

HIGH-STABILITY, LOW PHASE NOISE SMD VCOCXO

AOC2522B

Request Samples



Check Inventory



ESD Sensitive



25.4 x 22 x 12 mm
RoHS/RoHS II Compliant
MSL Level = 1

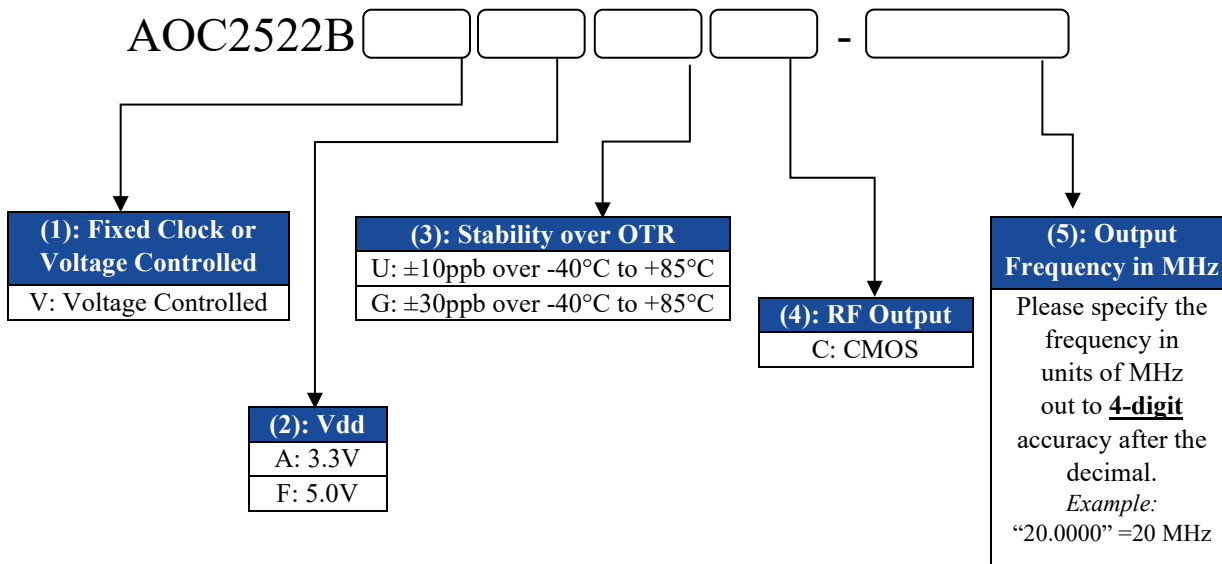
Features

- Extremely low long-term aging: ± 700 ppb over 20 years
- Stability over temperature: ± 10 ppb over -40°C to $+85^{\circ}\text{C}$
- 10, 12.8, 16.384, 20, 38.88, 40, 100 MHz standard available frequencies
- 25.4 x 22mm, 7-pin SMD reflow-solderable package
- 3.3V & 5V Vdd supply options
- SC-Cut, High “Q” resonator-based design

Applications

- Stratum 3 & Stratum 3E compliant
- Cellular infrastructure; Base stations
- Test & measurement equipment
- Switches & routers
- Time & frequency references
- Precision GPS

Part Identification



Part Number Example:

AOC2522BVAGC-20.0000

HIGH-STABILITY, LOW PHASE NOISE SMD VCOCXO

AOC2522B

Request Samples



Check Inventory



ESD Sensitive



25.4 x 22 x 12 mm
RoHS/RoHS II Compliant
MSL Level = 1

Electrical Specifications [\[Note 1\]](#)

