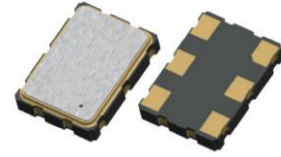


## Features

- Typical 2.5 x 2.0 x 0.81 mm ceramic SMD package.
- Operation supply voltage: 1.5V, 1.8V
- RTC frequency 32.768kHz
- Ultra-Low current: 1.4uA typical.
- Frequency Stability  $\pm 25$ ppm over  $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$
- Pb-free/RoHS compliant
- RTC Reference Clock
- Wearable device
- Sport Video Cams
- Mobile Phones
- Health and Wellness Monitors



## BS2520A Series

Parameter	1.5V		1.8V		Unit	Conditions
	Min.	Max.	Min.	Max.		
Supply Voltage Variation	VDD-5%	VDD+5%	VDD-5%	VDD+5%	V	
Frequency	32.768				kHz	
Frequency Tolerance	-10	10	-10	10	ppm	@ 25°C, 3 days average
Frequency vs Temperature	-25	25	-25	25	ppm	@-40 to +85°C with reference to +25°C, 3days average
Supply Current	Typ. 1.4	1.8	Typ. 1.4	1.8	uA	@No Load
Duty Cycle	45	55	45	55	%	
Output Level	Output High	90% VDD	-	90% VDD	-	V
	Output Low	-	10%VDD	-	10%VDD	V
Rise Time / Fall Time	-	10	-	10	nSec	Transition Time @10%-90%
Startup Time	-	8	-	8	mSec	
Aging	-	$\pm 3$	-	$\pm 3$	ppm	@ 25°C, First Year
Storage Temp. Range	-55	125	-55	125	°C	
FREQ. STABILITY vs. TEMP. RANGE		$\pm 20$ ppm	$\pm 25$ ppm	$\pm 50$ ppm		
	-20~+70	Conditional	Available	Available		
	-40~+85	Not available	Available	Available		
	-40~+105	Not available	Conditional	Available		

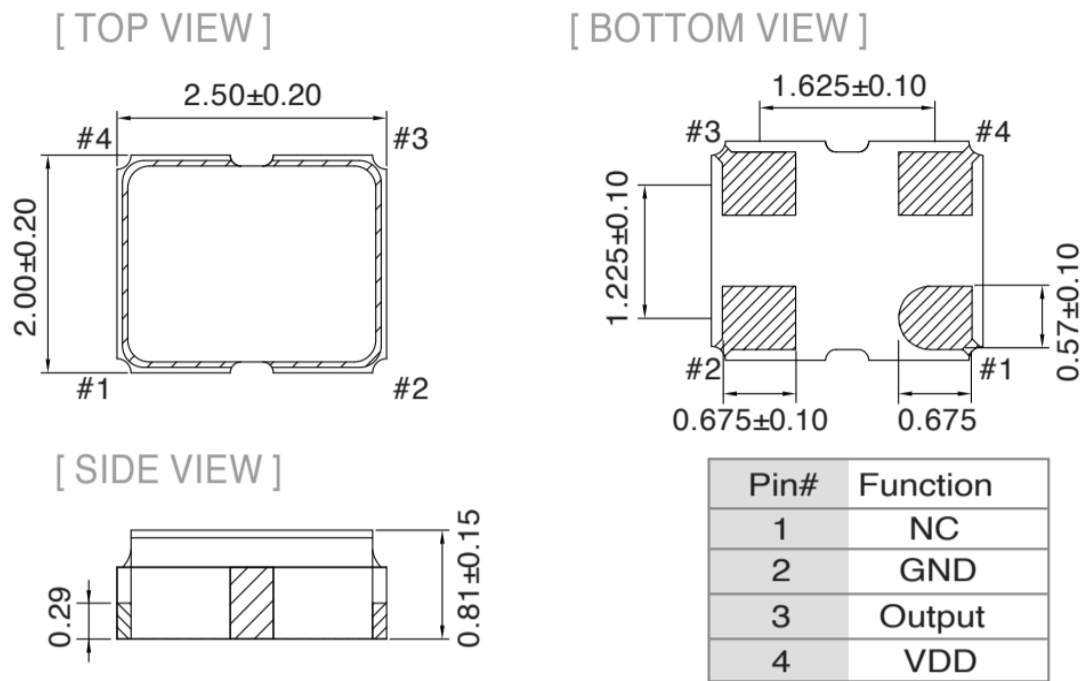
**Note: not all combination of options are available. Other specifications may be available upon request.**

