

DATA SHEET

SKY73009: 400–3000 MHz Direct Quadrature Demodulator

Applications

- PCS, DCS, GSM/GPRS, and EDGE receivers
- Third Generation (3G) wireless communications
- Power amplifier feedback/linearization
- Wireless Local Loops (WLLs)
- Wireless Local Area Networks (WLANs)

Features

- High IIP2 and IIP3
- Wideband RF input frequency range (400 to 3000 MHz)
- Wideband LO input frequency range (400 to 3000 MHz)
- Integrated LO balun
- Integrated LO amplifier
- On-chip I/Q phase splitter
- Differential IF output supports direct interface to A/D circuitry
- AM demodulation immunity
- Single 3.0 V supply
- RFLGA™ (32 pin, 5 x 5 mm) Pb-free package (MSL3, 260 °C per JEDEC J-STD-020)

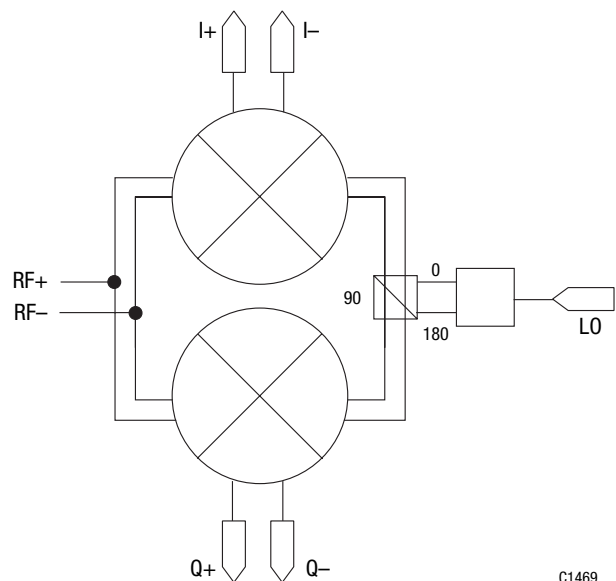
Description

Skyworks SKY73009 is an integrated, broadband, high-dynamic range quadrature demodulator for use in various wireless communication system applications. The SKY73009 can perform quadrature demodulation of RF input signals from 400 to 3000 MHz directly to baseband frequencies. The quadrature outputs are differential and can be directly connected to most commonly available A/D converters.

The high dynamic range and second order Input Intercept Point (IIP2) value of the SKY73009 make it ideal for use in direct conversion and low Intermediate Frequency (IF) receivers.

A functional block diagram for the SKY73009 is shown in Figure 1. Recommended operating conditions are provided in Table 1. Package dimensions for the 5 x 5 mm RF Land Grid Array (RFLGA) are shown in Figure 2.

NEW Skyworks offers lead (Pb)-free, RoHS (Restriction of Hazardous Substances)-compliant packaging.



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Figure 1. SKY73009 Functional Block Diagram

Table 1. SKY73009 Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Units
3 V supply voltage	V_{CC}	2.7	3	3.3	V
Current consumption	I_{CC}		75		mA
Operating case temperature	T_{OPR}	-40		+85	°C

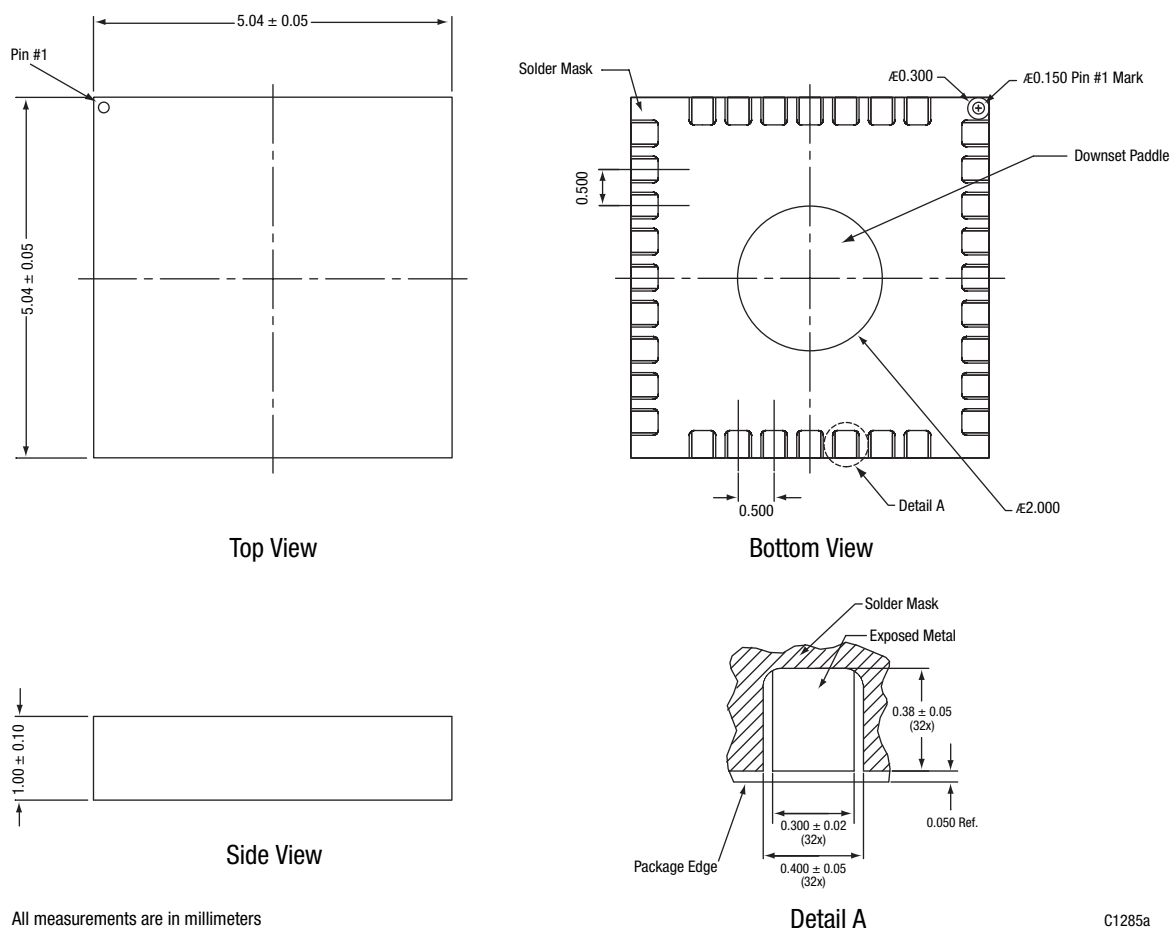


Figure 2. SKY73009 32-Pin RFLGA Package Dimensions

Ordering Information

Model Name	Manufacturing Part Number	Evaluation Kit Part Number
SKY73009 400-3000 MHz Direct Quadrature Modulator	SKY73009-11 (Pb-free package)	TW11-D982 (tuned for 800 to 1000 MHz) TW11-D992 (tuned for 1800 to 2000 MHz) TW12-D275 (custom frequency board)