
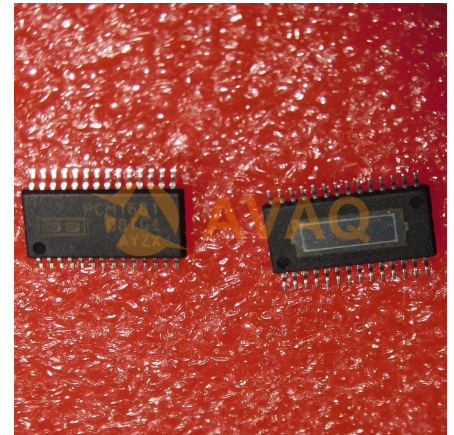


DAC 8-CH Delta-Sigma 24-bit 28-Pin HTSSOP EP T/R

Manufacturer:	Texas Instruments, Inc
Package/Case:	HTSSOP28
Product Type:	Data Conversion ICs
RoHS:	RoHS Compliant/Lead free 
Lifecycle:	Active



Images are for reference only

[Inquiry](#)

General Description

The PCM1681 and PCM1681-Q1 are CMOS monolithic integrated circuits which feature an eight-channel 24-bit audio digital-to-analog converter (DAC) and support circuitry in small 28-lead TSSOP PowerPAD packages. The DACs utilize Burr-Brown's enhanced multilevel delta-sigma ($\Delta\Sigma$) architecture to achieve excellent signal-to-noise performance and a high tolerance to clock jitter.

The PCM1681 and PCM1681-Q1 accept TDM (time-division multiplexed) format in addition to industry-standard audio data formats with 16- to 24-bit audio data width. Sampling rates up to 200 kHz are supported. The PCM1681 and PCM1681-Q1 provide a sub-set of user-programmable functions through a parallel control port, in addition to a full set of user-programmable functions through a serial control port, SPI, or I²C. The PCM1681 supports -40°C to $+85^{\circ}\text{C}$ for consumer grade applications and the PCM1681-Q1 supports -40°C to $+105^{\circ}\text{C}$ for automotive audio grade systems.

Key Features

Qualified for Automotive Applications: PCM1681-Q1

24-Bit Resolution

Analog Performance:
Dynamic Range: 105 dB Typical

SNR: 105 dB Typical

THD+N: 0.002% Typical

Full-Scale Output: 3.75 V_{pp} Typical

4×/8× Oversampling Interpolation Filter:
Stop-Band Attenuation: -57 dB

Pass-Band Ripple: ± 0.015 dB

Sampling Frequency: 5 kHz to 200 kHz

System Clock: 128 f_S, 192 f_S, 256 f_S, 384 f_S,
512 f_S, 768 f_S, or 1152 f_S with Autodetect

Zero Flags for Selectable Channel Combinations

Flexible Mode Control:

SPI /I²C Dual Mode for Serial Port

Parallel Hardware Control with 4 Functions

User-Programmable Functions (in SPI/I²C):

Flexible Audio Data Formats:

Right-Justified, I²S, Left-Justified, TDM,
DSP

16- and 24-Bit Audio Data

Digital Attenuation: Mode Selectable

0 dB to -63 dB, 0.5 dB/step

0 dB to -100 dB, 1 dB/step

Soft Mute

Digital De-Emphasis

Digital Filter Roll-Off: Sharp or Slow

Oversampling Mode

User-Programmable Functions (in H/W):

Flexible Audio Data Formats:

Right-Justified, I²S, Left-Justified, TDM

Soft Mute

Digital De-Emphasis

Oversampling Mode

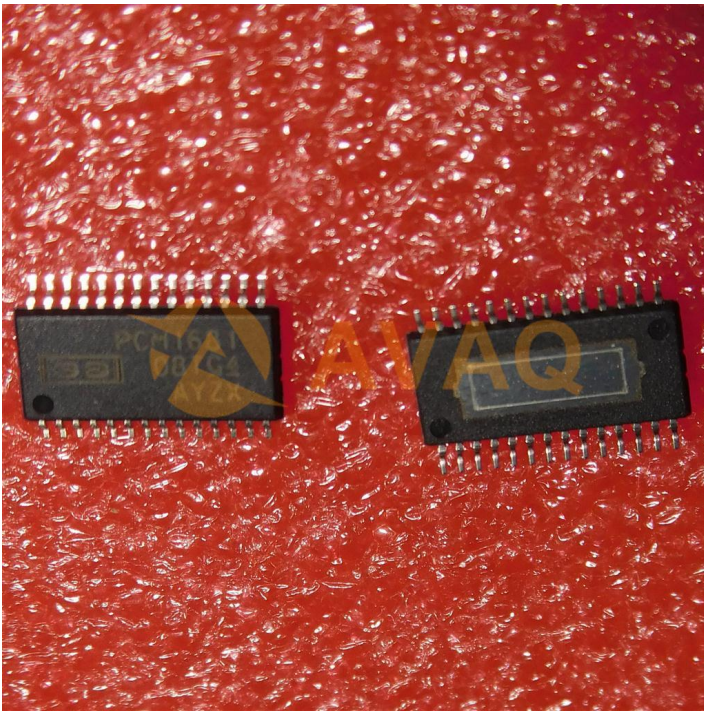
Power Supply Voltage: 5-V Analog, 3.3-V Digital

Package: 28-Lead HTSSOP PowerPAD

Operation Temperature Range:

-40°C to 85°C for Consumer Grade

-40°C to 105°C for Automotive Audio Grade



Recommended For You

PCMI798DB

Texas Instruments, Inc
SSOP28

PCMI863DBT

Texas Instruments, Inc
TSSOP30

PCMI789PW

Texas Instruments, Inc
TSSOP24

PCMI789PWR

Texas Instruments, Inc
TSSOP24

PCMI864DBTR

Texas Instruments, Inc
TSSOP30

PCMI793DB

Texas Instruments, Inc
SSOP

PCM56U

Texas Instruments, Inc
SOP16

PCM2704DBR

Texas Instruments, Inc
SSOP28

PCMI725U

Texas Instruments, Inc
SOP14

PCM5100APWR

Texas Instruments, Inc
TSSOP20

PCM9211PTR

Texas Instruments, Inc
LQFP48

PCMI808PW

Texas Instruments, Inc
TSSOP14

PCMI808PWR

Texas Instruments, Inc
TSSOP14

PCMI808QPWRQ1

Texas Instruments, Inc
TSSOP14

PCMI681TPWPRQ1

Texas Instruments, Inc
HTSSOP28