

# FFS-200-19000-MS

0.2~19GHz

**Features:**

- \* High Frequency Stability
- \* Ultra Low Phase Noise

**Applications:**

- \* Wireless
- \* Transceiver
- \* Laboratory Test
- \* Radar

**Electrical**

Output Frequency:	0.2~19GHz
Step:	100Hz
Switching Speed:	500μS max.
Output Power:	0±5dBm
Frequency Stability:	same as reference
Frequency Accuracy:	same as reference
Output Spurious:	-60dBc max.
Output Harmonic:	-5dBc max.
External Reference:	100MHz
Reference Power:	7±3dBm
Reference Phase Noise:	-153dBc/Hz max. @1kHz
Voltage:	+12±0.5V DC +15V DC max.
Current:	1.2A typ.
Control Type:	SPI
Impedance:	50Ω

		Output Phase Noise(dBc/Hz)			
		1GHz	5GHz	10GHz	19GHz
Offset	100Hz	-105	-91	-85	-79
	1KHz	-122	-108	-102	-97
	10KHz	-128	-114	-108	-102
	100KHz	-128	-114	-108	-102
	1MHz	-128	-114	-108	-102

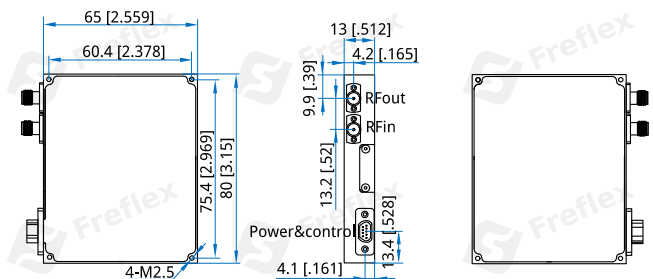
**Mechanical**

Size*1:	80*65*13mm 3.15*2.559*0.512in
RF Connectors:	SMA Female (removable)
Power & Control Interface:	J30J-9-ZKP
Mounting:	4-M2.5 Through hole

[1] Exclude connectors.

**Environmental**

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+85°C

**Outline Drawings**


Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

**Pin Numbering**

Pin	Function
1	+12V
2	+12V
3	GND
4	GND
5	LD (Locked: high voltage)
6	MOSI (SPI communication interface)
7	MISO (SPI communication interface)
8	SCK (SPI communication interface)
9	LE (SPI communication interface)

**How To Order**
**FFS-200-15000-MS**

Customization is available upon request.

Typical Performance Curves:  
Phase Noise (dBc)

R&S FSUP 50 Signal Source Analyzer				LOCKED			
Settings		Residual Noise [T1 w/o spurs]		Phase Detector +0 dB			
Signal Frequency:	8.500000 GHz	Int PHN (30.0 .. 10.0 M)	-48.9 dBc				
Signal Level:	1.4 dBm	Residual PM	0.291 ?				
Cross Corr Mode	Harmonic 1	Residual FM	10.288 kHz				
Internal Ref Tuned	Internal Phase Det	RMS Jitter	0.0951 ps				

