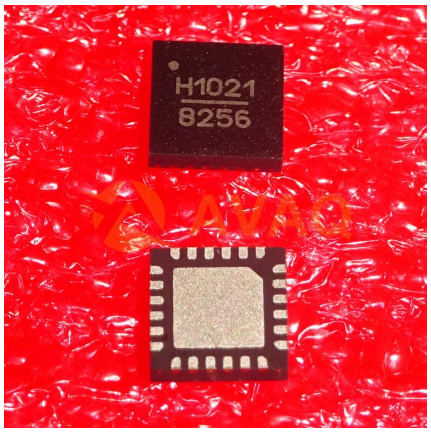
HMC1021LP4E

RF Detector 0MHz to 3900MHz 10dBm 24-Pin QFN EP T/R

Manufacturer:	Analog Devices, Inc
Package/Case:	QFN
Product Type:	RF Integrated Circuits
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Obsolete



Images are for reference only

Inquiry

General Description

The HMC1021LP4E is an RMS power detector with an integrated high bandwidth envelope detector. The RMS output is a temperature compensated, monotonic, linear-in-dB representation of real RF signal power, measured over an input sensing range of 70 dB.

The envelope detector provides an accurate voltage output which is linearly proportional to the envelope amplitude of the RF input signal for modulation bandwidths up to 150 MHz. The high bandwidth envelope detection of the HMC1021LP4E makes it ideal for detecting broadband and high crest factor RF signals commonly used in CDMA2000, WCDMA, and LTE systems. Additionally, the instantaneous envelope output can be used to create fast, excessive RF power protection, PA linearization, and efficiency enhancing envelopetracking PA implementations.

The HMC1021LP4E's RMS detector integration bandwidth is digitally programmable via input pins SCI1-4 over a range of more than 4 decades. This allows the user to dynamically set the operation bandwidth and also permits the detection of different types of modulations on the same platform.

The HMC1021LP4E features an internal op-amp at the RMS output stage, which accommodates slope and intercept adjustments and supports a wide range of applications.

Applications

Log –> Root-Mean-Square(RMS) Conversion
Tx/Rx Signal StrengthIndication (TSSI / RSSI)
RF Power Amplifier Efficiency Control
Receiver Automatic Gain Control
Transmitter Power Control
Envelope Tracking
PA Linearization

Key Features

Broadband Single-Ended RF Input

Input Dynamic Range:-62 dBm to +8 dBm

Envelope Detection Bandwidth:>150 MHz

Digitally ProgrammableIntegration Bandwidth

Power-Down Mode

24 Lead 4x4mm SMT Package: 16mm²

Application

Log –> Root-Mean-Square(RMS) Conversion

Tx/Rx Signal StrengthIndication (TSSI / RSSI)

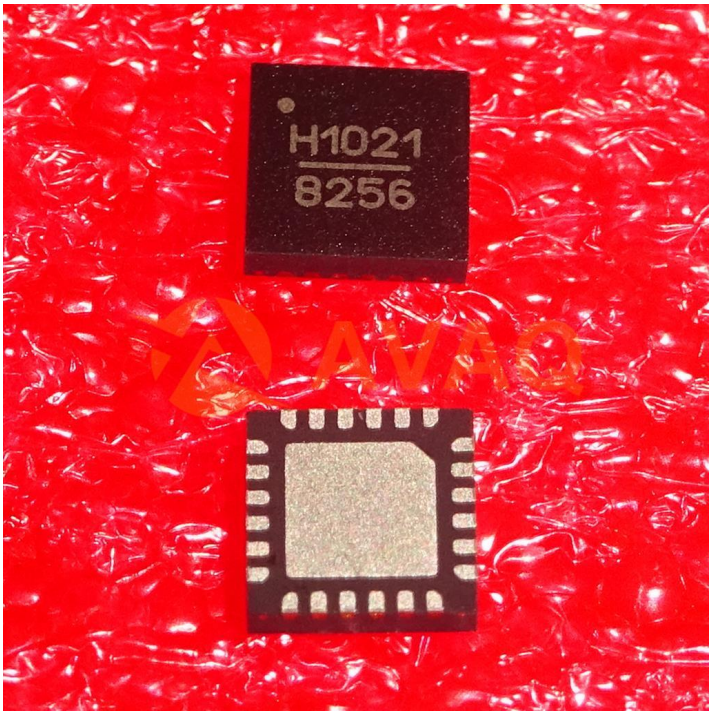
RF Power Amplifier Efficiency Control

Receiver Automatic Gain Control

Transmitter Power Control

Envelope Tracking

PA Linearization



Recommended For You

HMC624ALP4E

Analog Devices, Inc

QFN24

HMC952ALP5GE

Analog Devices, Inc

QFN

HMC361S8GE

Analog Devices, Inc

SOP-8

HMC253AQS24E

Analog Devices, Inc

QFN

HMC346MS8G

Analog Devices, Inc

MSOP8

HMC1119LP4ME

Analog Devices, Inc

QFN

HMC659LC5

Analog Devices, Inc

QFN

HMC909LP4E

Analog Devices, Inc

QFN

HMC564LC4

Analog Devices, Inc

QFN

HMC241AQS16E

Analog Devices, Inc

SSOP16

HMC424LP3E

Analog Devices, Inc

QFN

HMC662LP3E

Analog Devices, Inc

QFN

HMC8038LP4CE

Analog Devices, Inc

QFN16

HMC363S8G

Analog Devices, Inc

SOP8

HMC394LP4E

Analog Devices, Inc

QFN