

频率综合器 Frequency Synthesizer

特点 Features

- 输出频率 Output Freq.: 200MHz~15GHz
- 小尺寸 Small Size: 38*38*10mm
- 频率步进 Frequency Step: 1Hz
- 控制方式 Control Mode: SPI



规格 Electrical Specification@+25°C

型号 Model Number	LFS-1002
输出频率范围 Output Frequency (MHz)	200~15000
频率步进 Frequency Step (Hz)	1
跳频时间 Frequency Setting Time (us)	500us(TYP)/1000us(MAX)
输出功率 Output Power(dBm)	1±6
频率稳定度 Frequency Stability	同步与外参考 Sync With External Reference
杂散 Spurious (dBc)	≤-60dBc/-65dBc(Typ)
谐波 Harmonic (dBc)	≤-5
参考输入频率 Reference Input Freq. (MHz)	100
输入参考相位噪声 Reference Input Phase Noise	-125dBc/Hz@100Hz
	-153dBc/Hz@1kHz
	-160dBc/Hz@10kHz
	-160dBc/Hz@100kHz
	-165dBc/Hz@1MHz
参考输入功率 Reference Input Power (dBm)	7±3

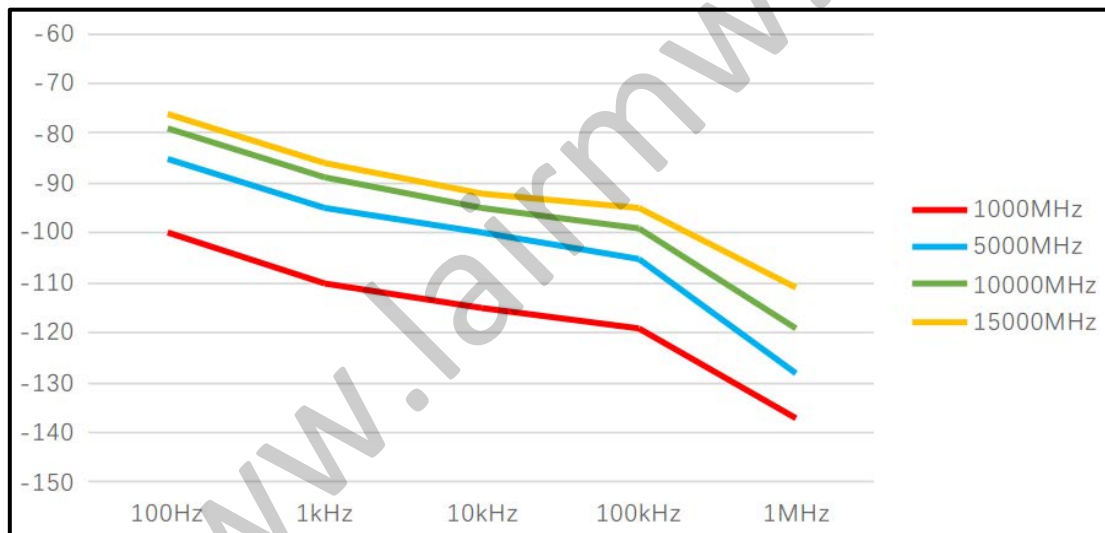
频率综合器 Frequency Synthesizer

性能 Typical Performance@+25°C

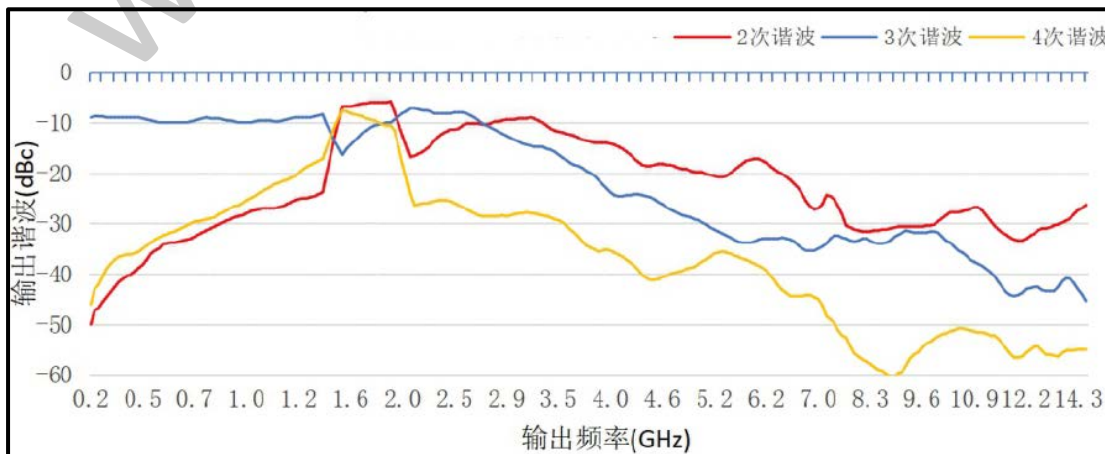
相位噪声 Phase Noise

频率 Frequency	500MHz	1GHz	5GHz	10GHz	15GHz
dBc/Hz@100Hz	≤-100	≤-94	≤-80	≤-74	≤-70
dBc/Hz@1kHz	≤-111	≤-105	≤-91	≤-85	≤-81
dBc/Hz@10kHz	≤-118	≤-112	≤-98	≤-92	≤-88
dBc/Hz@100kHz	≤-120	≤-114	≤-100	≤-94	≤-90
dBc/Hz@1MHz	≤-136	≤-130	≤-116	≤-110	≤-106

