Product Overview

NB3RL02: Clock Fanout Buffer, 2-Channel, Low Phase Noise

For complete documentation, see the data sheet

Product Description

The NB3RL02 is a low-skew, low jitter 1:2 clock fan-out buffer, ideal for use in portable end-equipment, such as mobile phones. With integrated LDO and output control circuitry. The MCLK_IN pin has an AC coupling capacitor and will directly accept a square or sine wave clock input, such as a temperature compensated crystal oscillator (TCXO). The minimum acceptable input amplitude of the sine wave is 300 mV peak-to-peak. The two clock outputs are enabled by control inputs CLK_REQ1 and CLK_REQ2. The NB3RL02 has an integrated Low-Drop-Out (LDO) voltage regulator which accepts input voltages from 2.3 V to 5.5 V and outputs 1.8 V at Iout = 50 mA. This 1.8 V supply is externally available to provide regulated power to peripheral devices, such as a TCXO. The adaptive clock output buffers offer controlled slew-rate over a wide capacitive loading range which minimizes EMI emissions, maintains signal integrity, and minimizes ringing caused by signal reflections on the clock distribution lines. The NB3RL02 is offered in a 0.4 mm pitch wafer-level-chip-scale (WLCS) package (0.77 mm x 1.57 mm) and is optimized for very low standby current consumption.

Features

- Low Additive Noise: -149 dBc/Hz at 10 kHz Offset Phase Noise
- Regulated 1.8 V Output Supply Available for External Clock Source, ie. TCX0
- Ultra-Small Package: 8-ball: 0.4 mm Pitch WLCS (0.77 mm x 1.57 mm)
- ESD Performance Exceeds JESD 22: 2000 V Human Body Model

Applications

- Wireless LAN
- FM Radio
- WiMAX
- Wireless BT

End Products

- Cellular Phones
- Global Positioning Systems (GPS)

Part Electrical Specifications

Product	Compliance	Status	Type	Channels	Input / Output Ratio	Input Level	Output Level	V_{CC} Typ (V)	t_{Jitter} RMS Typ (ps)	$t_{skew(o-o)}$ Max (ps)	t_{pd} Typ (ns)	t_R & t_F Max (ps)	f_{max} Clock Typ (MHz)	f_{max} Data Typ (Mbps)	Package Type
NB3RL02FCT2G	Pb-free Halide free	Active	Buffer	2	1:2	Crystal Sine Wave Square Wave	Square Wave	2.5 3.3 5	0.37	500	10 12	5000	26		WLCSP-8

For more information please contact your local sales support at www.onsemi.com

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