
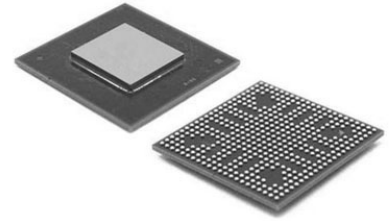


RF Detector 0.00005MHz to 6000MHz 16-Pin LFCSP EP T/R

Manufacturer:	<u>Analog Devices, Inc</u>
Package/Case:	LFCSP16
Product Type:	RF Integrated Circuits
RoHS:	RoHS Compliant/Lead free 
Lifecycle:	Active



Images are for reference only

Inquiry

General Description

The AD8363 is a true rms responding power detector that can be directly driven with a single-ended 50 Ω source. This feature makes the AD8363 frequency versatile by eliminating the need for a balun or any other form of external input tuning for operation up to 6 GHz.

The AD8363 provides an accurate power measurement, independent of waveform, for a variety of high frequency communication and instrumentation systems. Requiring only a single supply of 5 V and a few capacitors, it is easy to use and provides high measurement accuracy. The AD8363 can operate from arbitrarily low frequencies to 6 GHz and can accept inputs that have rms values from less than -50 dBm to at least 0 dBm, with large crest factors exceeding the requirements for accurate measurement of WiMAX, CDMA, W-CDMA, TD-SCDMA, multicarrier GSM, and LTE signals.

The AD8363 can determine the true power of a high frequency signal having a complex low frequency modulation envelope, or it can be used as a simple low frequency rms voltmeter. The high-pass corner generated by its internal offset-nulling loop can be lowered by a capacitor added on the CHPF pin.

Used as a power measurement device, VOUT is connected to VSET. The output is then proportional to the logarithm of the rms value of the input. The reading is presented directly in decibels and is conveniently scaled to 52 mV/dB, or approximately 1 V per decade; however, other slopes are easily arranged.

In controller mode, the voltage applied to VSET determines the power level required at the input to null the deviation from the setpoint. The output buffer can provide high load currents.

The AD8363 has 1.5 mW power consumption when powered down by a logic high applied to the TCM2/PWDN pin. It powers up within about 30 μs to its nominal operating current of 60 mA at 25°C. The AD8363 is available in a 4 mm × 4 mm 16-lead LFCSP for operation over the -40°C to +125°C temperature range.

A fully populated RoHS-compliant evaluation board is also available.

Applications:

- Power amplifier linearization/control loops
- Multi-Standard, Multi-Carrier Wireless Infrastructure (MCGSM, CDMA, WCDMA, TD-SCDMA, WiMAX, LTE)
- Transmitter power controls
- Transmitter signal strength indication (TSSI)
- RF instrumentation

Key Features

Application

Accurate rms-to-dc conversion from 50 Hz to 6 GHz	Power amplifier linearization/control loops
Single-ended input dynamic range of >50 dB	Multi-Standard, Multi-Carrier Wireless Infrastructure (MCGSM, CDMA, WCDMA, TD-SCDMA, WiMAX, LTE)
No balun or external input tuning required	
Waveform and modulation independent RF power detection	Transmitter power controls
Linear-in-decibels output, scaled: 52 mV/dB	Transmitter signal strength indication (TSSI)
Log conformance error: <±0.15 dB	RF instrumentation
Temperature stability: <±0.5 dB	
Voltage supply range: 4.5 V to 5.5 V	
Operating temperature range: -40°C to +125°C	
Power-down capability to 1.5 mW	
Small footprint, 4 mm × 4 mm, LFCSP	

Recommended For You

ADF4153BCPZ

Analog Devices, Inc
QFN

ADF5355BCPZ

Analog Devices, Inc
LFCSP32

AD8318ACPZ

Analog Devices, Inc
LFCSP

AD6620ASZ

Analog Devices, Inc
QFP

ADF4107BCPZ

Analog Devices, Inc
QFN

ADL5513ACPZ-R7

Analog Devices, Inc
LFCSP-16

AD8319ACPZ

Analog Devices, Inc
LFCSP

ADRF6755ACPZ

Analog Devices, Inc
QFN

ADL5535ARKZ-R7

Analog Devices, Inc
SOT89

AD608AR

Analog Devices, Inc
SOP16

ADF4107BRUZ-REEL7

Analog Devices, Inc
TSSOP16

ADRF6780ACPZN

Analog Devices, Inc
QFN

AD8317ACPZ

Analog Devices, Inc
LFCSP

AD608ARZ

Analog Devices, Inc
SOP16

AD8318ACPZ-REEL7

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LFCSP