

### MC13233 TRANSMITTER BLOCK DIAGRAM

The MC13233 transmitter block diagram is shown in Figure 1.

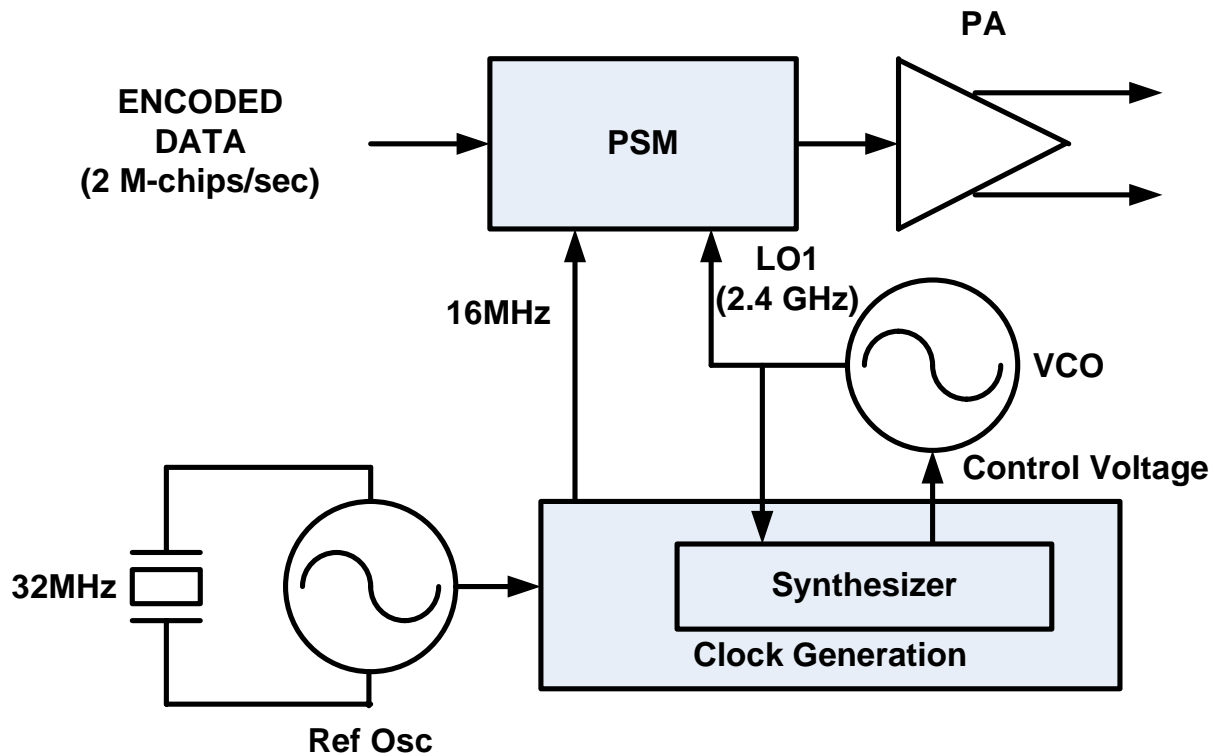


Figure 1. MC13233 Transmitter Block Diagram

The transmitter is compatible with the IEEE 802.15.4 Standard 2450 MHz band:

- Modulation is 16-ary quasi-orthogonal modulation using 0-QPSK
- The LO1 frequency has a tuning range of 2400-2483.5 MHz
- Standard usage for the radio includes 16 channels (using 5 MHz channel spacing) within the tuning range:
  1. Channel 11 - 2405 MHz
  2. Channel 12 - 2410 MHz
  3. Channel 13 - 2415 MHz
  4. Channel 14 - 2420 MHz
  5. Channel 15 - 2425 MHz
  6. Channel 16 - 2430 MHz
  7. Channel 17 - 2435 MHz
  8. Channel 18 - 2440 MHz
  9. Channel 19 - 2445 MHz

- 10. Channel 20 - 2450 MHz
- 11. Channel 21 - 2455 MHz
- 12. Channel 22 - 2460 MHz
- 13. Channel 23 - 2465 MHz
- 14. Channel 24 - 2470 MHz
- 15. Channel 25 - 2475 MHz
- 16. Channel 26 - 2480 MHz
- Logic clock to the Phase Shift Modulator (PSM) is 16 MHz
- Digital encoded data is presented to the PSM as “chips” (logic levels) at the rate of 2 mega-chips/sec.
- All clocks are derived from a 32 MHz crystal reference oscillator.