HMC1050

3Vpp Optical Modulator Driver / Wideband Amplifier, DC - 30 GHz

No Image Available

Product Details

Request Data Sheet
ECCN: EAR99

Quality & Reliability

Waffle-Pak & Gel-Pak

Press & Media

Featured Article

Life Cycle Status

Production, Recommended for New Designs

Data Rate (Gbps)	Function	Gain (dB)	Group Delay Variation (ps)	Additive Jitter (ps)	Output Voltage Max. (Vp-p)	Package
32	3Vpp Optical Modulator Driver, with Peak Detect	14	±5	0.3	3	Chip

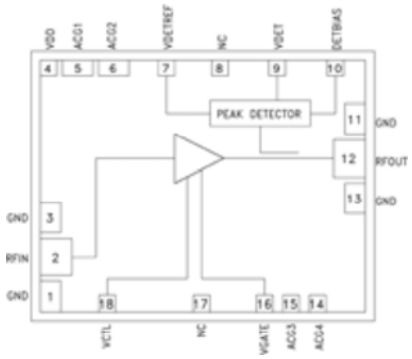
Features

- Low DC Power Dissipation, 0.36W for 2.8Vpp swing @ 6V supply
- Integrated peak-detect function
- 14.8 dB Gain @ 16 GHz
- +15 dBm typical saturated output power
- Low Additive RMS Jitter, <300 fsec
- Rise and Fall Times 12 ps
- Small Die Size: 1.71 x 1.35 x 0.10 mm

Typical Applications

- Up to 32Gbps optical modulator driver
- Test and Measurement Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Up to 32Gbps pre-driver or receiver block

Functional Diagram



General Description

The HMC1050 is a GaAs MMIC PHEMT Distributed Amplifier die which operates between DC and 30 GHz. The amplifier provides 14 dB of gain, and +14 dBm of output power at 1 dB gain compression. HMC1050 has a wide supply (Vdd) operating range from +5V to +7V.

Integrated Peak-Detect Function enables the output power stability for calibration and field monitoring. The HMC1050 amplifier I/Os are internally matched to 50 Ohms facilitating integration into Mutli-Chip-Modules (MCMs). 2.80 Vpp output voltage swing can be obtained with 500mVpp input when stimulated with 32Gbps 2^{31}-1 PR BS NRZ data.

The HMC1050 is suitable for a variety of wideband electronic warfare systems and test & measurement applications including NRZ applications up to 32 Gbps. The HMC1050 is capable of driving Mach- Zehnder optical modulator with electrical NRZ data. In addition, the HMC1050 may also be used as a predriver or a receive gain block.

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