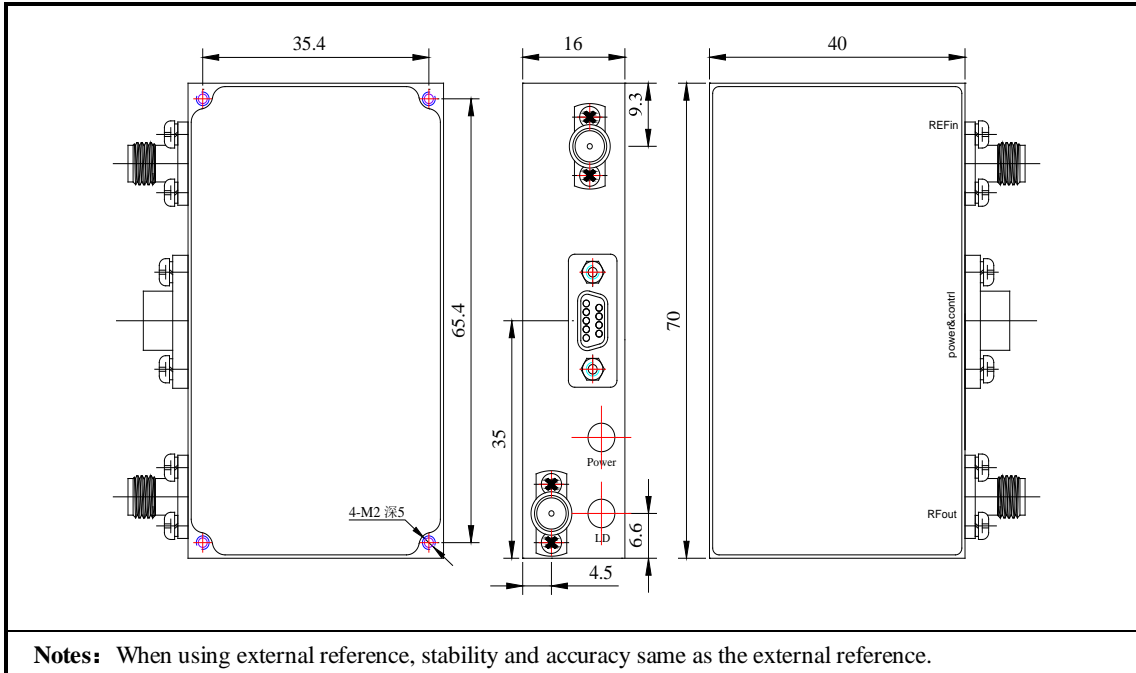


Fast Hopping Frequency Synthesizer



| Description: | | | | | |
|---|----------------|---|-------------|--------|-------------|
| 1. Internal 100MHz TCXO; | | | | | |
| 2. Detection options: internal and external reference for adaptive switching; | | | | | |
| 3. Choose a different VCO to handle different frequency and bandwidth outputs; | | | | | |
| 4. $F_{OUT}=N \times F_{REF}$, applicable to large step fast hopping source or point frequency output. | | | | | |
| Frequency range (MHz) | | 1200~20000 | | | |
| Step (MHz) | | 100 (1.2GHz~7GHz) | | | |
| | | 200 (7GHz~14GHz) | | | |
| | | 400 (14GHz~20GHz) | | | |
| Reference frequency (MHz) | | 100 | | | |
| Reference level (dBm) | | 0~10 | | | |
| Frequency switching (uS) | | ≤ 2 (Option: 1uS) | | | |
| Output level (dBm) | | $\geq +13$ | | | |
| Output level flatness (dB) | | ± 2 | | | |
| Frequency temperature stability | | $\pm 3 \times 10^{-7}$ (Same as external reference) | | | |
| Frequency accuracy | | $\pm 3 \times 10^{-7}$ (Same as external reference) | | | |
| Spurious (dBc) | | ≤ -70 (Typical) | | | |
| Harmonics (dBc) | | ≤ -10 (20% output bandwidth: ≤ -30) | | | |
| Phase Noise | dBc/Hz@100Hz | @5GHz | ≤ -81 | @10GHz | ≤ -75 |
| | dBc/Hz@1kHz | | ≤ -105 | | ≤ -98 |
| | dBc/Hz@10kHz | | ≤ -108 | | ≤ -102 |
| | dBc/Hz@100k Hz | | ≤ -108 | | ≤ -102 |
| | dBc/Hz@1MHz | | ≤ -108 | | ≤ -102 |
| 100M Reference Phase Noise | dBc/Hz@100Hz | -125 | | | |
| | dBc/Hz@1kHz | -150 | | | |
| | dBc/Hz@10kHz | -160 | | | |
| | dBc/Hz@100k Hz | -160 | | | |
| | dBc/Hz@1MHz | -160 | | | |
| Power supply (V/mA) | | +12/400 | | | |
| Connector | | RF connector: SMA-KFD Control and power connector: J30J-9ZKP/ J30J-25ZKP | | | |
| Dimensions | | 70×40×16mm | | | |
| Control | | Parallel | | | |
| Operating temperature (°C) | | -40~+70 | | | |
| Storage temperature (°C) | | -55~+85 | | | |



DB9/J30J-9 Common Interface Definition (SPI and serial control)

| Pin number | Pin definition | Function | Pin number | Pin definition | Function |
|------------|----------------|------------------------------|------------|----------------|-----------|
| 1 | U/S | Communication mode selection | 6 | SCLK | SPI Clock |
| 2 | TXD | Serial transmission | 7 | MOSI | SPI DATA |
| 3 | RXD | Serial receive | 8 | GND | GND |
| 4 | NSS | SPI LE | 9 | +12V | Power |
| 5 | MISO | SPI DATA | | | |

Notes: When the U / S is set to high, the system is serial communication, U / S is set to low, the system for the SPI communication; this pin is floating when the high.