Specifications of LO/Clock box Prototype for BPM 14-October-2016

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| --- | --- | --- | --- |
| **Parameter** | **704 MHz systems** | **352 MHz systems** | **Notes** |
| **LO OUTPUT** |  |
| No. Outputs | 6 |  |
| Power Level | 10 dBm +/- 1 dB (sine) |  |
| Return Loss | > 14 dB (50 ohm) |  |
| LO frequency range | 330.196875 MHz (352.21x15÷16)374.223125 MHz?? (352.21x17÷16) | 682.406875 MHz(704.42\*31÷32)726.433125 MHz(704.42\*33÷32) | Other frequencies are possible, depending on reference and VCO divide ratios |
| SSB Phase Noise, L(f) (dBc/Hz) | -94 @ 10 Hz-106 @ 100 Hz-116 @ 1 kHz-123 @ 10 kHz-141 @ 100 kHz-163 @ 1 MHz-170 @ 10 MHz | -88 @ 10 Hz-100 @ 100 Hz-110 @ 1 kHz-117 @ 10 kHz-135 @ 100 kHz-160 @ 1 MHz-170 @ 10 MHz  | Tentative values |
| Jitter/Integrated phase noise, additive | 200 fsec rms (10 Hz to 1 MHz) | Guaranteed |
| Harmonics | < -50 dBc (<= 3xLO)< -60 dBc for (> 3xLO) |  |
| Spurious | < -80 dBc (> 1 MHz)< 10 dB above PN limits (10 kHz-1 MHz)< 5 dB above PN limits (<=10 kHz) |  |
| **REFERENCE INPUT** |  |
| Frequency | 352.210 MHz (or 704.420 MHz) | 704.420 MHz(or 352.21 MHz) |  |
| Power Level | 10 dBm +/- 2 dB (sine) |  |
| Return Loss | 14 dB (50 ohm) |  |
| SSB Phase Noise L(f)(dBc/Hz) | -96 @ 10 Hz-111 @ 100 Hz-131 @ 1 kHz-165 @ 10 kHz-167 @ 100 kHz-168 @ 1 MHz | -90 @ 10 Hz-105 @ 100 Hz-125 @ 1 kHz-160 @ 10 kHz-165 @ 100 kHz-170 @ 1 MHz |  |
| Harmonics | < -60 dBm |  |
| Spurious | < -90 dBm |  |
| **CLOCK OUTPUT** |  |
| Clock frequency range | 88.0525 MHz (352.21÷4, 704.42÷8) | Other clock frequencies are possible (by changing divide ratio) |
| No. Outputs | 6 |  |
| Power Level / Signal Type | LVPECL |  |
| Jitter | 200 fsec rms (10 Hz to 1 MHz) |  |
| **ELECTRICAL** |  |
| Supply Voltage | 220 Vac, 50 Hz |  |
| Power Consumption | < 15 W |  |
| **MECHANICAL** |  |
| RF connectors | SMA(f) |  |
| Power Supply Connector | IEC |  |
| Remote Interface Connector | USB (Mini-B) | USB2ANY module |
| **MONITORING AND CONTROL** |  |
| Indicators | AC OK, DC OK, PLL Lock Detect | LEDs on front panel |
| LO Frequency | Remote configuration via serial port (USB) | TICS Pro software |
| CLK Frequency | By hand (jumpers) | Jumpers on Clock Distribution IC board |
| LO/REF switch | By hand (jumpers) | Jumper on DC board |

