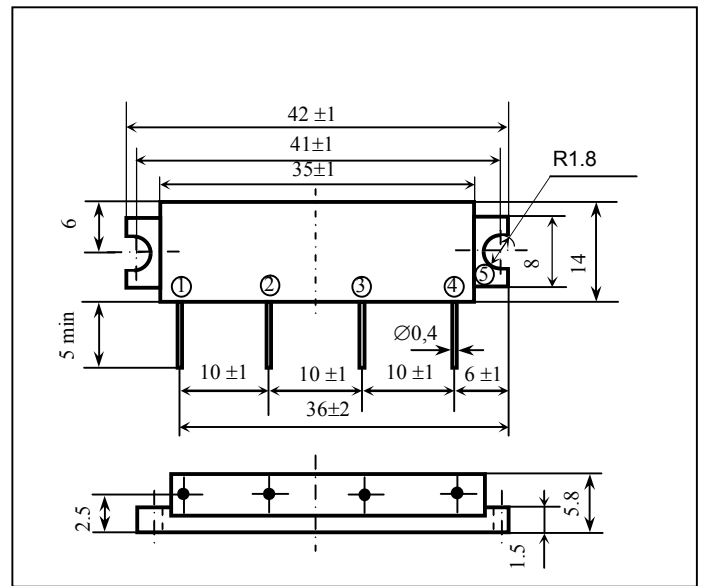


Power RF Amplifier

Power = 5 Watts
 Bandwidth = 51 to 57.5 MHz
 Gain = 30dB Vcc=9.6 Volts
 50 Ohms Input/Output Impedances
 Copper Flange

Description

The UM109-1D is 5 Watt FM amplifier module covering a bandwidth of 51-57.5 MHz. This dual stage amplifier is specifically designed for Land Mobile VHF band portable radio applications.



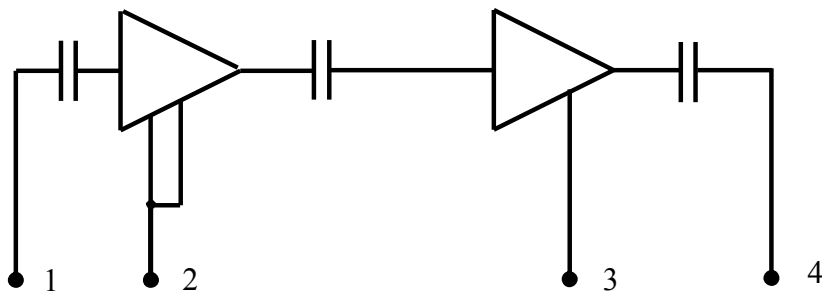
Absolute Maximum Ratings (T=25°C)

Parameter	Symbol	Value	Unit
DC supply Voltage	Vcc	12	V
DC bias Voltage, Power control	Vbb	9.6	V
Input Power	Pin	30	mW
Output Power	Pout	10	W
Operating Case Temp.	Tc	-40 to +85	°C
Storage Temperature	Tstg	-60 to +100	°C

Electrical Characteristics: (Tc = 25°C, Zs = Zl = 50 Ohms. Vcc = 9.6 Volts. Vbb = 9.6Volts.)

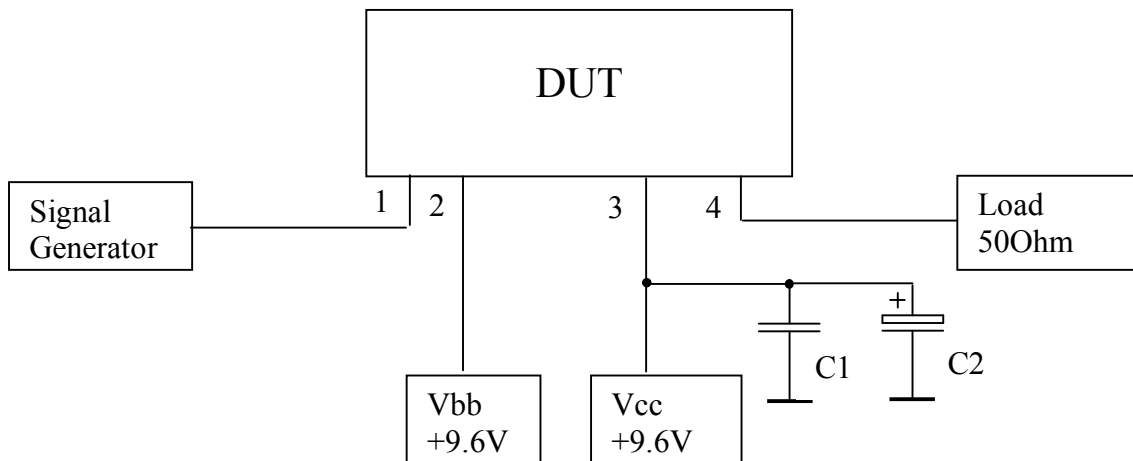
Parameter	Symbol	Min	Typical	Max	Unit	Test Conditions
Frequency Range	BW	51		57.5	MHz	50 Ohm load
Output Power	Pout	5			Watts	
Power Gain	PG	30			dB	
Total Efficiency	η	45	55		%	Po=5W, CW
2 nd Harmonic	F ₂		-40	-30	dBc	
3 rd Harmonic	F ₃		-40	-30	dBc	
Load Mismatch	Ψ	No degradation or destroy				Pin=10mW, Po=5W, VSWR =20

Block diagram



- 1- RF input
- 2- Bias Voltage (V_{bb}), Power Control
- 3- Collector Voltage (V_{cc})
- 4- RF Output (P_{out})
- 5- RF Ground (Case)

Test block diagram



- C1- 0.1μF
- C2- 100μF

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Specification is subject to change without notice