

Fact Sheet

Military Semiconductor Products

THS4011M / 5962-9959301QxA

SGYV081, May 2000

200-MHZ LOW-DISTORTION HIGH-SPEED AMPLIFIER

HIGHLIGHTS

The THS4011 is a very high speed, voltage feedback, single amplifier ideal for a wide range of applications. The device offers very good AC performance with 200-MHz bandwidth, 400-V/ μ s slew rate and 37-ns settling time (0.1%). This amplifier has a high output drive capability of 115 mA and draws only 7.8-mA supply current. For applications requiring low distortion, the THS4011 operates with a total harmonic distortion (THD) of -80 dB at $f = 1$ MHz. For video applications, the THS4011 offers 0.1 dB gain flatness to 70 MHz, 0.006% differential gain error and 0.01° differential phase error.

KEY FEATURES/BENEFITS

Very High Speed

- 200 MHz Bandwidth ($G = 1$, -3 dB)
- 400 V/ μ s Slew Rate
- 37 ns Settling Time (0.1%)

Very Low Distortion

- THD = -80 dBc ($f = 1$ MHz, $R_L = 150$)
- 115 mA Output Current Drive (Typical)
- 7.5 nV/ $\sqrt{\text{Hz}}$ Voltage Noise

Excellent Video Performance

- 70 MHz Bandwidth (0.1 dB, $G = 1$)
- 0.006% Differential Gain Error
- 0.01° Differential Phase Error
- ± 5 V to ± 15 V Supply Voltage

DIE SIZE

The current die has a size of 40 mils x 39 mils.

TECHNOLOGY

- BICOM-1
- ESD level: 1 kV

PACKAGING

Package Option: 8-pin Ceramic Dual in Line Package (JG)
20-pin Leadless Ceramic Chip Carrier (FK)

POWER DISSIPATION

The table below shows modeled data. This data can be used for approximating system thermal characteristics:

Package Thermal Data

Package	$R_{\theta JA}$	$R_{\theta JC}$
8-Pin DIP	180°C/W	14.52°C/W
20-Pin LCC	65°C/W*	22°C/W*

*modeled data

Note: much better thermal impedances can be achieved by using air flow or by increasing metal backplane thickness or trace area in the Printed Circuit Board (PCB) that is used.

PROCESS/PERFORMANCE OPTIONS

The THS4011MxxB are processed to MIL-PRF-38535. The DSCC Standard Microcircuit Drawings (SMD) for this device is given below.

DSCC SMD

TI Parent	DSCC SMD
THS4011MFKB	5962-9959301Q2A
THS4011MJGB	5962-9959301QPA
THS4011MJG	N/A

SUPPORT

For additional information on this and other Mixed Signal/Analog Products visit our Mixed Signal home page at:

http://www.ti.com/sc/docs/military/product/mix_sig/mixsig_1.htm

Additional information regarding this product is available by calling the Texas Instruments Product Information Center (PIC during normal business hours (CST/CDT). For European PIC information visit <http://www.ti.com/sc/docs/pic/home.htm> or call one of the numbers listed below.

SUPPORT LITERATURE

You can access data sheets via TI's home page on the internet (<http://www.ti.com>) or reference the literature number SLOS216B when contacting the PIC.

Product Information Center

North America

Telephone # - 972-644-5580 (English)

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