

Main Features

- 10-bit Resolution
- 1.2 Gsps Guaranteed Conversion Rate, 1.4 Gsps Typical
- 4:1 Integrated Parallel MUX
- PECL/LVDS Differential Data and Clock Inputs
- Programmable DSP Clock
- 2 Vpp Differential Analog Output Swing
- Output Impedance: 50Ω Single-ended, 100Ω Differential
- Power Up Reset for Easy Synchronization of Several DACs
- Dual Power Supply : ±5V
- CBGA 255 Package for “C” and “V” Grades
- Evaluation Board TSEV86101G2BGL

Performance

- Broadband
 - NPR: 49 dB at $F_s = 1.2$ Gsps: 9.5 bits equivalent (20 MHz to 580 MHz Broadband Pattern, 25 MHz Notch Centered Around 250 MHz)
- Single Tone
 - SFDR Baseband:
 - 69 dBFS at $F_s = 1.2$ Gsps and $F_{out} = 25$ MHz
 - 69 dBFS at $F_s = 1.2$ Gsps and $F_{out} = 575$ MHz
 - SFDR in Third Nyquist Zone:
 - 63 dBFS at $F_s = 1.2$ Gsps and $F_{out} = 1650$ MHz with $F_{out} = F_s + 450$ MHz Image Frequency
- Multi-tone
 - Eight-tone IMD: 70 dBFS at $F_s = 1.2$ Gsps and 500 MHz Baseband
- Total Power Dissipation = 3.6W

Applications

- Direct Digital Synthesis (DDS) for Broadband Applications
- Automatic Test Equipment (ATE)
- Instrumentation: Arbitrary Waveform Generator Screening

Screening

- Temperature Range:
 - C grade: 0°C < T_c ; T_j < 90°C
 - V grade: -40°C < T_c ; T_j < 110°C

Description

The TS86101G2B is a 10-bit 1.2 Gsps DAC with an integrated 4:1 multiplexer, allowing easy interfacing with standard FPGAs. The enhanced linearity and Noise Power Ratio (NPR) performance (9.5 bits equivalent at 1.2 Gsps) and over 550 MHz instantaneous bandwidth make this product particularly suitable for high-end applications such as arbitrary waveform generators and broadband DDS systems.



**4:1 10-bit
1.2 Gsps
MUX-DAC**

TS86101G2B

Summary

For more information please
contact
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5343CS-BDC-08/04



This is a summary document. A complete document is not available at this time. For more information, please contact your local Atmel sales office.



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