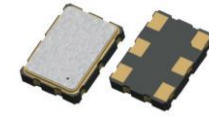


**Features**

- Typical 2.5 x 2.0 x 0.81 mm ceramic SMD package
- Conforms to AEC-Q100
- Operation supply voltage: 1.8V, 2.5V and 3.3V
- FASTXO series, Fast delivery at any frequency
- Tri-state enable/disable.
- Frequency Stability  $\pm 20\text{ppm}$  over  $-40^\circ\text{C}$  to  $105^\circ\text{C}$
- Pb-free/RoHS compliant

**Typical Application**

- Computer Peripherals
- Set-top Box , HDTV
- DSC, PDA


**BS2520A Series**

Parameter	3.3v		2.5V		1.8V		Unit	Conditions	
	Min.	Max.	Min.	Max.	Min.	Max.			
Supply Voltage Variation	VDD-5%	VDD+5%	VDD-5%	VDD+5%	VDD-5%	VDD+5%	V		
Frequency Range	1	200	1	200	1	125	MHz		
Vdd Sensitivity ( $\pm 5\%$ )	-2	2	-2	2	-2	2	ppm		
Supply Current (@15pf Loading)	-	27	-	27	-	25	mA	$1\text{MHz} \leq F_o < 30\text{MHz}$	
	-	27	-	27	-	25		$30\text{MHz} \leq F_o < 75\text{MHz}$	
	-	30	-	30	-	25		$75\text{MHz} \leq F_o < 125\text{MHz}$	
	-	35	-	35	-	-		$125\text{MHz} \leq F_o < 170\text{MHz}$	
	-	40	-	35	-	-		$170\text{MHz} \leq F_o \leq 200\text{MHz}$	
Output Level	Output High	90% Vdd	-	90% Vdd	-	90% Vdd	V		
	Output Low	-	10%Vdd	-	10%Vdd	-		10%Vdd	
Transition Time: Rise/Fall Time	-	3	-	4	-	4	nSec	$1\text{MHz} \leq F_o < 10\text{MHz}$	
	-	2	-	3	-	3		$10\text{MHz} \leq F_o < 125\text{MHz}$	
	-	2	-	2	-	-		$125\text{MHz} \leq F_o < 200\text{MHz}$	
Tri-State	Output Enable	0.7 x Vdd	-	0.7 x Vdd	-	0.7 x Vdd	V		
	Output Disable	-	0.3 x Vdd	-	0.3 x Vdd	-		0.3 x Vdd	
Duty Cycle	45	55	45	55	45	55	%		
Standby Current	-	400	-	400	-	400	uA	@PD Mode	
	-	20	-	20	-	20	mA	@OE Mode	
Output Loading	15		15		15		pF		
RMS Phase Jitter offset 12kHz to 20MHz @50MHz	Integer Mode	-	1.5	-	1.5	-	1.5	pSec	
	Fractional Mode	-	2.0	-	2.0	-	2.0		
Startup Time	-	8	-	8	-	8	mSec		
Aging	-	$\pm 3$	-	$\pm 3$	-	$\pm 3$	ppm	@ 25°C, First Year	
Storage Temp. Range	-55	125	-55	125	-55	125	°C		
FREQ. STABILITY vs. TEMP. RANGE		$\pm 15\text{ppm}$		$\pm 20\text{ppm}$		$\pm 25\text{ppm}$		$\pm 50\text{ppm}$	
	-10~+60	Conditional		Available		Available		Available	
	-20~+70	Not Available		Conditional		Available		Available	
	-40~+85	Not Available		Conditional		Available		Available	
	-40~+125	Not Available		Not Available		Not Available		Available	

