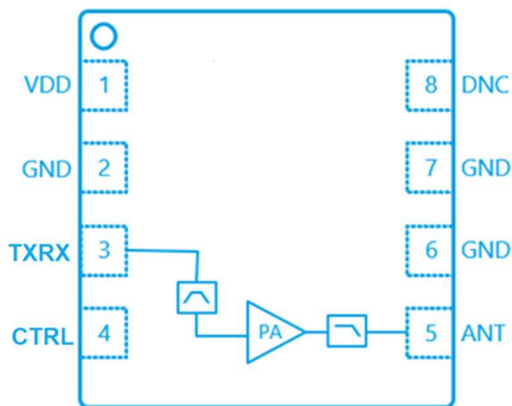


### Description

The 8TR7201 is a RF Power Amplifier (PA) intended for 802.15.4 ZigBee™/ Thread, Bluetooth® Smart, and proprietary ISM protocol wireless systems in the 2.4GHz band. It is optimized for battery-operated applications with enhanced efficiency. The comes integrated with input/output matching circuitry in a 2.0 x 2.0 x 0.45mm 8-pin DFN package.

### Block Diagram



### Logic Table

CTRL	Operational Mode
0	Shutdown Mode
1	PA Mode

### Key Specifications

RF		General	
Parameter	Typical	Parameter	Typical
Frequency Range	2.4 - 2.5 GHz	Supply Voltage	1.5 - 3.6 V
Large-Signal Gain	22 dB	Quiescent Current	25 mA
Max Output Power	+21 dBm	Shutdown Current	1 uA
Supply Current At +20dBm	90 mA	ESD (HBM)	3000 V
2 <sup>nd</sup> /3 <sup>rd</sup> Harmonics at +20dBm	-47 dBm / MHz*	Temperature Range	-40 to 125°C

At 3.3V Vdd unless otherwise specified. Zs = ZL = 50Ω

\*With the use of recommended external pi filter.

### Applications

- IoT (Internet of Things) / M2M Connectivity
- 802.15.4 Zigbee, RF4CE, Proprietary ISM
- Bluetooth® Low Energy (BLE) Mesh Networks
- Smart Home Hubs and Gateways
- Consumer Electronics, Smart Appliances
- Smart Lighting, Smart Metering
- Drone, Toy, Media Remote Controller
- Industrial Wireless Sensor Networks
- Home, Industrial, Factory Automation
- Wireless Sensor Nodes & Networks
- Wireless Audio & Video

### Features

- 2.4 – 2.5 GHz Frequency Range
- Low TX Current for direct battery connection
- 90mA at +20dBm Output Power at 3.3 V
- Integrated PA with Input/Output Matching Circuitry
- 1-Bit Control between Bypass and PA Modes
- Delivers up to +21dBm Output Power at 3.3V
- 3.3V Nominal Operating Voltage w/ extended voltage capability from 1.5V – 3.6V Operation
- 2.0 x 2.0 x (0.5 mm max) Package; 0.5mm Pitch
- -40°C to 125°C Temperature Range