

Dynamic Engineers Inc.

Website: <u>www.DynamicEngineers.com</u> Email: <u>Inquiry@DynamicEngineers.com</u>

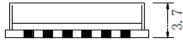
Features and Benefits

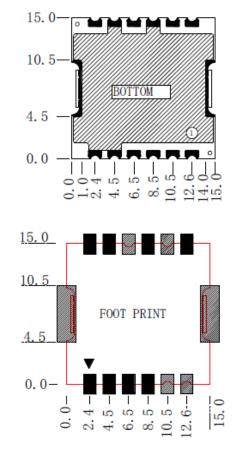
Frequency Range: 139-141MHz Supply Voltage: 5.0V Current: 30mA Max. 3 wire serial integer PLL Output power: +7.0dBm Max. Phase noise: -118dBc/Hz@10KHz Operating temperature: -40°C--+85°C Size: 15x15x3.7mm Package type: SMD

Typical Applications

Broadcast VHF radio Wireless Telemetry Test Instrument-Signal Generation

Mechanical Drawing & Pin Connections





PLL1515BQ-IT-139MHz-141MHz-A 139-141MHz SMD Phase Locked Loop (PLL) Synthesizer

Drawing No: M

MD240065-2

Pin Connections:

| Pin | Function | | | |
|-------------|-------------|--|--|--|
| 1 | CLK | | | |
| 2 | DATA | | | |
| 3 | LE | | | |
| 4- 6 | GND | | | |
| 7 | VCC(VCO) | | | |
| 8 | GND | | | |
| 9 | RF Out | | | |
| 10 | GND | | | |
| 11 | Lock Detect | | | |
| 12 | Vcp(PLL) | | | |
| 13&14 | GND | | | |
| 10014 | OND | | | |

Unit in mm 1mm = 0.0394 inches

Dynamic Engineers, Inc.

Rev. 1

Dynamic Engineers reserves the right to make changes to the company datasheet(s) along with other information contained inside; such as data tables and araphs without notification to potential customers who may have earlier revisions in their possession.



Dynamic Engineers Inc.

Website: <u>www.DynamicEngineers.com</u> Email: <u>Inquiry@DynamicEngineers.com</u>

PLL1515BQ-IT-139MHz-141MHz-A 139-141MHz SMD Phase Locked Loop (PLL) Synthesizer

Specifications

| Parameter | | Units | Min. | Typical | Max. |
|--------------------------------|----------------|----------|------|---------|------|
| Operating Frequency Range | | MHz | 139 | | 141 |
| Output Power | | dBm | +3.0 | +5.0 | +7.0 |
| Step Size | | KHz | | 10 | |
| Settling Time | | msec | | 10 | 30 |
| Output Impedance | | Ω | | 50 | |
| Phase Noise | @1kHz offset | dBc / Hz | | -90 | -85 |
| Phase Noise | @10kHz offset | dBc / Hz | | -118 | -113 |
| Phase Noise | @100kHz offset | dBc / Hz | | -140 | -135 |
| Phase Noise | @1MHz offset | dBc / Hz | | -159 | -154 |
| 2nd Harmonic Suppression | | dBc | | -22 | -15 |
| Sideband Spurious Suppression | | dBc | | | -70 |
| Reference (frequency) | | MHz | | 13 | |
| Reference (Freq. Stability) | | ppm | | | 2.5 |
| VCO Power Supply (Vcc) Voltage | | Vdc | | 5 | |
| VCO Power Supply (Vcc) Current | | mA | | 20 | 30 |
| PLL Power Supply (Vcp) Voltage | | Vdc | | 5 | |
| PLL Power Supply (Vcp) Current | | mA | | 5 | 10 |
| Operating Temperature Range | | °C | -40 | | +85 |