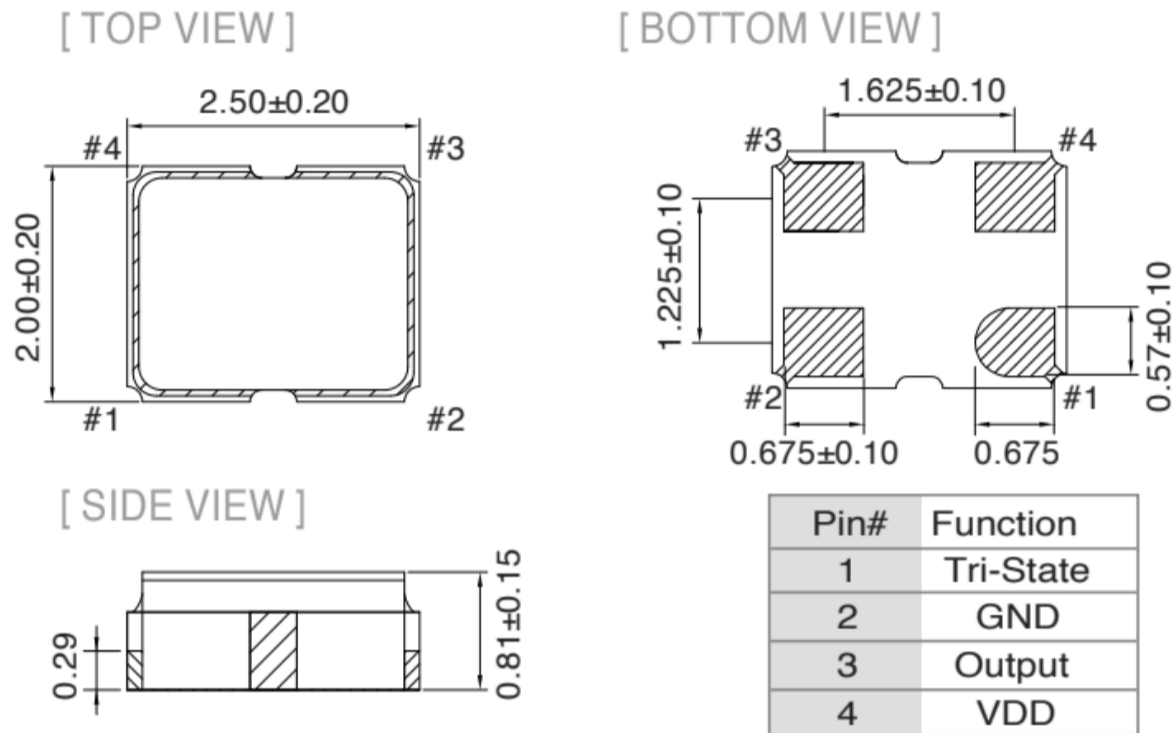
**Note: not all combination of options are available. Other specifications may be available upon request.**

## 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

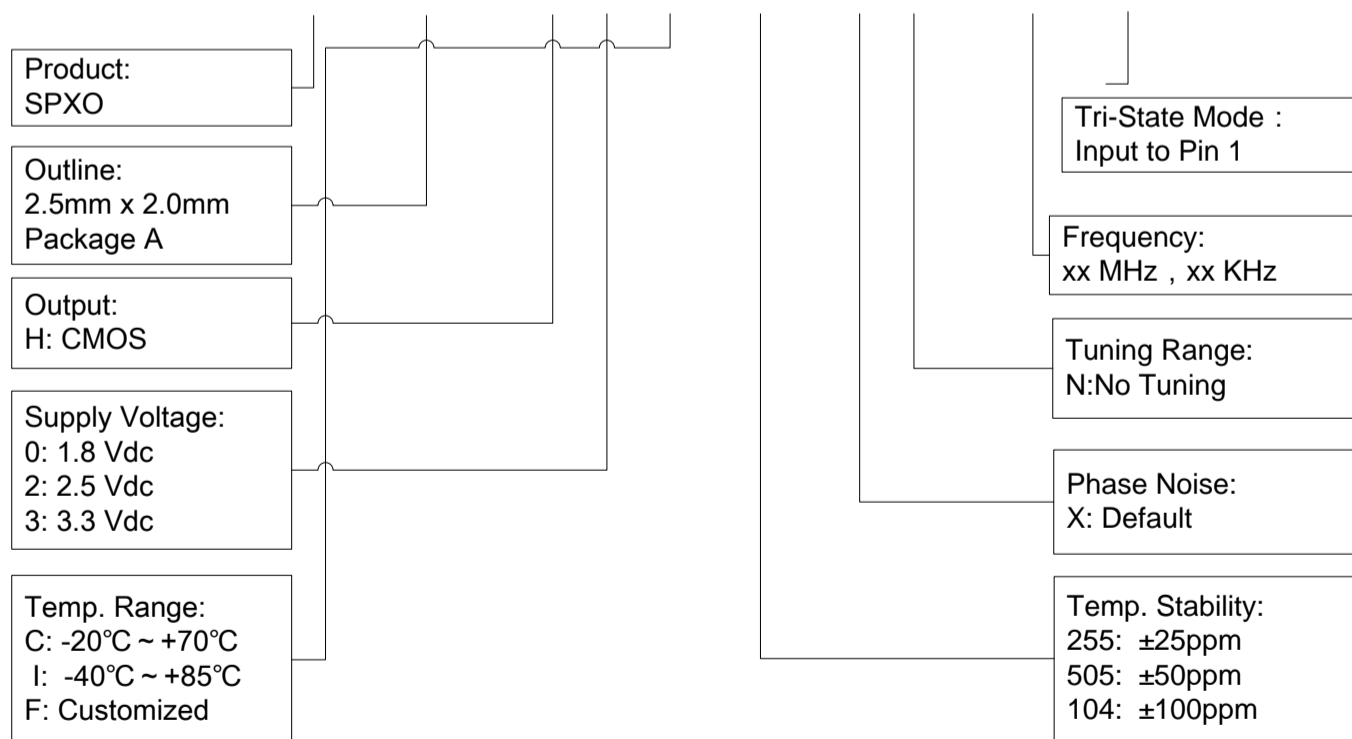
## Outline Dimension & Pin Connections

Unit: mm



## Ordering Guide

### BS2520A X X X XXX X XXX.XX X


**Example: BS2520AD3I505CN20**

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