

OX4115B-D3-0.5-20.000-3.3





ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	VALUE		UNIT	
			Min.	Тур.	Max.	
Nominal Frequency	fo			20.000		MHz
Supply Voltage	Vs	Ta=25°C, Vs ±5%	3.135	3.3	3.465	V
Innut Cumant	I_S	Ta=25°C, Steady state			300	mA
Input Current	I_{w}	Ta=25°C, During warm-up			750	mA
Frequency Calibration	$\Delta \mathrm{f}/\mathrm{f}_0$	Ta=25°C, after 15 minutes powered on, ref to nominal frequency	-200		+200	ppb
Frequency Stability vs. Temperature	$\Delta f/f_0 (T_a)$	Ta= -40°C+85°C, measurement ref to 25°C	-5		+5	ppb
Frequency Stability vs. Load Change	$\Delta f/f_0 \left(\Delta R_L\right)$	Ta=25°C, load ±5%	-2		+2	ppb
Frequency Stability vs. Supply Voltage	$\Delta f/f_0 (\Delta V_S)$	Ta=25°C, Vs±5%	-2		+2	ppb
Short Term Stability		In still air, after powered on 1 hour; $\tau = 1s$			0.01	ppb
Aging, after 30 days of operation	$\Delta f/\Delta t_d$	Per day	-0.5		+0.5	ppb
	$\Delta f/\Delta t_y$	Per year	-100		+100	ppb
	$\Delta f/\Delta t_y$	10 years	-400		+400	ppb
Warm-up Time	T_{w}	Ta=25°C, within ±100ppb of final frequency, ref to 1 hour powered on			2	min
Operating Temperature Range	Ta		-40		+85	°C
Storage Temperature Range	T _(stg)	Absolute max	-55		+105	°C



OX4115B-D3-0.5-20.000-3.3

CMOS Output Characteristics

PARAMETER	SYMBOL	CONDITION	VALUE		UNIT	
			Min.	Тур.	Max.	
Load	OLoad	Output to Ground		15		pF
Output signals Levels	VOH		2.4	2.8		V
	VOL				0.4	V
Rise/ Fall Time	Tr/Tf	10% to 90% Vout			5	ns
Duty Cycle	DC	Load 15pF, @50% Output signal	45		55	%
Spurious	-	_			-80	dBc

PHASE NOISE

PARAMETER	SYMBOL	CONDITION	VALUE		UNIT	
			Min.	Тур.	Max.	
@1 Hz Offset	£ (Δf)				-75	
@10 Hz Offset	£ (∆f)				-105	dBc/Hz
@100 Hz Offset	£ (∆f)				-135	dBc/Hz
@1 kHz Offset	£ (∆f)				-150	dBc/Hz
@10 kHz Offset	£ (∆f)				-153	dBc/Hz
@100 kHz Offset	£ (∆f)				-155	dBc/Hz
@1 MHz Offset	£ (∆f)				-155	dBc/Hz

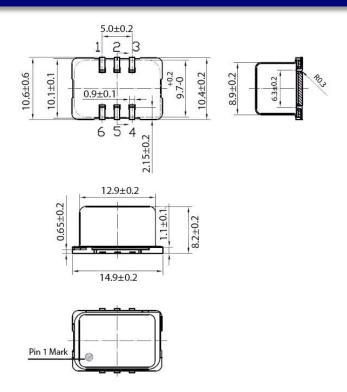
Environmental, Mechanical Conditions

Mechanical Shock	The test shall be carried out as the provisions of the IEC60068-2-27 test Ed. 500g, 1mS duration, 1/2 sine wave, 3 shocks each direction along 3 mutually perpendicular planes.
Thermal shock	0.5h@-40°C, 0.5h@+85°C, Note: the changing time < 30 seconds, cycling for 100 times
Vibration test	The test shall be carried out as the provisions of the IEC60068-2-34 test Ed. Random: Acceleration: 0.04g²/Hz Grms=7.5g Sweep time: 15 minutes (perpendicular axes each sweep time)
Moisture sensitivity level	MSL 1
Drop Test	The test shall be carried out as the provisions of the IEC60028-2-32 test Ed. 10cm height, 3 times on hard board with thickness of 3cm
Bumping Test	The test shall be carried out as the provisions of the IEC60068-2-29 test Ed. Device are bumped to three mutually perpendicular axes at peak acceleration of 400m/s^2 , each 4000 ± 10 times, 6ms pulse duration time.



OX4115B-D3-0.5-20.000-3.3

MECHANICAL DIMENSIONS AND PIN FUNCTIONING



PIN	SYMBOL	FUNCTION
1	NC	No connect
2	NC	No connect
3	GND	Case/Ground
4	OUT	Output
5	NC	No connect
6	Vs	Supply Voltage

	Signed	Date
Created	СР	September 16, 2020
Eng. approved	SP	September 16, 2020
REV A		

Raltron Electronics / RAMI Technology USA, LLC, including its affiliates, employees, agents and other persons acting on its behalf (collectively Raltron/RAMI Tech), disclaim any and all liability for any errors or inaccuracies contained in this data sheet. While Raltron/RAMI Tech has made every reasonable elfort ensure the accuracy of all product information, specifications and data contained herein, Raltron/RAMI Tech does not guarantee that the information is accurate, reliable or current. The product information is provided only for reference purposes only and is subject to change, correction or revision, at any time without notice. Raltron/RAMI Tech does not assume any liability arising out of an application or use of any product described herein and disclaims any warranties expressed or implied. The user of products in such applications shall assume all risks of such use and will agree to hold Raltron/RAMI Tech, harmless against all damages.

Copyright © 2016, Raltron Electronics / RAMI Technology USA, LLC. All rights reserved. No part of this document may be reproduced in any form without the prior written permission of Raltron Electronics / RAMI Technology USA, LLC.