Parameters	Min.	Typ.	Max.	Units	Notes
Frequency (Fc)	10		100	MHz	
Standard Available Frequencies	10, 12.8, 16.384, 20, 38.88, 40, 100			MHz	
Operating Temperature Range	-40		+85	°C	
Storage Temperature Range	-55		+100	°C	
Supply Voltage (Vdd)	3.135	3.3	3.465	V	
	4.75	5.0	5.25		
Power Consumption (warm-up)			3.2	W	
Power Consumption (steady state @+25°C)			1.0	W	
Frequency Accuracy (calibration) [Note 2]		±100	±200	ppb	10MHz ≤ Fc ≤ 40MHz
		±200	±300		Fc = 100MHz
Frequency Stability over Operating Temperature Range [Note 3]			±10	ppb	Over -40°C to +85°C
Frequency Stability vs. Supply Voltage Change (Vdd±5%)			±10	ppb	10MHz ≤ Fc ≤ 40MHz
			±15		Fc = 100MHz
Frequency Stability vs. Load Change			±5	ppb	Load=15pF±10%
Aging per Day		±1	±2	ppb	@+25°C
Aging per Year		±50	±100	ppb	
Aging 10 Years			±500	ppb	
All-Inclusive Frequency Tolerance over 20 Year Product Life [Note 4]			±700	ppb	
Warm-Up Time [Note 5]			15	min.	
Output Signal	LVCMOS				@ Vdd=3.3V
	HCMOS				@ Vdd=5.0V
Output Load	13.5	15	16.5	pF	Output to ground
Duty Cycle	45	50	55	%	@ 50% Vdd
Output High Voltage (VOH)	VOH	0.9*Vdd		V	
Output Low Voltage (VOL)					
Rise (Tr) / Fall (Tf) Time			5	ns	@10%Vdd-90%Vdd
Center Control Voltage (Vc)		Vdd/2		V	
Control Voltage Range	0		Vdd	V	
Frequency Pullability	±0.7			ppm	
Control Port Input Impedance	100			kΩ	
EFC Linearity			10	%	
Tuning Slope	Positive				
Reference Voltage (Vref)	2.6	2.8	3.0	V	@ Vdd=3.3V
	4.3	4.5	4.7		@ Vdd=5.0V



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 06-03-20

ABRACON IS
ISO9001-2015
CERTIFIED

HIGH-STABILITY, LOW PHASE NOISE SMD VCOCXO

AOC2522B

Request Samples



Check Inventory



ESD Sensitive



25.4 x 22 x 12 mm
RoHS/RoHS II Compliant
MSL Level = 1

Parameters	Min.	Typ.	Max.	Units	Notes
Phase Noise (@ 10.0000MHz)		-85	-80	dBc/Hz	Offset @1Hz
		-120	-115		Offset @10Hz
		-138	-135		Offset @100Hz
		-146	-145		Offset @1kHz
		-156	-150		Offset @10kHz
		-156	-150		Offset @100kHz
Phase Noise (@ 20.0000MHz)		-85	-80	dBc/Hz	Offset @1Hz
		-118	-110		Offset @10Hz
		-142	-135		Offset @100Hz
		-150	-145		Offset @1kHz
		-154	-150		Offset @10kHz
		-155	-150		Offset @100kHz
Phase Noise (@ 100.0000MHz)		-60	-55	dBc/Hz	Offset @1Hz
		-93	-80		Offset @10Hz
		-125	-120		Offset @100Hz
		-146	-140		Offset @1kHz
		-158	-152		Offset @10kHz
		-158	-155		Offset @100kHz

Note 1: Above table: All measurements at +25°C, nominal Vdd, nominal Vc, and nominal load, unless otherwise specified

Note 2: @ +25°C; relative to carrier; initial set-tolerance frequency at time of shipment, pre-reflow

Note 3: Over -40°C to +85°C; relative to stabilized frequency (at +25°C) after 1 hour of continuous operation, post-reflow

Note 4: Includes stability over temperature, initial frequency accuracy (calibration), load pulling, power supply variation, and 20 years aging

Note 5: @ +25°C; within ±100ppb of F where F is the stabilized frequency reached after 1 hour of continuous operation



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 06-03-20

ABRACON IS
ISO9001-2015
CERTIFIED

HIGH-STABILITY, LOW PHASE NOISE SMD VCOCXO

AOC2522B

Request Samples



Check Inventory

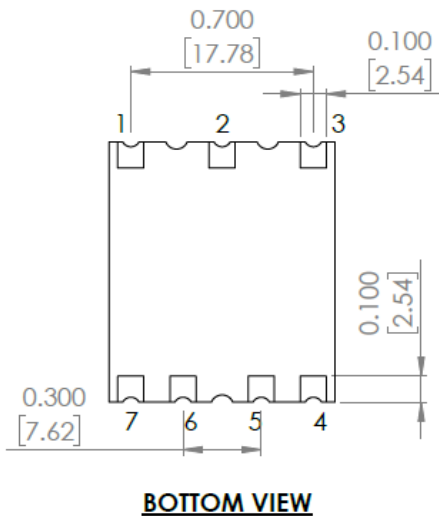
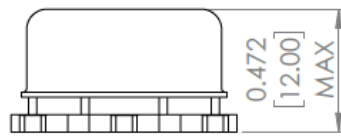
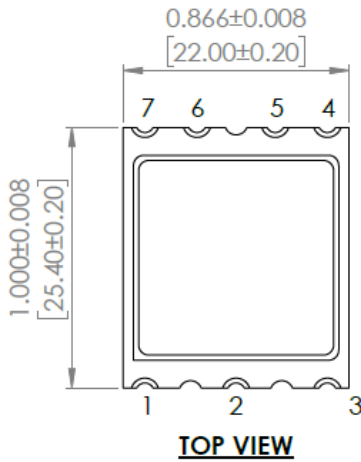


