

ADE7755ARSZ

Data Sheet

Energy Measurement 24-Pin SSOP Tube

Manufacturers <u>Analog Devices, Inc</u>

Package/Case SSOP-24

Product Type Integrated/Special Purpose A/D Converters; Energy Metering

ICs

RoHS Pb-free Halide free

Lifecycle



Images are for reference only

Please submit RFQ for ADE7755ARSZ or Email to us: sales@ovaga.com We will contact you in 12 hours.

RFO

General Description

The ADE7755 is a high accuracy electrical energy measurement IC. The part specifications surpass the accuracy requirements as quoted in the IEC 1036 standard.

The only analog circuitry used in the ADE7755 is in the ADCs and reference circuit. All other signal processing (for example, multiplication and filtering) is carried out in the digital domain. This approach provides superior stability and accuracy over extremes in environmental conditions and over time.

The ADE7755 supplies average active power information on the low frequency outputs, F1 and F2. These logic outputs can be used to directly drive an electromechanical counter or interface to an MCU. The CF logic output gives instantaneous active power information. This output is intended to be used for calibration purposes or for interfacing to an MCU.

The ADE7755 includes a power supply monitoring circuit on the AVDD supply pin. The ADE7755 remains in a reset condition until the supply voltage on AVDD reaches 4 V. If the supply falls below 4 V, the ADE7755 resets and no pulse is issued on F1, F2, and CF.

Internal phase matching circuitry ensures that the voltage and current channels are phase matched whether the HPF in Channel 1 is on or off. An internal no load threshold ensures that the ADE7755 does not exhibit any creep when there is no load.

The ADE7755 is available in a 24-lead SSOP package.

Features

High accuracy, surpasses 50 Hz/60 Hz IEC 687/IEC 1036

Less than 0.1% error over a dynamic range of 500 to 1

Supplies active power on the frequency outputs, F1 and F2

High frequency output CF is intended for calibration and supplies instantaneous active power

Synchronous CF and F1/F2 outputs

Logic output REVP provides information regarding the sign of the active power

Direct drive for electromechanical counters and 2-phase stepper motors (F1 and F2)

Programmable gain amplifier (PGA) in the current channel facilitates usage of small shunts and burden resistors

Proprietary ADCs and DSPs provide high accuracy over large variations in environmental conditions and time

On-chip power supply monitoring

On-chip creep protection (no load threshold)

On-chip reference $2.5 \text{ V} \pm 8\%$ (30 ppm/°C typical) with external overdrive capability

Single 5 V supply, low power (15 mW typical)

Low cost CMOS process







Related Products



ADP3336ARMZ-REEL7

Analog Devices, Inc MSOP-8



ADP3367ARZ

Analog Devices, Inc SOIC-8



ADP3330ARTZ3.3-RL7

Analog Devices, Inc SOT-23-6



ADR421ARZ

Analog Devices, Inc SOP-8



AD737JRZ

Analog Devices, Inc SOP-8



AD636JH

Analog Devices, Inc TO-100-10



ADR434BRZ

Analog Devices, Inc SOIC-8



ADR3412ARJZ-R7

Analog Devices, Inc SOT-23-6