

# Agile Frequency Synthesizer

## HFS110

### Features

- Frequency Range 100MHz~20GHz
- low Phase Noise
- Frequency Switching Time : 3us

Frequency Range ( MHz )	100~10000&200~20000				
Frequency Resolution ( kHz )	10				
Frequency Switching Time ( us )	3				
Power ( dBm )	≥13				
Power Stability ( dB )	±2.5				
Frequency Stability	2×10 <sup>-7</sup> (Same as reference)				
Frequency Accuracy	2×10 <sup>-7</sup> (Same as reference)				
Non-Harmonic Spurious ( dBc )	≤-65/-60(typ (max.))				
Harmonics ( dBc )	≤-7 ( 100M-500M )				
	≤-40 ( 500M-12000M )				
	≤-20 ( 12000M-20000M )				
Phase Noise dBc/Hz	dBc/Hz@1kHz	@1GHz	≤-120	@5GHz	≤-104
	dBc/Hz@10kHz		≤-124		≤-108
	dBc/Hz@100kHz		≤-124		≤-108
	dBc/Hz@1MHz		≤-126		≤-110
Phase Noise dBc/Hz	dBc/Hz@1kHz	@10GHz	≤-98	@20GHz	≤-92
	dBc/Hz@10kHz		≤-102		≤-96
	dBc/Hz@100kHz		≤-102		≤-96
	dBc/Hz@1MHz		≤-104		≤-98

Supply Voltage ( V/A )	+12/1.6 ( Warm-up ) +12/1.4 ( Stable )
Connector	RF : SMA-KFD Contro : J30J-31
Size ( W x L x H )	100*100*16.5mm
Control Interface	parallel por
Temperature Range(operating) ( °C )	-40~+70
Temperature Range (non-operating) ( °C )	-55~+85
Pulse modulation	
Pulse depth	≥60dBc(Test power : +10dBm)
pulse width	100ns~10ms
Power Stability ( dB )	≤0.2dB
Rise/Fall Time	≤30ns/50ns
Ordering Information	
FHS110-0110M-P	Frequency Rang : 100MHz~10GHz , The Control Interface is parallel port.
FHS110-0220M-P	Frequency Rang : 200MHz~20GHz , The Control Interface is parallel port.
FHS110-0110M-S	Frequency Rang : 100MHz~10GHz , The Control Interface is SPI
FHS110-0220M-S	Frequency Rang : 200MHz~20GHz , The Control Interface is SPI