## Reliability

Parameter	Condition
Temperature Stress Test	IEC60068, GJB360B
Mechanical Stress Test	IEC60068, GJB360B
EMC Test (ESD)	IEC61000, JESD22
Solderability	EIA/JESD22-B102-C
Contact Pads	Gold over Nickel
RoHS	RoHS Directive 2011/65/EU Annex II Recasting 2002/95/EC

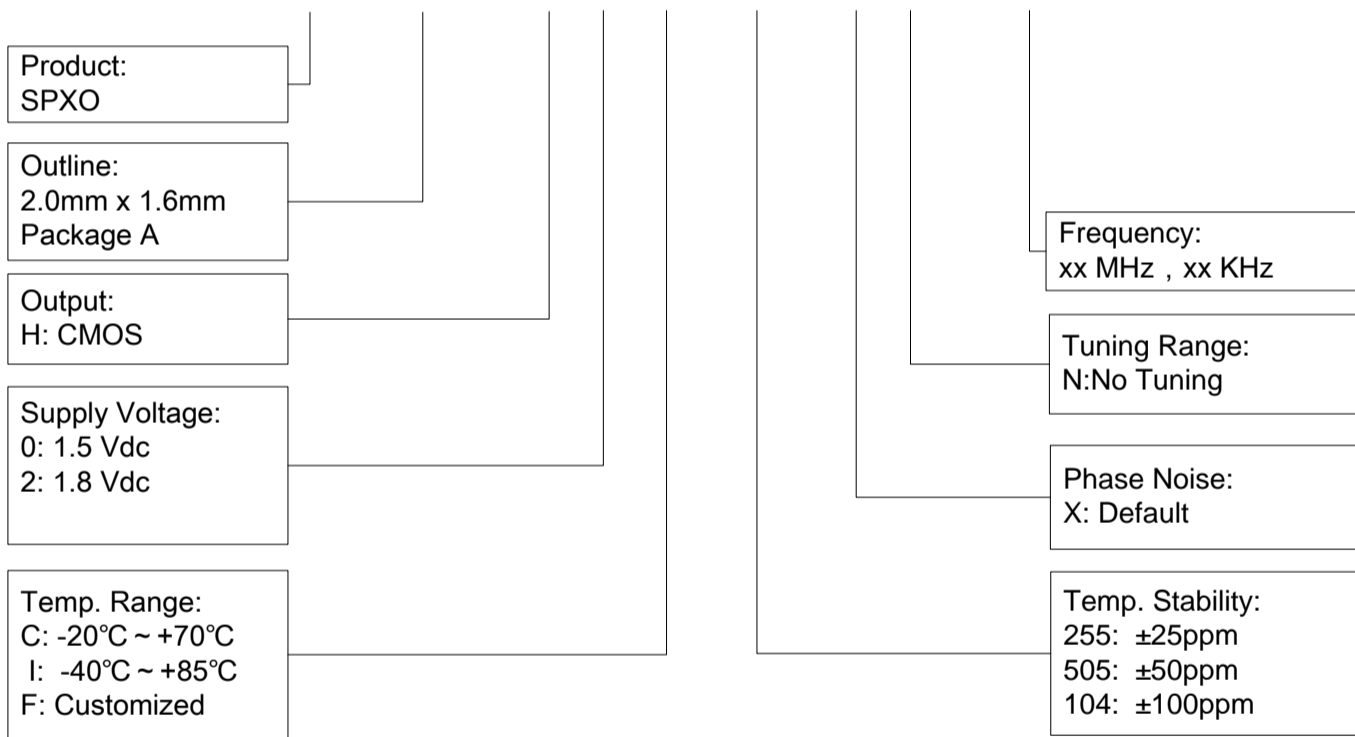
## Outline Dimension & Pin Connections

Unit: mm



## Ordering Guide

BS2016A X X X XXX X X XX.XX



**Example: BS2520AD3I505CN20**

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