

**[IC information]**

Manufacture	Renesas Electronics
Series/Product	RL78/G Series/G13A
Type/Device Code	R5F140PLAFB

**[Specification of Resonator]**

Model	DST310S
Nominal Frequency	32.768kHz
Load Capacitance	6.0pF
Series Resistance	50k $\Omega$ max.

**[Measurement Results]**

Oscillation mode: Ultra low power

C1=8pF, C2=8pF, VDD=+3.3V

Negative Resistance	-360k $\Omega$
Drive Level	0.1 $\mu$ W
Frequency Deviation	+2ppm

C1=8pF, C2=8pF, VDD=+5.0V

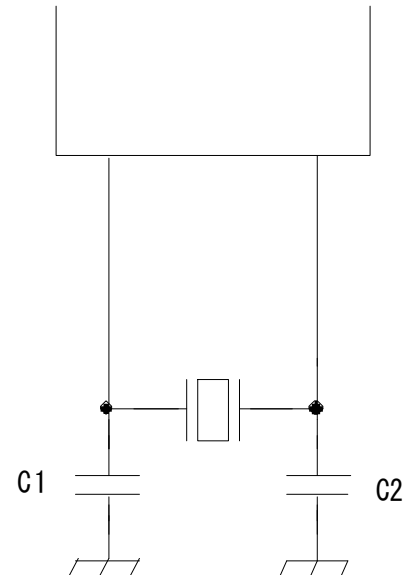
Negative Resistance	-360k $\Omega$
Drive Level	0.1 $\mu$ W
Frequency Deviation	+2ppm

Measurement Results are for Reference only.

Therefore, it is necessary to conduct a survey on your board.

If you have any questions about circuit survey, please contact us by the following e-maill.

[circuitanalysis797@kds.info](mailto:circuitanalysis797@kds.info)

**[Oscillation Diagram]**

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Manufacture	Renesas Electronics
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Type/Device Code	R5F140PLAFB

**[Specification of Resonator]**

Model	DST310S
Nominal Frequency	32.768kHz
Load Capacitance	6.0pF
Series Resistance	80k $\Omega$ max.

**[Measurement Results]**

Oscillation mode: Low power

C1=8pF, C2=8pF, VDD=+3.3V

Negative Resistance	-560k $\Omega$
Drive Level	0.2 $\mu$ W
Frequency Deviation	+7ppm

C1=8pF, C2=8pF, VDD=+5.0V

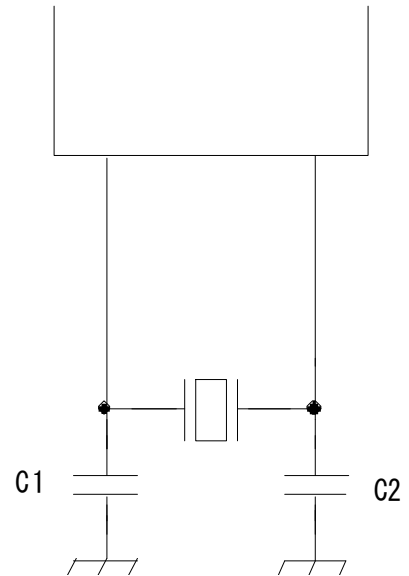
Negative Resistance	-560k $\Omega$
Drive Level	0.2 $\mu$ W
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Model	DST310S
Nominal Frequency	32.768kHz
Load Capacitance	6.0pF
Series Resistance	80k $\Omega$ max.

**[Measurement Results]**

Oscillation mode: Standard

C1=8pF, C2=8pF, VDD=+3.3V

Negative Resistance	-750k $\Omega$
Drive Level	0.2 $\mu$ W
Frequency Deviation	+6ppm

C1=8pF, C2=8pF, VDD=+5.0V

Negative Resistance	-750k $\Omega$
Drive Level	0.2 $\mu$ W
Frequency Deviation	+7ppm

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