



# SRB 660

Ultra Low Noise Voltage Controlled 1200 MHz SAW Oscillator  
*Tentative specification*

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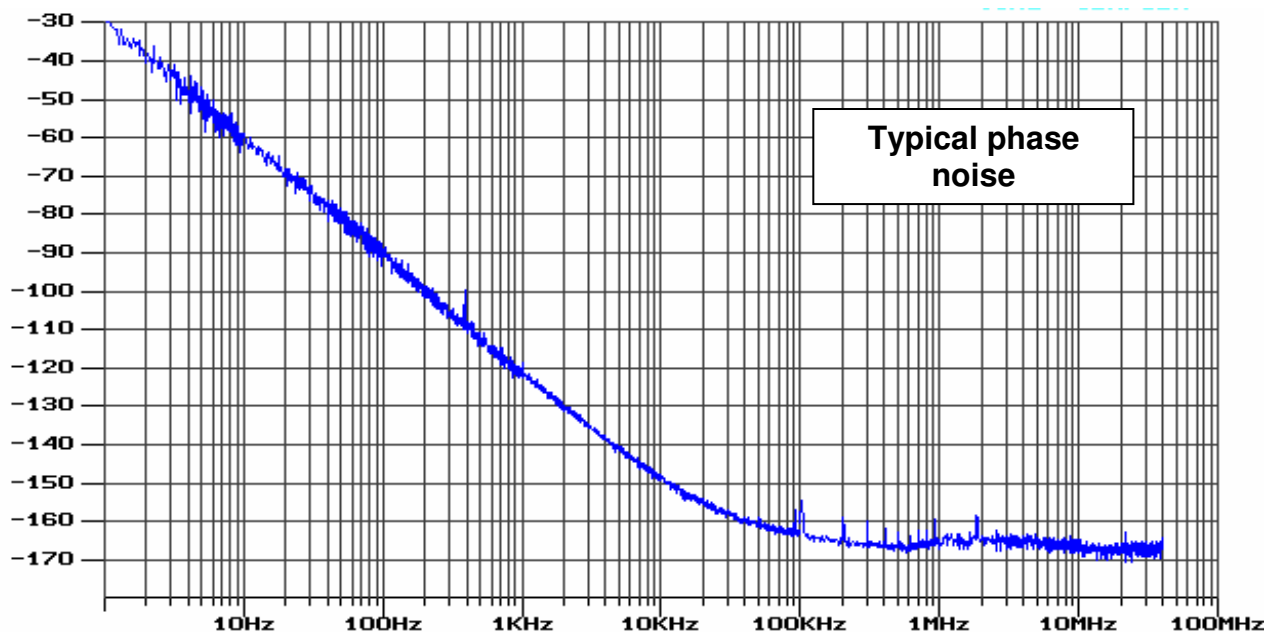
## Ultra Low Noise Voltage Controlled 1200 MHz SAW Oscillator

*Tentative specification*

March, 2008

### Features

- ❑ Ultra Low Noise (ULN), Oven Controlled, Voltage Controlled, SAW Oscillator (OCVCSO)
- ❑ Output frequency: 1200 MHz
- ❑ Ultra low phase noise: - 150 dBc/Hz @ 10 kHz offset (typical)  
< - 165 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:

