SR B260

Ultra Low Noise Voltage Controlled 600 MHz SAW Oscillator

Tentative specification

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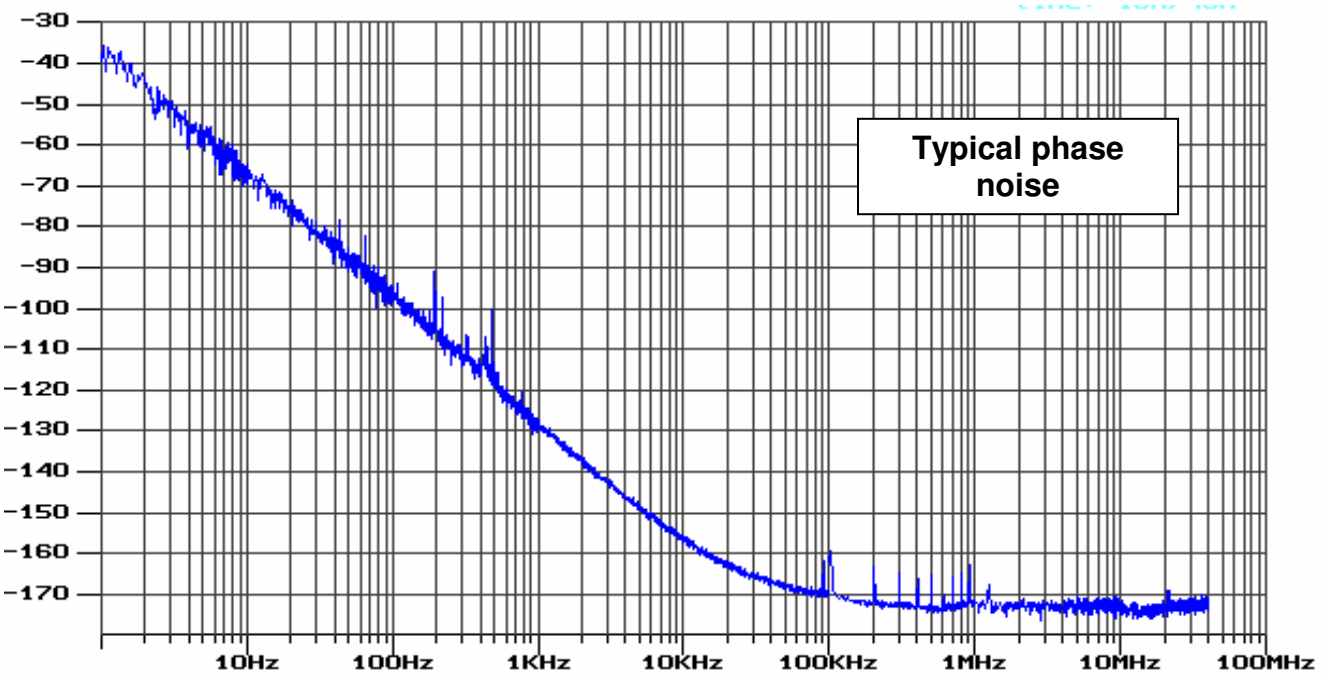
Features

- Ultra Low Noise (ULN), Oven Controlled, Voltage Controlled, SAW Oscillator (OCVCSO)
- Output frequency: 600 MHz
- Ultra low phase noise: - 158dBc/Hz @ 10 kHz offset (typical)
  < - 170 dBc/Hz noise floor (typical)
- Frequency fine tuning by temperature control of the oven
- Operating temperature range : [- 20 to + 50°C]
- Environment: shelters, stabilized platforms
- Applications:
  - Instrumentation: phase noise analyzer, synthesizer
  - Ground based or naval military equipment & test bench
  - Radar & Telecom simulator
- Rugged packaging: 95 x 76 x 23 mm [3.75 x 3 x .92 "]
- SMA connector for the frequency output + 2 feedthrus for DC supply and $V_{Control}$



Environmental conditions

Parameters	Unit	Minimum	Typical	Maximum
Operating temperature range	°C	- 20		+ 50
Storage temperature range	°C	- 40		+ 85

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Mechanical characteristics

Package:

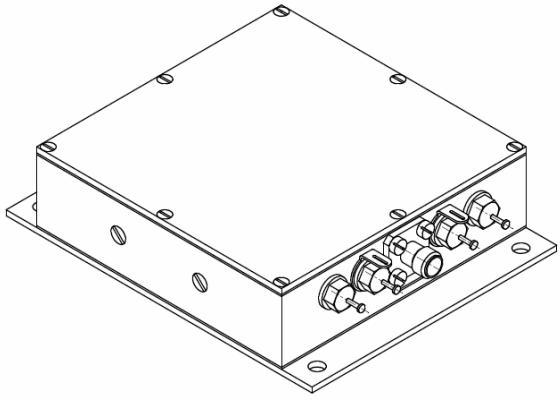
- **Machined, shielded enclosure**
- **SMA connector & feedthru solder pins**

