ADE7751ARS

Energy Measurement 24-Pin SSOP

Manufacturer:	Analog Devices, Inc
Package/Case:	SSOP24
Product Type:	Discrete Semiconductor Modules
Lifecycle:	Obsolete

Images are for reference only

Inquiry

General Description

The ADE7751 is an accurate fault tolerant electrical energy measurement IC intended for use in two-wire distribution systems. It provides instantaneous and average real power based on line voltage and current. The part specifications surpass the accuracy requirements as quoted in the IEC1036 standard. The only analog circuitry used on the ADE7751 is in the ADCs and reference circuit. All other signal processing (e.g., 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 ADE7751 incorporates a novel fault detection scheme, which both warns of fault conditions and allows the ADE7751 to continue accurate billing during a fault event. The ADE7751 does this by continuously monitoring both the phase and neutral (return) currents. A fault is indicated when these currents differ by more than 12.5%, and billing is continued using the larger of the two currents. Gain calibration between channels is adjusted external to this device. The ADE7751, available in SSOP packages, is pin compatible with the AD7751. It has the same functionalities as the AD7751. The only difference is that its low frequency (F1/F2) and high frequency (CF) outputs are synchronized under all load conditions.

Key Features

Exceeds IEC61036 with less than 0.1% active energy error over dynamic range of 500:1 at 25ºC

Continuous monitoring of Phase and Neutral

Fault and Reverse Power Outputs Indicate Potential Miswiring

Pulse Output for Direct Interface to Stepper Motor Counter

Additional High Frequency Pulse Output for Fast Calibration

On chip Voltage Reference (2.4 V)

Low Power (15 mW typical)

Recommended For You

AD1816AJS

Analog Devices, Inc

QFP

ADE7754AR

Analog Devices, Inc

SOP24

AD7751AN

Analog Devices, Inc

DIP24

ADV7541BCBZ-P-2RL

Analog Devices, Inc

BGA

AD1892JR

Analog Devices, Inc

SOP

AD7816ARMZ-REEL7

Analog Devices, Inc

SOP8

AD7816ARMZ

Analog Devices, Inc

MSOP8

AD7751ARS

Analog Devices, Inc

SSOP24

AD7751AAN

Analog Devices, Inc

DIP

AD1895AYRSRL

Analog Devices, Inc

SSOP28

ADV7162KSZ220

Analog Devices, Inc

QFP160

ADV473KP66

Analog Devices, Inc

PLCC

AD9859YSV

Analog Devices, Inc

QFP

ADV7541BCBZ-2RL

Analog Devices, Inc

BGA

ADV473KP80

Analog Devices, Inc

PLCC