LFS-1002 相位噪声 Phase Noise

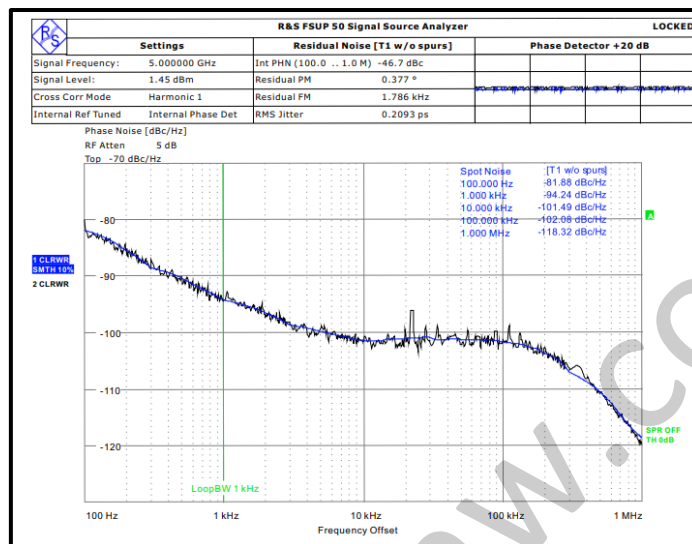


LFS-1002 谐波曲线 Harmonic Curve

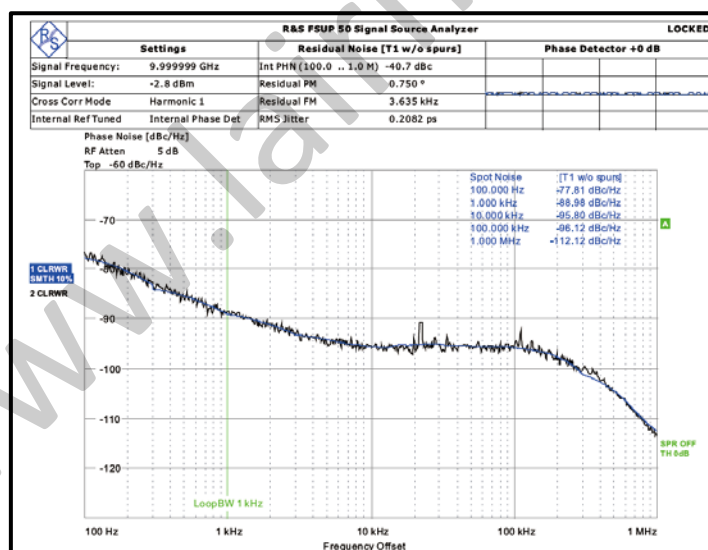


频率综合器 Frequency Synthesizer

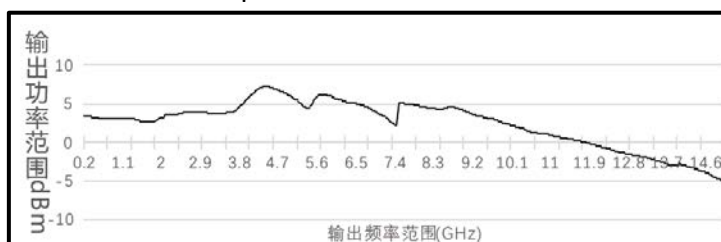
5GHz 相位噪声测试曲线 Phase Noise Curve



10GHz 相位噪声测试曲线 Phase Noise Curve



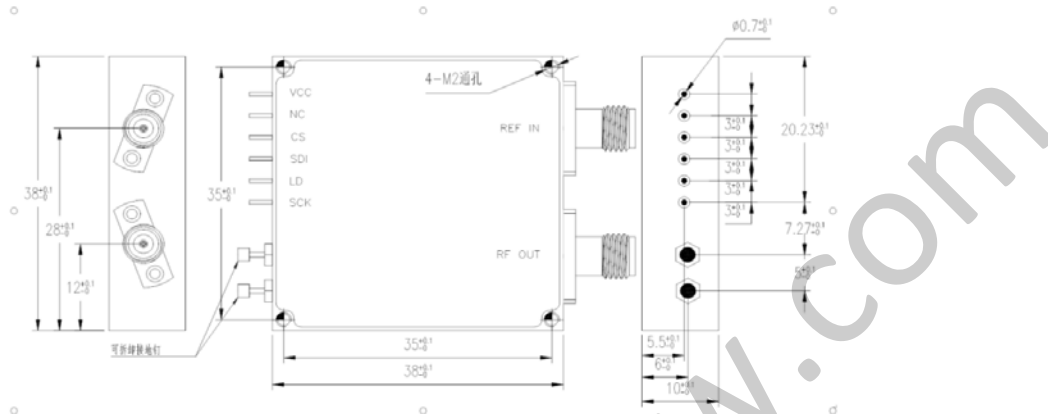
LFS-1002 输出功率曲线@25°C
Output Power Curve@25°C



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外观 Outline

安装尺寸 Installation Dimension



连接器定义 Connector Definition

RF in	SMA-K (可拆卸 Detachable) (Φ0.38)
RF out	SMA-K (可拆卸 Detachable) (Φ0.38)
VCC	+3.3V (Φ0.7)
NC	绝缘子 Insulator (Φ0.7)
CS	绝缘子 Insulator (Φ0.7)
SDI	绝缘子 Insulator (Φ0.7)
LD-out	绝缘子 Insulator (Φ0.7)
SCK	绝缘子 Insulator (Φ0.7)

工作电压 Operating Voltage

供电 Power Supply	电源 1: +3.3V±0.1(V/A)
最大电压 Max Voltage	+3.4V
工作电流 Operating Current	0.68A
启动时间 Activate Time	≤2S

运行环境及外形封装

Operating Environment & Shape Package

供电 Power Supply	电源 1:+3.3V1/680mA(V/A)
控制方式 Control Mode	SPI
工作/储存温度 Operating/Storage Temperature	-40~+70/-55~+85(°C)
外形尺寸 Size	38*38*10mm