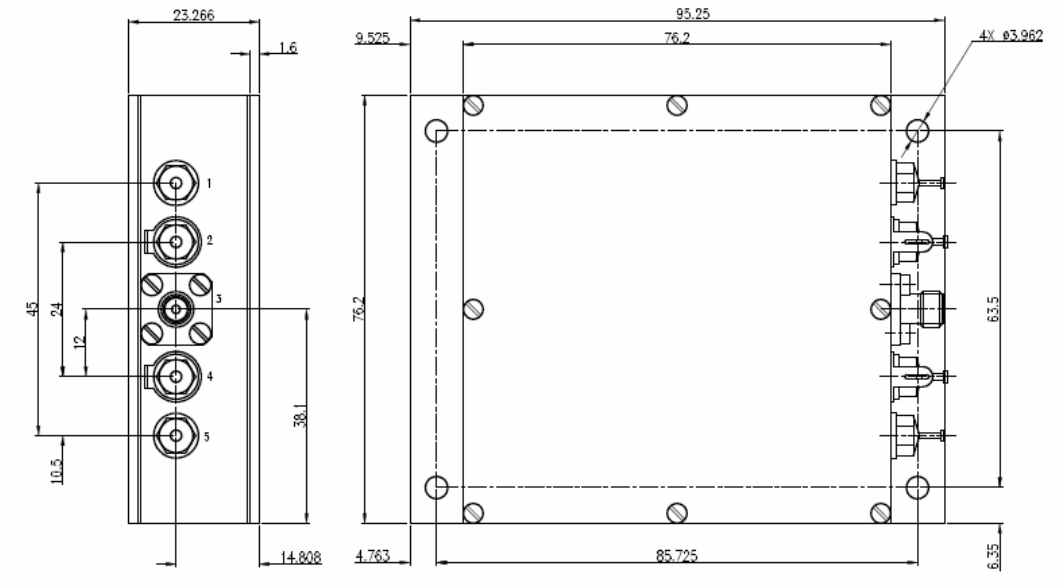
Foot-print:

- **96 x 77 mm max.**
- **[3.75 x 3 inch]**

Height:

- **23.3 mm max.**
- **[0.916 inch]**





Pin description

Pin number	Type	Label	Function
1	Feedthru	NA	NC
2	Feedthru + Ground	DC Supply voltage	Oscillator & oven power supply
3	Female SMA	Frequency output	Frequency output
4	Feedthru + Ground	Voltage control	Voltage control for electrical tuning
5	Feedthru	NA	NC

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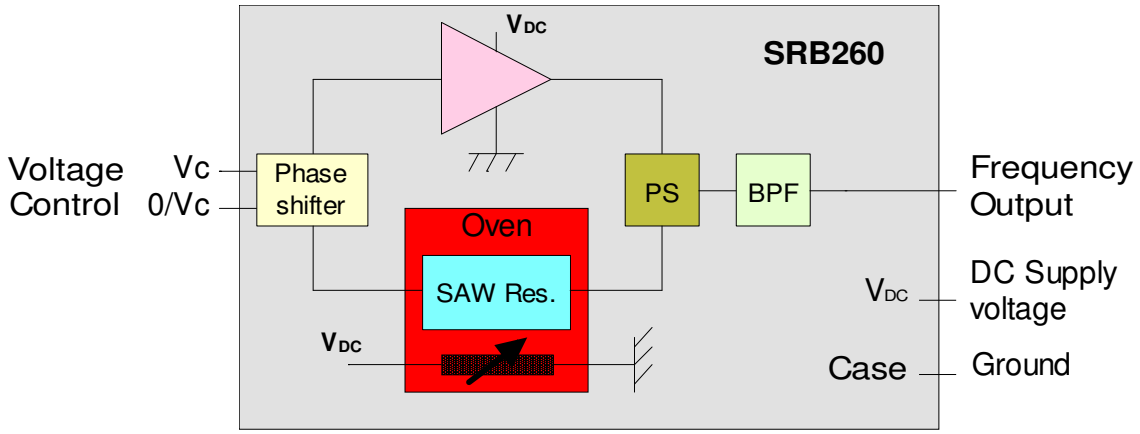
Technical Characteristics

Block diagram



Electrical specifications

Electrical Parameters	Unit	Minimum	Typical	Maximum
Frequency output (SMA Connector)				
Nominal frequency	MHz		600	
Output level (50 Ω load)	dBm	9	10	11
Harmonics suppression	dBc	-30		
Phase noise @ 1 kHz offset	dBc/Hz		-130	-123
Phase noise @ 10 kHz offset	dBc/Hz		-158	-153
Phase noise @ 100 kHz offset	dBc/Hz		-170	-168
Phase noise floor	dBc/Hz	< -170	< - 170	- 170
VSWR	-		1.5:1	2:1
Free running mode (Voltage Control pin NC)				
Factory set accuracy @ 25 °C	ppm		± 0.2	± 0.5
Temperature stability	ppm			± 2
Aging per year	ppm			± 1
Electrical tuning (Voltage Control pin)				
Relative tuning range	ppm	± 2	± 3	
Voltage range	V_{DC}	3	4.7	7
Slope @ V control = 4.7 V	Hz / V	1000	1500	2200
DC supply voltage (DC supply voltage pin)				
Voltage range	V_{DC}	11.8	12	12.2
Supply current	mA		250 @ 25°C	600
Warm up time	mn		4	5