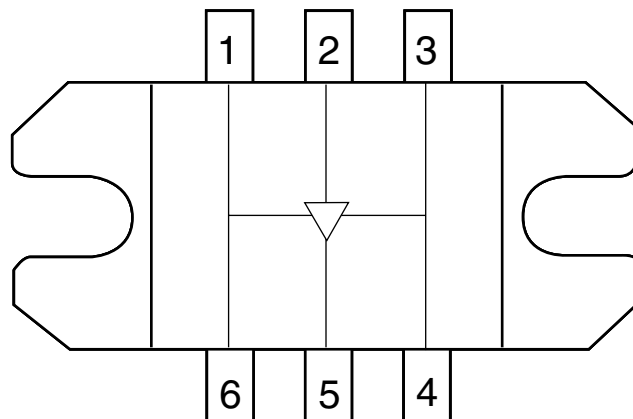




S-PARAMETERS
 $V_{DD} = 10V, V_{GG} = -5V$

FREQUENCY (MHZ)	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
13800	.222	-22.9	22.454	14.6	.009	-125.7	.355	-17.5
13900	.179	-15.4	22.847	3.3	.006	-103.7	.301	-22.2
14000	.161	0.4	22.346	-7.1	.009	-97.3	.250	-29.3
14100	.183	11.8	22.428	-19.8	.008	-129.8	.203	-36.2
14200	.210	19.5	22.008	-28.3	.008	-113.6	.139	-45.2
14300	.255	19.0	21.359	-38.9	.010	-135.9	.075	-59.0
14400	.285	16.1	20.744	-48.2	.009	-138.1	.023	-93.6
14500	.307	12.0	20.085	-57.3	.008	-123.7	.048	129.1
14600	.324	7.7	19.427	-65.2	.012	-153.6	.110	113.2
14700	.341	2.0	19.460	-74.0	.008	-126.8	.146	105.3

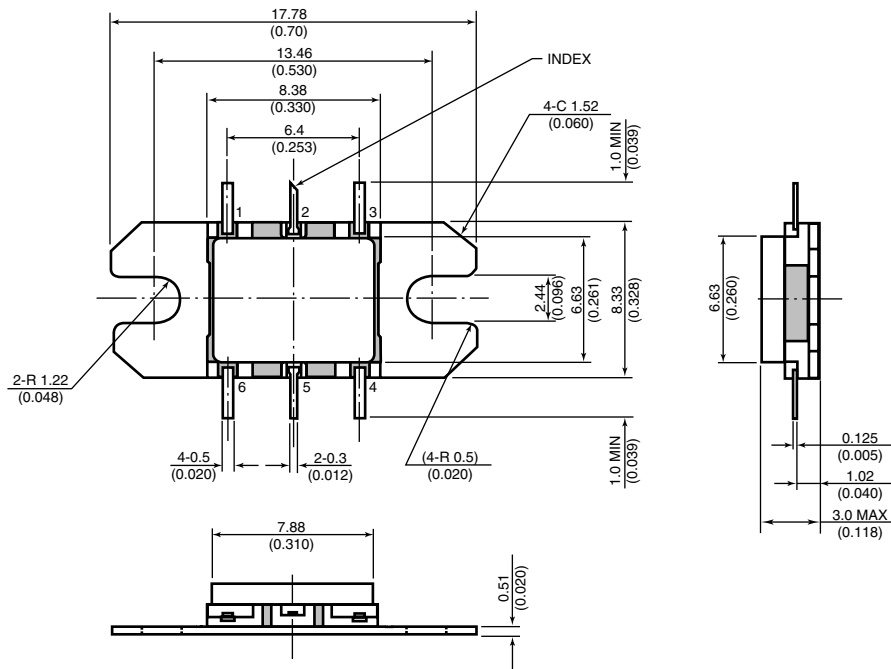
Pin Configuration



FMM5010VF

GaAs MMIC

Case Style "VF"



PIN ASSIGNMENT

Pin	Symbol
1.	V _{DD}
2.	RF in
3.	V _{GG}
4.	V _{GG}
5.	RF out
6.	V _{DD}

Unit: mm(inches)

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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.
- Observe government laws and company regulations when discarding this product. This product must be discarded in accordance with methods specified by applicable hazardous waste procedures.

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