

RMPA1750-78

3.0V CDMA MMIC Power Amplifier Module

Description

The RMPA1750-78 is a small outline, high efficiency power amplifier module for Korean PCS CDMA personal communication system applications. The Power Amplifier module is internally matched to 50 ohms which minimizes the use of external components and reduces circuit complexity for the designer. The module uses Raytheon's Heterojunction Bipolar Transistor (HBT) process.

Features

- Single supply operation
- Efficiency of 30% typical, for CDMA average power out of 28 dBm
- Low cost LCC package
- Matched input and output module

Electrical Characteristics¹

Parameter	Min	Typ	Max	Unit
Frequency Range	1720		1780	MHz
Gain (Small Signal)		27		dB
Gain Variation vs Temp over Range = -30 to +85°C	-2		+1	dB
Gain Linearity (0 dBm ≤ Pout ≤ 28 dBm)	-0.5		+1.5	dB
Power Out	28			dBm
Efficiency at Pout = 28 dBm	27	30		%
ACPR (Offset ≥ ± 1.25 MHz) ³		-48	-46	dBc
Noise Figure		6		dB
Noise Power (All Power Levels)			-135	dBm/Hz
Input VSWR (50Ω)			2.0:1	---
Output VSWR (50Ω)			3.5:1	---
Stability (All spurious) ²			-70	dBc
Harmonics (Po ≤ 28 dBm) 2fo, 3fo, 4fo			-30	dBc
Quiescent Current		100	120	mA
Vcc	3.0	3.5	4.0	Volts
Case Operating Temp	-30		+85	°C

Product Information

Notes:

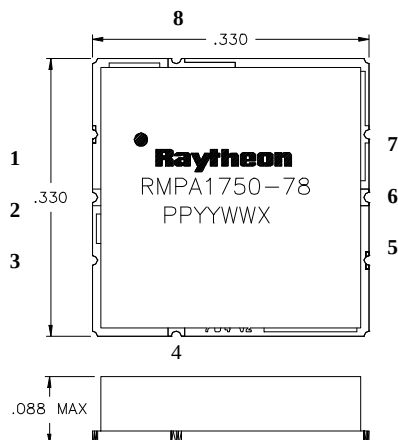
1. All parameters to be met at Ta = +25°C, Vcc = +3.5V and load VSWR ≤ 1.2:1.
2. Source/Load VSWR ≤ 3:1 (In Band, All Angles) or Load VSWR ≤ 20:1 (Out of Band, All Angles) Tc = -30°C to +85°C).
3. Po ≤ 28 dBm at Vdd=3.5V; CDMA Waveform measured using the ratio of the average power within the 1.23 MHz channel and within a 30 kHz bandwidth at a 1.25 MHz offset.

Raytheon reserves the right to update or change specifications without notice.

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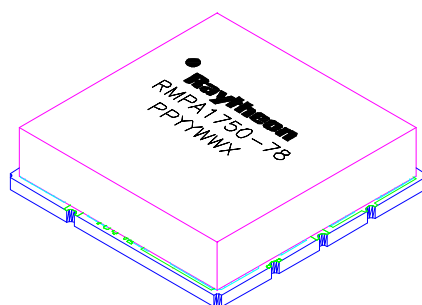
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Figure 1. Package Details



Pin#	Description
1	GND
2	RF IN
3	VREF
4	N/C
5	GND
6	RF OUT
7	GND
8	Vcc

Dimensions in Inches



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