

Crystal Unit

Product	FCX-05
Model number	12.000MHZ-J21138
Nominal frequency	12.000000 MHz
Overtone order [Cut]	Fundamental [AT-cut]
Load capacitance	6 pF
Equivalent series resistance	200Ω Max.
Frequency tolerance	±30 ppm (@25°C)

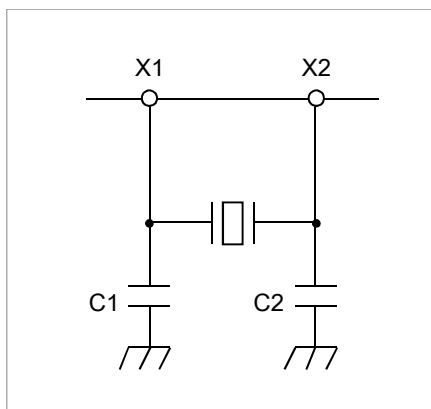
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Manufacturer	Renesas Electronics
Series	RL78/G13
Model	R5F100xxx

Recommended Condition for Stable Oscillation

Negative resistance	1000Ω Min.
Drive level	200 μW Max.

Circuit Diagram



Evaluation Result

Flash operation mode of RL78/G13	C1 [pF]	C2 [pF]	VDD [V]	Negative resistance [Ω]	Drive level [μW]	Frequency deviation [ppm]
HS (high speed main) mode	6	6	+2.4	1620	70	+4.8
			+2.70	1620	70	+4.8
			+2.75	1620	70	+4.8
			+5.5	1620	70	+5.4
			+6.0	1620	70	+5.4

* Ambient temperature: 25°C

RIVER

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