Differences Between PCM2902B and PCM2902

Consumer Audio Products

ABSTRACT

This letter summarizes the specification differences between the PCM2902B and the PCM2902 stereo audio codec devices from Texas Instruments. TI recommends that customers migrate to the PCM2902B in place of the PCM2902.

1 Summary of Descriptor and Data Sheet Specification Differences Between PCM2902B and PCM2902

Table 1 lists the differences between the PCM2902B and PCM2902 devices in terms of the descriptors reported to the PC during the plug-in sequence and the electrical specifications stated in the product data sheet.

Table 1. PCM2902B and PCM2902 Differences

Parameter		PCM2902BDB	PCM2902E
USB compliance(1)		0x0200 (USB2.0)	0x0110 (USB1.1)
Product ID(1)		0x29B2	0x2902
Alternate setting of Interface #01(1)		#00/01/02/03/04	#00/01/02/03/04/05/06
Supply current during Suspend Mode(2)		250 µA (typ)	210 µA (typ)
Power dissipation during Suspend Mode(2)		1.25 mW (typ)	1.05 mW (typ)
Internal power-supply voltage(2)	Min	3.1 V	3.25 V
	Typ	3.3 V	3.35 V

(1) Descriptor and specification change.
(2) Specification change only.

2 Changes from PCM2902 to PCM2902B

This section explains the changes to the PCM2902B from the PCM2902 that result in the differences summarized in Section 1.

1. **Change model name and applicable version in USB compliance.**
   Change the model name from *PCM2902E* to *PCM2902BDB*, and change the applicable version USB compliance to USB2.0 from USB1.1.
2. **Bug fix (three bugs listed in the data sheet errata document**, SLAZ036A**).**
   The bugs fixed are:
   a. Fix of over-/undersized packet sending in recording.
   b. Fix of 1-kHz noise at 16-kHz/16-bits/Mono mode in recording.
   c. Fix of one-sample interchannel phase error in recording and playback.
3. **Remove 8-bit Offset Binary format from playback data format**.
   Remove Alternate Setting #05 and #06 from Interface#01 for playback. That is, the PCM2902B removes 8-bit Offset Binary format from playback data format in available results.

4. **Relax S/PDIF input signal requirement**.

   The PCM2902B changes the S/PDIF input signal specification supported so that inconsistency between sampling rate information on channel status and sampling rate information of the S/PDIF signal itself can be accepted.

5. **Change the output voltage of the internal regulators**.

   Change the output voltage of the internal regulators to improve the temperature dependency of power dissipation during suspend mode.

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