

## 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 k $\Omega$ Max.
Frequency tolerance	$\pm 20$ ppm (@25°C)

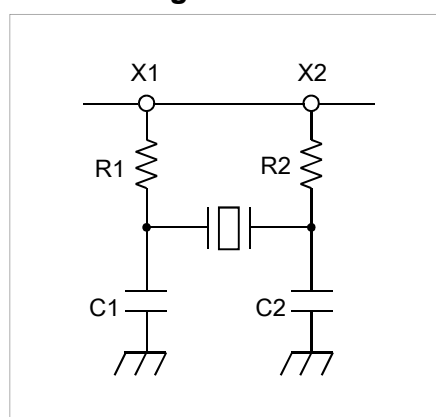
## IC

Manufacturer	STMicroelectronics
Model	STM32F303xx

## Recommended Condition for Stable Oscillation

Negative resistance	240 k $\Omega$ Min.
Drive level	0.5 $\mu$ W Max.

## Circuit Diagram



## Evaluation Result

R1 [ $\Omega$ ]	R2 [ $\Omega$ ]	C1 [pF]	C2 [pF]	Negative resistance [k $\Omega$ ]	Drive level [ $\mu$ W]	Frequency deviation [ppm]
0	0	2	3	910 Min.	0.1 Max.	+9.6

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

# RIVER

リバーエレクトック株式会社  
RIVER ELETEC CORPORATION

<http://www.river-ele.co.jp/>

〒407-8502 山梨県韮崎市富士見ヶ丘2丁目1番11号  
TEL(0551)22-1211(代) FAX(0551)22-6645

東京営業所  
大阪営業所

River Electronics(Singapore)Pte.Ltd  
Taiwan River Co.,Ltd.  
Xi'an River Electronics Corporation  
Shenzhen Liaison Office

TEL(03)3377-5444(代) FAX(03)3374-2865  
TEL(06)6998-4888(代) FAX(06)6998-4899

TEL: +65-6258-7874 FAX: +65-6258-7366  
TEL: +886-2-8988-2811 FAX: +886-2-2983-4785

TEL: +86-755-86528590 FAX: +86-755-86528590