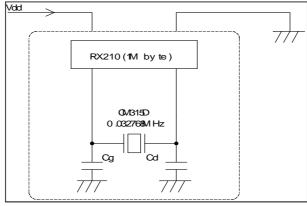
Document No: Date:

QJD-11638 2013/4/10

Investigation Report of Oscillation Circuit

	*at Vdd=5.0V/25°C		
IC		RENESANCE ELECTRONICS	
		RX210(1Mbyte)	
CRYSTAL		CM315D	
Nominal Frequency	kHz	32.768	
Laod Capacitance	pF	9	
Cg,Cd	pF	10	10
Negative Resistance (-R)	ohm	390k	
Drive Level	μW	0.1	
Startup Time	ms	40	

* Our Recommendable Negative Resistance Value : over 200k ohm

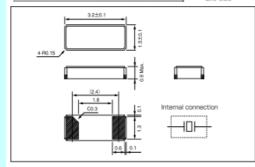


*These recommendations are based on actual evaluation results and intended to support users in picking the right components. As the actual board layout and choice of external components influences the best suitable crystal load capacitance, we does not assume evaluation.

Please refer to IC maker's manual for designing.

CM315D





TUNING FORK CRYSTAL UNIT Tuning fork crystal with ceranic packaged type. High-density SMD type. Ultra-light weight with ultra-miniature packaging. High-stability assured with tight vaccum sealing. Most appropriate for portable devices and mobile telecommunications devices. Standard Specificatione kHz 32.768 Nominal Frequency Frequency Tolerance ppm +/-20 (at 25°C) °C Operatating Temperature Rang -40 to 85 Storage Temperature Range °C -55 to 125 Motional Resistance Ω 70k

uW

 $M\Omega$

CITIZEN FINEDEVICE CO., LTD. Crystal Devices Department

1 Max.

500 Min. (at DC100+/-15V)

Insulation Resistance

Level of drive