

# 27MHz RF Transceiver W55RF027



## Target Specifications of W55RF027:

- Frequency Band: 26.96 to 27.28 MHz
- Channel Number: 1 channel
- Operating Center Frequency: Selectable by external reference crystal frequency
- Crystal Source: 27.00 ~ 27.25 MHz fundamental type; 100ppm; CL=16pf  
Recommend Frequency: 27.00MHz and 27.205MHz
- Modulation Scheme: On-Off Keyed (OOK)
- Modulation Duty Cycle: 20% ~ 80%
- Transmission Data Rate: up to 5Kbps
- Output Power: -15/+5 dBm: 2 step selectable with die bonding option
- Receiver Sensitivity: -90 dBm (typical) @ BER < 10<sup>-5</sup>  
(assume: 20-meter open-field, 15dB antenna loss, 15dB fading margin)
- Power Supply Voltage Range: 3.0V to 5.5 VDC
- Internal Regulator Operation Voltage: 2.8 V
- Current Consumption: TX mode: ≤ 15mA  
RX mode: 5 mA (typical)  
Standby mode: ≤ 5 μA
- Switching Time: RX to TX: 1 msec (typical)  
TX to RX: 1 msec (typical)
- Oscillator Turn-on Time: 3 msec (typical)
- AGC Attack/Decay time: 10:1
- Operating Mode: Two-way half duplex
- Interface Voltage Level: Direct CMOS logic interface to base-band chip
- Antenna Port Impedance: 50 Ω (with matched), internally AC-coupled
- Operating Temperature: 0 ~ 60 °C
- Package: COB
- Reference design PC board Size: 20x20mm<sup>2</sup>
- Spurious Emission: FCC part 15 class B and 15.227 / ETSI 300 220-1 compliance
- Minimize External Component: Inductor & capacitor only