## Crystal Unit

Product	TFX-03
Model number	ST-RIVER-2012-5PF-80K
Nominal frequency	32.768 kHz
Overtone order [Cut]	Fundamental [X-cut]
Load capacitance	5 pF
Equivalent series resistance	80 kΩ Max.
Frequency tolerance	±20 ppm (@25°C)

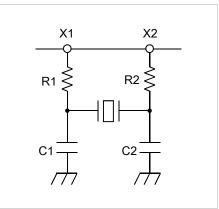
#### IC

Manufacturer	STMicroelectronics	
Model	STM32F410××	

#### **Recommended Condition for Stable Oscillation**

	Negative resistance	240 kΩ Min.
	Drive level	0.5 μW Max.

# Circuit Diagram



### **Evaluation Result**

R1 [Ω]	R2 [Ω]	C1 [pF]	C2 [pF]	Negative resistance [kΩ]	Drive level [µW]	Frequency deviation [ppm]
0	0	4.3	4.3	250	0.1 Max.	-4.2

\* Ambient temperature: +25°C / Supply voltage: USB

