Functional description

The TX3 transmitter module uses a frequency modulated crystal-locked PLL and operates between 2.2V and 10V at a current of 10mA nominal. At 3V supply it delivers nominally 0dBm (1mW) RF output. The SIL style TX3 measures 32 x 12 x 3.8 mm excluding the pins.

The RX3 module is a single conversion FM superhet receiver capable of handling data rates of up to 50kb/s. It will operate from a supply of 2.7V to 13V and draws 9.5mA when receiving. The RX3 features a fast power-up time for effective duty cycle power saving and a signal strength (RSSI) output with 75dB of range. Full screening and a SAW front-end filter give good immunity to interference. The SIL style RX3 measures 48 x 17.5 x 4.5 mm excluding the pins.

TX3 transmitter

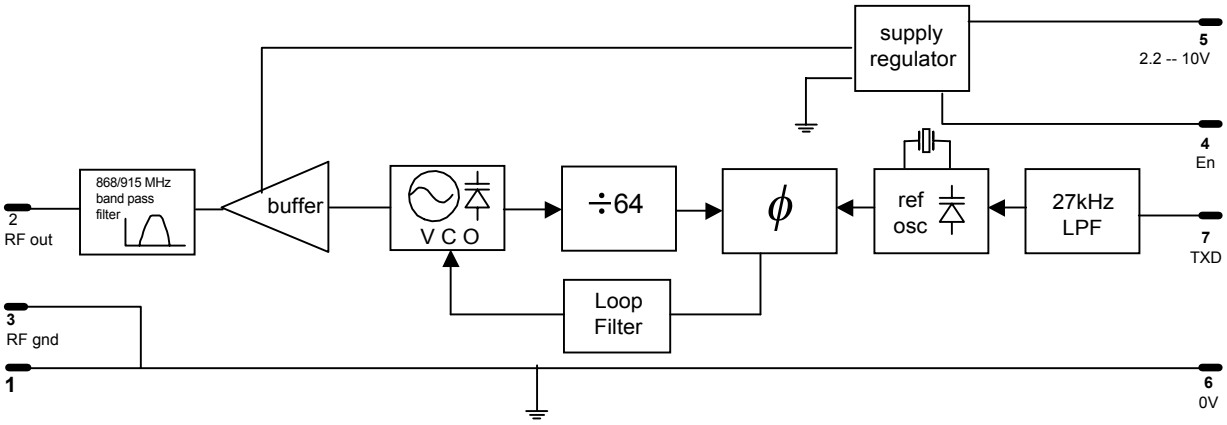

Fig 1 :TX3 block diagram

Pin description

RF GND *(pins 1&3)*
RF ground, internally connected to the module screen and pin 6 (0V). These pins should be directly connected to the RF return path - e.g. coax braid, main PCB ground plane etc.

RF OUT *(pin 2)*
50Ω RF output to the antenna. Internally DC-isolated. See antenna section of apps notes for details of suitable antennas.

En *(pin 4)*
Tx enable. <0.4V or o/c shuts down module (current <1μA). >2V enables the transmitter. Impedance ~2MΩ.

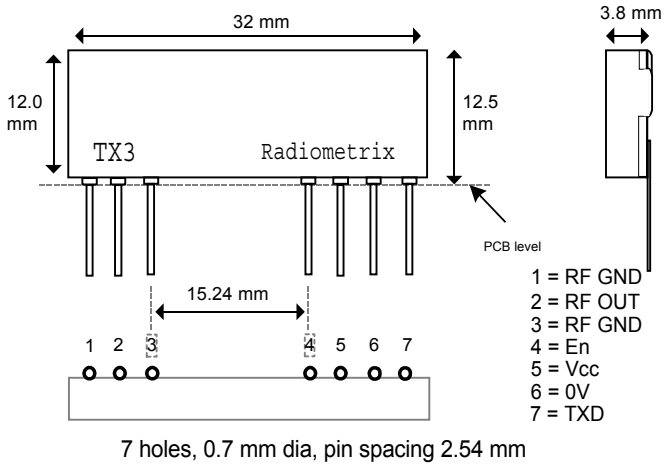

Fig2: TX3 physical dimensions

Vcc *(pin 5)*
+2.2V to +10V DC supply. Max ripple content $0.1V_{P-P}$. Decoupling is not generally required.

0V *(pin 6)*
DC supply ground. Internally connected to pins 1 & 3 and module screen.

TXD *(pin 7)*
DC-coupled modulation input. Accepts serial digital data at 0V to 3V levels.
See applications notes for suggested drive methods. Input impedance 150kΩ nominal.