ALM-2203
SDARS LNA Module

AVAGO TECHNOLOGIES

Product Brief

Description

Avago Technologies' ALM-2203 is an ultra low-noise front-end module that combines three low-noise amplifiers (LNA) with a Film Bulk Acoustic Resonator (FBAR) filter into a 5mm x 5mm Molded Chip On Board (MCOB) package for use in Satellite Digital Audio Radio Service (SDARS) radios. The LNAs use Avago Technologies' proprietary GaAs Enhancement-mode pHEMT process to achieve high gain with very low noise figure and high linearity. Noise figure distribution is very tightly controlled. The integrated filter utilizes an Avago Technologies' leading-edge FBAR filter for exceptional rejection.

The low noise figure and high gain, coupled with low current consumption make it suitable for use in critical low-power SDARS applications.

Component Image

Surface Mount (5.0 x 5.0 x 0.95) mm^3 MCOB
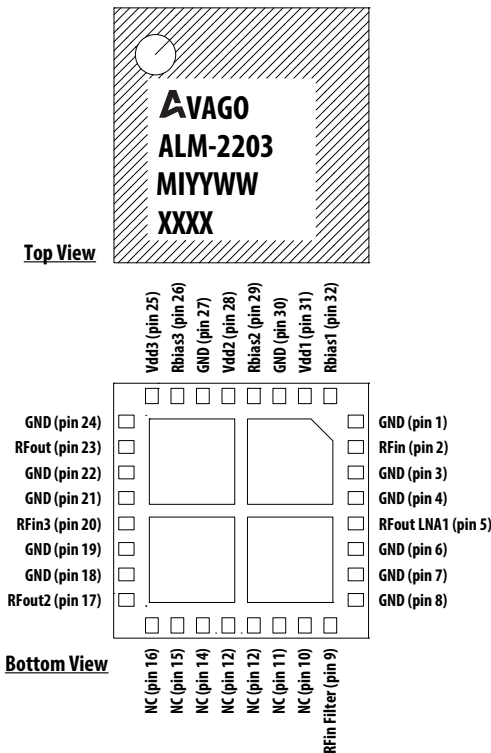
Note:
Package marking provides orientation and identification
MI = Manufacturer Code
YY = Manufacture year
WW = Manufacture work week
XXXX = Assembly lot number

Features

- Very Low Noise Figure: 0.83 dB typ.
- Exceptional Cell/DCS/PCS/WLAN-Band rejection
- Advanced GaAs E-pHEMT & FBAR Technology
- 0.95mm typical thickness
- Small package dimension: (5.0 x 5.0 x 0.95) mm^3
- Meets MSL3, Lead-free and halogen free
- Simultaneous SDARS/GPS operation

Target Specifications (Typical performance @ 25°C)

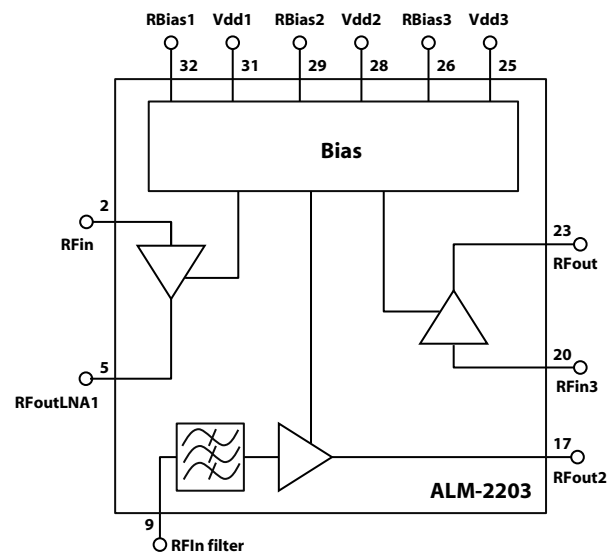At 2.3325 GHz (unless specified), Vdd = 5V, Idd = 110mA

