Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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Specification of Simple Packaged Crystal Oscillators

1. NDK Part Number NZ2520SB-32.768K-RNA3045A
2. Chipset Maker Renesas
3. Chipset Name R-Car H3
4. NDK Specification Number RNA3045A
5. Type NZ2520SB
6. Absolute Maximum ratings

	Item	Ratings			Notes
		Min.	Max.	Units	
1	Supply voltage	-0.3	+7.0	V	-
2	Storage temp. rage	-55	+125	℃	-

7. Electrical Specification

	Parameters	SYM.	Electrical Spec.				Notes
			Min.	Typ.	Max.	Units	
1	Nominal frequency	fnom		32.768		kHz	-
2	Supply voltage	Vcc	1.62	1.8	1.98	V	-
3	Current consumption (Operating)	I_{CC}	-	-	0.22	mA	at 1.8V, 25°C
4	Current consumption (Stand-by)	I_{ST}	-	-	10	μA	at 1.8V, 25°C
5	Output level	-	CMOS				-
6	Load capacitance	CL			15	pF	-
7	Operating temp. rage	T_{opr}	-40	-	+85	℃	-
8	Overall frequency tolerance	$\Delta f/f_{nom}$	-50	-	+50	ppm	*1
9	Long-term frequency stability	Δf_{lt}	-5	-	+5	ppm	at 25°C, 1 year
10	Output voltage	V_{OL}	-	-	0.1 V_{CC}	V	-
		V_{OH}	0.9 V_{CC}	-	-	V	-
11	Rise time (T_r), Fall time (T_f)	T_r/T_f	-	-	200	ns	0.1V_{CC} to 0.9V_{CC}
12	Symmetry	SYM	45	-	55	%	at 1/2 V_{CC}
13	Start-up time	T_{su}	-	-	5	ms	
14	Output wave form	-	Rectangular				-
15	Stand-by function						
	#1 PAD input		# 3 PAD output				
	H level (0.7 V_{CC} to V_{CC}) or Open		Operating				
	L level (0.3 V_{CC} max.)		High impedance				

*1 'Inclusive of frequency. tolerance (at 25 °C), requency/temperature characteristics, frequency/voltage coefficient.

8. Dimension