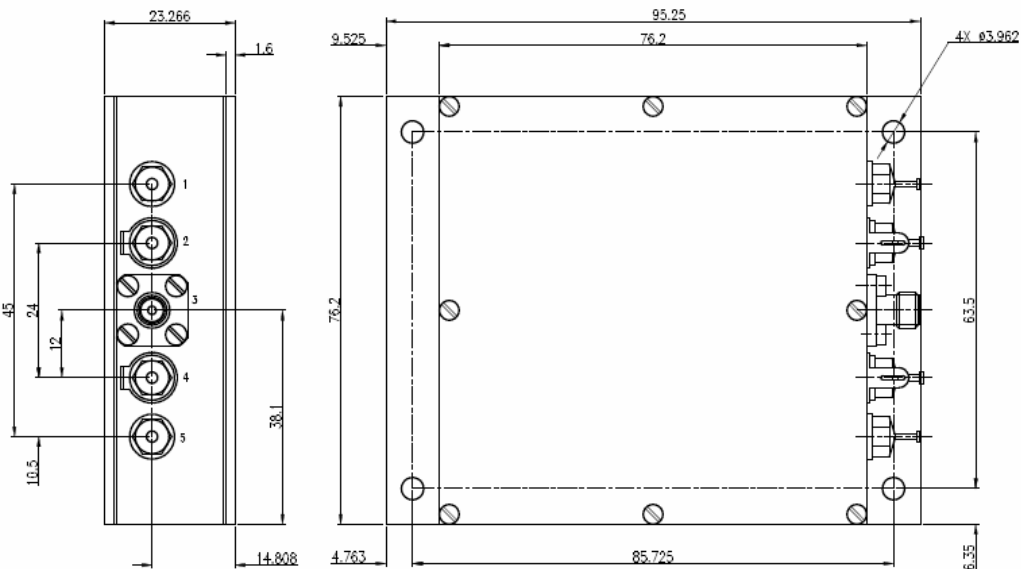
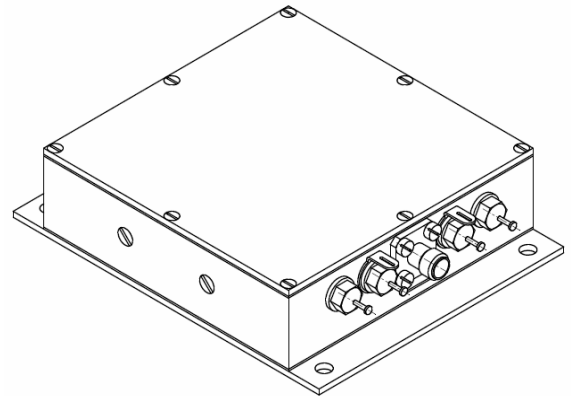
- Machined, shielded enclosure
- SMA connector & feedthru solder pins

### 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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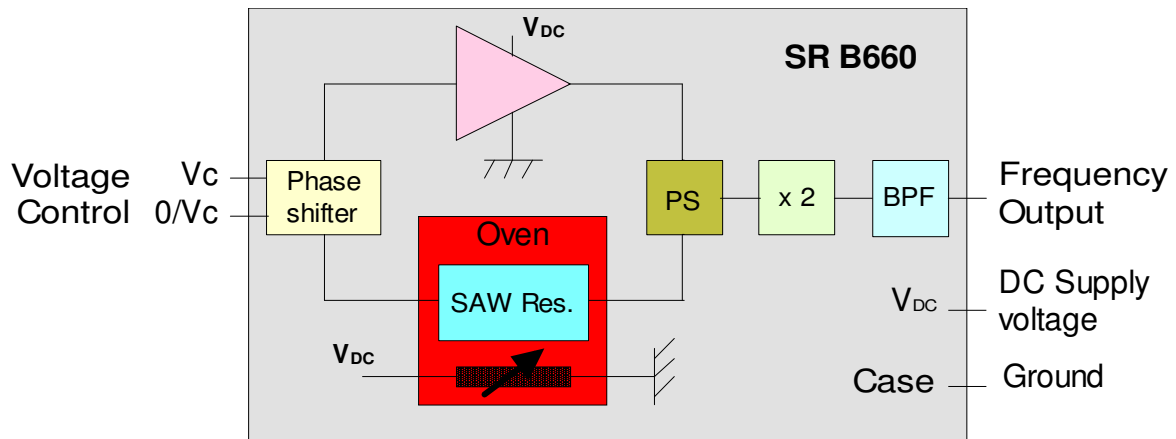
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## Technical Characteristics

### Block diagram



### Electrical specifications

Electrical Parameters	Unit	Minimum	Typical	Maximum
<b>Frequency output (SMA Connector)</b>				
Nominal frequency	MHz		1200	
Output level (50 Ω load)	dBm	-1	0	1
Harmonics suppression	dBc	-25	-30	-40
Phase noise @ 1 kHz offset	dBc/Hz		-120	-118
Phase noise @ 10 kHz offset	dBc/Hz		-150	-148
Phase noise @ 100 kHz offset	dBc/Hz	< -165	-163	-160
Phase noise floor	dBc/Hz	< -165	< -165	-165
VSWR	-		2:1	2.5:1
<b>Free running mode (Voltage Control pin NC)</b>				
Factory set accuracy @ 25 °C	ppm		± 0.2	± 0.5
Temperature stability	ppm			± 2
Aging per year	ppm			± 1
<b>Electrical tuning (Voltage Control pin)</b>				
Relative tuning range	ppm			± 4
Voltage range	V <sub>DC</sub>	3		7
Slope @ V control = 4.7 V	Hz / V	2000	3000	4400
<b>DC supply voltage (DC supply voltage pin)</b>				
Voltage range	V <sub>DC</sub>	11.8	12	12.2
Supply current	mA		250 @ 25 °C	600
Warm up time	mn		4	5