

PDS synthesizer

A new concept in frequency synthesis permits the achievement of excellent spectral purity, high agility, very fine resolution, low power consumption and low cost. The principle of the Phase Digital Synthesizer (PDS) is that the control signal of the PLL is formed by a multi frequency-phase comparator with phase splitting of the reference and VCO signals into large group of compared signals. The outputs of these partial detectors are then summed to develop the VCO control voltage.

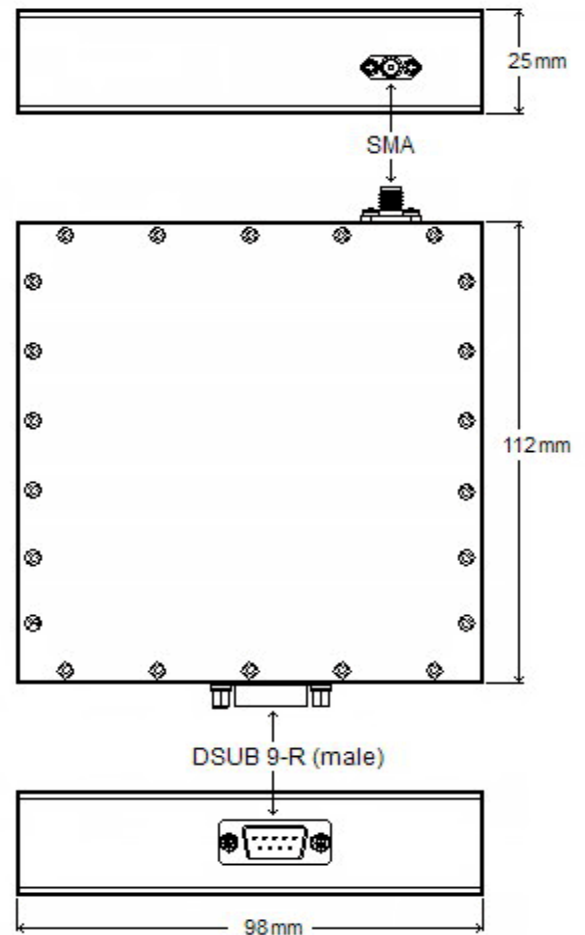
Application:

- Personal communications systems (PCS)
- Cellular
- VSAT
- Satellite communications equipment
- Local oscillators (LOs)
- Automatic test equipment (ATE)



Specification:

- Range – 12% bands up to 2 GHz
- Resolution – 1 Hz
- Spectral Purity:
 - Spurious - <-60 dBc overall
- Noise (@ 2 GHz):
 - In Narrow BandWidth mode (BW=20kHz) –
 - -90dBc/Hz @ 10kHz offset
 - -110dBc/Hz @ 100kHz offset
 - <-120dBc/Hz @ 1 MHz offset
 - In Broad BandWidth mode (BW=200kHz) –
 - -95dBc/Hz @ 10kHz offset (noise floor to 200kHz offset)
 - <-120dBc/Hz @ 1MHz offset
- Switching Speed
 - <5us (10 MHz hop)
- FSK and PSK modes
- Reference Frequency:
 - Internal - 60..120 MHz <3ppm/1st year and <1ppm/every year there after
- Control – 4-wire serial
- Output Power +6 dBm +/-1dB
- Power Supply:
 - +8..11 VDC, <200mA;
 - +13..16 VDC, <10mA
- Operating Temperature - -20C to 70C
- Dimensions – 112x98x25 mm
- Weight - <250 g



CONN		FUNCTION
SMA		RF OUT
DSUB 9-R	P1	CLK
	P2	DATA
	P3	LATCH
	P4	GND
	P5	NC
	P6	NC
	P7	GND
	P8	+8..11 VDC
	P9	+13..16 VDC