- Gain = 38.3 dB
- NF = 0.83 dB
- IIP3 = -9.0 dBm, IP1dB = -18.3 dBm
- S11 = -13.4 dB, S22 =-9.5 dB
- OOB IP1dB @ 824 – 894MHz: >13dBm
- OOB IP1dB @ 1710 – 1755MHz: 9.5dBm
- OOB IP1dB @ 1850 – 1990MHz: 8.5dBm
- OOB IP1dB @ 2400 – 2600MHz: 10.8dBm
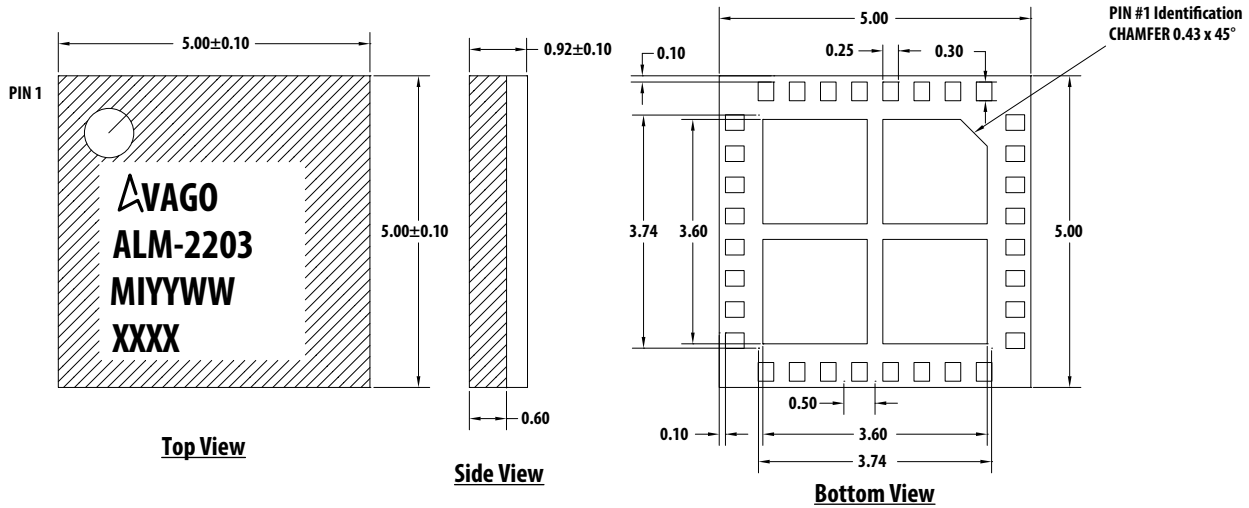
Application

- Digital satellite radio

Block Diagram

Part Number Ordering Information

Part Number	Qty	Container
ALM-2203-BLKG	100	Antistatic bag
ALM-2203-TR1G	1000	7" Reel

Package Dimensions

PIN 1

5.00±0.10

5.00±0.10

**VAGO
ALM-2203
MIYYWW
XXXX**

Top View

0.92±0.10

0.60

Side View

5.00

0.10

0.25

0.30

PIN #1 Identification
CHAMFER 0.43 x 45°

3.74 3.60

5.00

0.10

0.50

0.10

3.60

3.74

Bottom View

MI = Assembly Site Code
YY = Assembly Year
WW: Assembly Work Week
XXXX: Assembly Lot number

Note :
1. ALL DIMENSIONS ARE IN MILIMETERS
2. DIMENSIONS ARE INCLUSIVE OF PLATING
3. DIMNETIONS ARE INCLUSIVE OF MOLD FLASH AND METAL BURR
4. PIN 1 MARKING USING SOLID

For product information and a complete list of distributors, please go to our web site: **www.avagotech.com**

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T E C H N O L O G I E S