

# Programmable Frequency Synthesizer 8-16 GHz



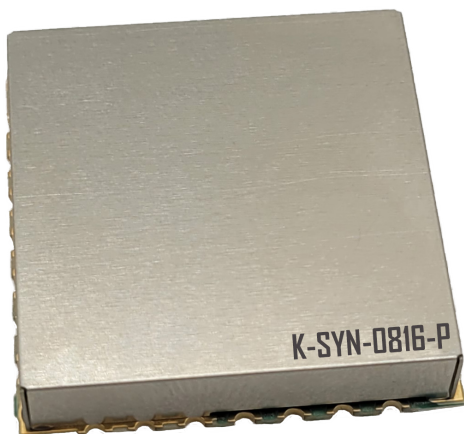
Product Datasheet

## K-SYN-0816-P

Programmable Microwave Synthesizer.

### Overview

The K-SYN-0816-P is a programmable low-phase noise Microwave Frequency Synthesizer. This product comes in a tiny surface mount package measuring 25.4 mm x 25.4 mm x 6.35 mm. The frequency of the synthesizer is custom in the range of 8-16 GHz.



### Features

- Programmable frequency in the range of 8-16 GHz
- -103 dBm/ Hz phase noise at 10 KHz
- 25.4 x 25.4 mm surface mount package
- 0 dBm output power
- Low reference spurs (<-80 dBc)
- Reference signal input 10 MHz, 100 MHz or custom on request



### Applications

- Satellite communications
- Radar
- Mobile communications
- 5G

## Physical Specifications

| Parameter | Typ                | Unit  |
|-----------|--------------------|-------|
| Size      | 25.4 x 25.4 x 6.35 | mm    |
| Weight    | 4                  | grams |

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Product Datasheet

## Specification Overview

| Parameter  | Typ                          | Unit   |
|--|------------------------------|--------|
| Frequency Range <sup>1</sup>                               | 8-16                         | GHz    |
| Step Size <sup>2</sup>                                     | Custom                       |        |
| Phase Noise <sup>3</sup>                                   |                              |        |
| 1 kHz  | -93                          | dBc/Hz |
| 10 kHz   | -103                         | dBc/Hz |
| 100 kHz  | -107                         | dBc/Hz |
| 1 MHz  | -121                         | dBc/Hz |
| Power Supply @ 3.3 V                                       | 250                          | mA     |
| Power Supply @ 5.0 V                                       | 150                          |        |
| Output Power   | 1 ±2                         | dBm    |
| Load Impedance   | 50                           | Ω      |
| Spurious   | <-80                         | dBc    |
| Harmonics <sup>3</sup>                                     | -25                          | dBc    |
| Subharmonics <sup>3</sup>                                  | -25                          | dBc    |
| Programming Interface                                      | UART                         |        |
| Settling Time (please contact ReliaSat for <100 μs option) | 3.5                          | Ms     |
| Reference Signal Input <sup>4</sup>                        | 10 / 100 / Custom on request | MHz    |
| Operating Temperature                                      | -40 to +85                   | °C     |

## Specification References

1. Can operate up to 16.8 GHz but not guaranteed.
2. Default is 200 MHz if not specified during ordering.
3. 16 GHz carrier with 200 MHz step size. Lower frequencies have better phase noise performance. The phase noise degrades with a lower step size.
4. Should be lower than 200 MHz.

## Contact Information

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