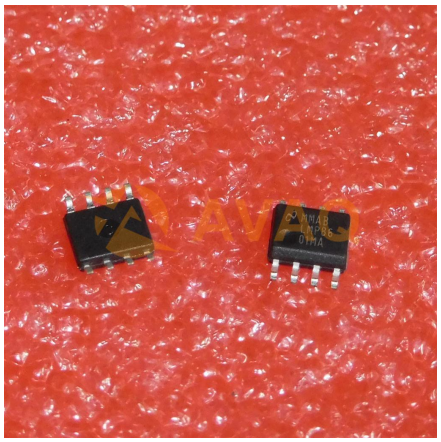
LMP8601MAX/NOPB

SP Amp Current Sense Amp Single 5.5V 8-Pin SOIC T/R

Manufacturer:	Texas Instruments, Inc
Package/Case:	SOP8
Product Type:	Amplifier ICs
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active



Images are for reference only

Inquiry

General Description

The LMP8601, LMP8602, LMP8603 (LMP860x) and LMP8601-Q1, LMP8602-Q1, LMP8603-Q1 (LMP860x-Q1) devices are fixed-gain, precision current-sense amplifiers (also referred to as current-shunt monitors). The input common-mode voltage range is –22 V to +60 V when operating from a single 5-V supply, or –4 V to +27 V with a 3.3-V supply. The LMP860x and LMP860x-Q1 are ideal parts for unidirectional and bidirectional current sensing applications. These devices have a precise gain of 20x (LPM8601, LPM8601-Q1), 50x (LPM8602, LPM8602-Q1), and 100x (LPM8603, LPM8603-Q1), and are adequate in most targeted applications to drive an ADC to full-scale value. The fixed gain is achieved in two separate stages: a preamplifier with a gain of 10x and an output stage buffer amplifier with a gain of 2x (LMP8601, LMP8601-Q1), 5x (LMP8602, LMP8602-Q1), or 10x (LMP8603, LMP8603-Q1). The path between the two stages is brought out on two pins to enable the option of an additional filter network or modifying the gain.

The offset input pin enables these devices for unidirectional or bidirectional single supply voltage current sensing.

The LMP860x-Q1 devices incorporate enhanced manufacturing and support processes for the automotive market and are compliant with the AEC-Q100 standard.

Key Features

Gain = 20x for LMP8601 and LMP8601-Q1

Gain = 50x for LMP8602 and LMP8602-Q1

Gain = 100x for LMP8603 and LMP8603-Q1

TCV_{OS}: 10 µV/°C Maximum

CMRR: 90-dB Minimum

Input Offset Voltage: 1-mV Maximum

CMVR at V_S = 3.3 V: –4 V to 27 V

CMVR at V_S = 5 V: –22 V to 60 V

Single-Supply Bidirectional Operation

All Minimum and Maximum Limits 100% Tested

Q1 Devices Qualified for Automotive Applications

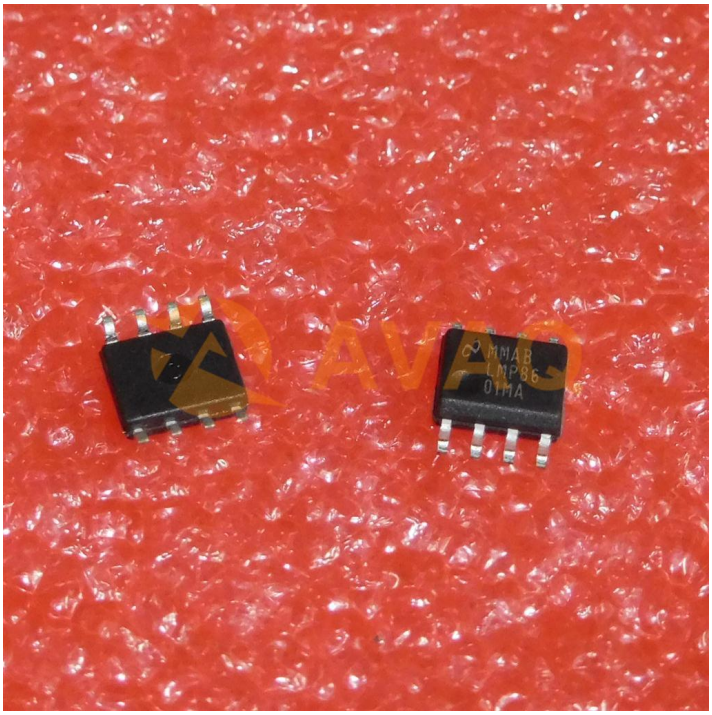
Q1 Devices ACE-Q100 Qualified With the Following Results:
Device Temperature Grade 1: –40°C to 125°C Ambient Operating Temperature Range

Device Temperature Grade 0: –40°C to 150°C (LMP8601EDRQ1 Only)

Device HBM ESD Classification Level 2
(3A on inputs)

Device CDM ESD Classification Level C6

Device MM ESD Classification Level M2



Recommended For You

LM311MX

Texas Instruments, Inc

SOP8

LMV7219M5

Texas Instruments, Inc

SOT23-5

LM348D

Texas Instruments, Inc

SOP-14

LM224N

Texas Instruments, Inc

DIP14

LM239J

Texas Instruments, Inc

CDIP14

LMV331M5

Texas Instruments, Inc

SOT23-5

LM393ADR

Texas Instruments, Inc

SOP8

LM293DR

Texas Instruments, Inc

SOP8

LM293D

Texas Instruments, Inc

SOP8

LMV824MTX

Texas Instruments, Inc

TSSOP

LMV358M

Texas Instruments, Inc

SOP8

LMV321M5

Texas Instruments, Inc

SOT23-5

LM741H

Texas Instruments, Inc

CAN8

LM193AH

Texas Instruments, Inc

CAN8

LM111H/NOPB

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CAN8