

MAIN FEATURES

- 10-bit resolution.
- Conversion rate up to 1.2 GSPS.
- 4:1 parallel MUX.
- PECL/LVDS differential data and clock inputs.
- Programmable DSP clock
- Data Ready and Master Clock Inputs
- Data Ready and Master Clock monitoring Outputs
- Differential analog output swing 1 Vpp.
- Internal 50Ω output load (connected to analog ground).
- power supply :+/- 5V
- CI-CGA-255 cavity up package and die form.

PERFORMANCE

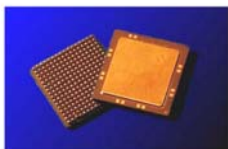
- Single tone SFDR = -62 dB_C
@ Fs = 1.2 GSPS and Fout = 10 MHz @ 0dB FS (Full Scale).
- Single tone SFDR = -56dB_C.
@ Fs = 1.2 GSPS and Fout = 150 MHz @ 0dB FS.
- Single tone SFDR = -51dB_C.
@ Fs = 1.2 GSPS and Fout = 575 MHz @ 0dB FS.
- Multi-tone SFDR (eight tone IMD) = -46dB_C
@ Fs = 1.2 GSPS and 500MHz Baseband (-18dB FS each tone).
- IF Sampling conditions (Second Nyquist Zone):
Single tone SFDR = TBD @ Fs = 1.2GSPS and Fout = 795 MHz
- NPR at -13.1dB FS peak to rms optimum loading factor: TBD
- Output VSWR (packaged device): 1.15 from DC to 400MHz
1.2 from 400MHz to 2GHz
- Deviation from sinX / X: -0.5dB @ Fout = 575MHz (50Ω // 2pF output load)
- Max power dissipation = 3 W.
- Low glitch energy : TBD.
- Absolute gain error: TBD.
- 100 kRAD total dose expected (TBC).

APPLICATIONS

- Automatic test equipment (ATE)..
- FF HSSR.
- Direct digital synthesis (DSS) application.
- High speed modem for satellite.
- Instrumentation : arbitrary waveform generator.

DESCRIPTION

- The TS86101G2 is a 10 bit Digital to Analog Converter 4:1 MUXDAC for wideband applications. It offers an SFDR of 51dB over 500 MHz output band of interest at 1.2 Gsps. For a 500 MHz multichannel composite signal, this device features an SFDR of 50dB @ -14 dBFS together with 0.5dB deviation from sinx/x characteristics.
- The architecture is fully differential
- The TS86101G2 is fabricated with an high speed bipolar technology.



CI-CGA 255 cavity up packaged device



MUXDAC 10-bit 1.2 Gsps Converter Demonstrator

TS86101G2

Summary

Caution: This is a preliminary Data Sheet. The information provided herein is believed to be reliable and is given for information only. ATMEL reserves the right to make changes at any time without notice.

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Note: This is a summary Document. A complete document is available under NDA. For more information, please contact your local Atmel Sales Office.