

ADVANCE INFORMATION

CGY2170XHV

6-bit X-Band Core Chip

DESCRIPTION

The CGY2170XUH is a high performance QFN packaged T/R 6-bit Core Chip operating in X-band. It includes a 6-bit phase shifter, a 6-bit attenuator, and switches. It has a phase shifting range of 360° and a gain setting range of 32 dB. It covers the frequency range from 8 to 12 GHz and can be used in Radar, Telecommunication and Instrumentation applications.

The on-chip control logic with serial input register minimizes the number of bonding pads and greatly simplifies the interfacing to this device.

This die is manufactured using OMMIC's 0.18 μm gate length PHEMT Technology ED02AH. This technology has been evaluated for Space applications and is on the European Preferred Parts List of the European Space Agency.

The device is available in 6x6 mm² HTCC QFN package.

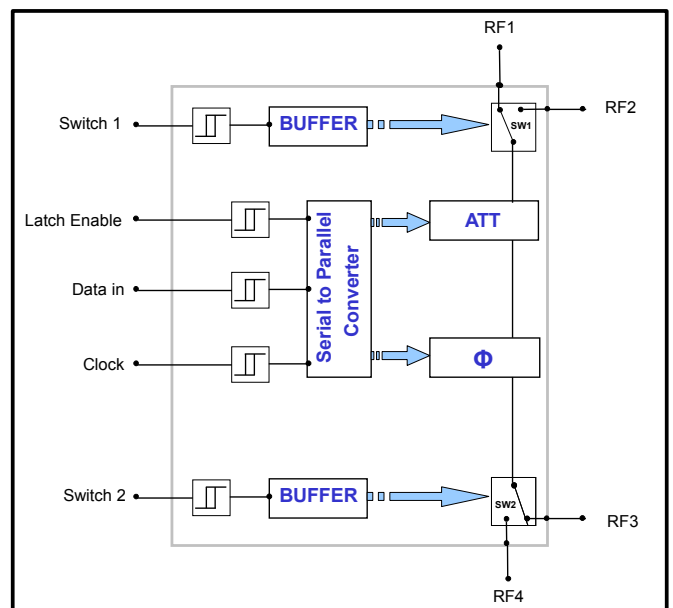
APPLICATIONS

- ▶ Radar
- ▶ Telecommunication
- ▶ Instrumentation



FEATURES

- ▶ Operating Range : 8 GHz to 12 GHz
- ▶ Insertion Loss : 15 dB @ 10 GHz
- ▶ RMS Phase Error $\approx 3.0^\circ$ @ 10 GHz
- ▶ RMS Amplitude Error ≈ 0.8 dB @ 10 GHz
- ▶ Input P1dB $\approx +20$ dBm
- ▶ S_{11} & $S_{22} < -10$ dB @ 10 GHz (all states)
- ▶ Total Power Consumption ≈ 40 mW
- ▶ 6x6 mm² 40 leads HTCC QFN package
- ▶ Tested, Inspected Known Good Die (KGD)



Block Diagram of the CGY2170XUH