ESD Sensitive

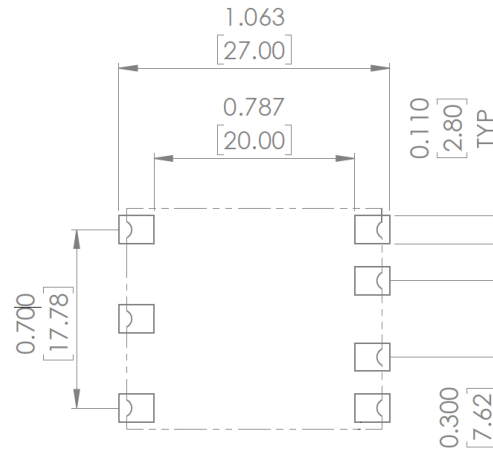


25.4 x 22 x 12 mm
RoHS/RoHS II Compliant
 MSL Level = 1

Mechanical Dimensions



RECOMMENDED LAND PATTERN



Pin #	Function
#1	Voltage-Control (Vc)
#2	Reference Voltage (Vref)
#3	Supply Voltage (Vdd)
#4	Output
#5	No Connect (NC)
#6	No Connect (NC)
#7	GROUND

Dimensions: inches [mm]

HIGH-STABILITY, LOW PHASE NOISE SMD VCOCXO

AOC2522B

Request Samples



Check Inventory

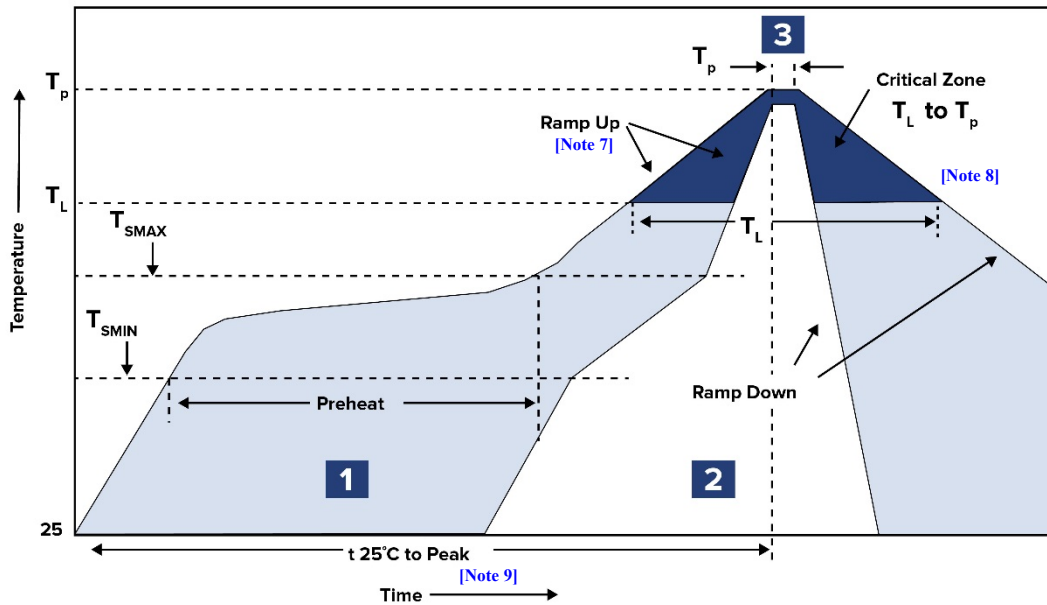


ESD Sensitive



25.4 x 22 x 12 mm
RoHS/RoHS II Compliant
MSL Level = 1

Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C	60 ~ 180 sec.
2	Reflow	T_L 217°C	60 ~ 150 sec.
3	Peak heat	T_P 260°C	10 sec. MAX

Note 6: Can withstand 2 times reflow; all temperatures refer to topside of the package, measured on the package body surface

Note 7: Ramp Up Rate ($T_L \rightarrow T_P$) = 3°C / sec. MAX

Note 8: Ramp Down Rate ($T_P \rightarrow T_L$) = 6°C / sec. MAX

Note 9: Time 25°C to Peak Temperature ($25^\circ\text{C} \rightarrow T_P$) = 8 minutes MAX



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 06-03-20

ABRACON IS
ISO9001-2015
CERTIFIED

HIGH-STABILITY, LOW PHASE NOISE SMD VCOCXO

AOC2522B

Request Samples



Check Inventory



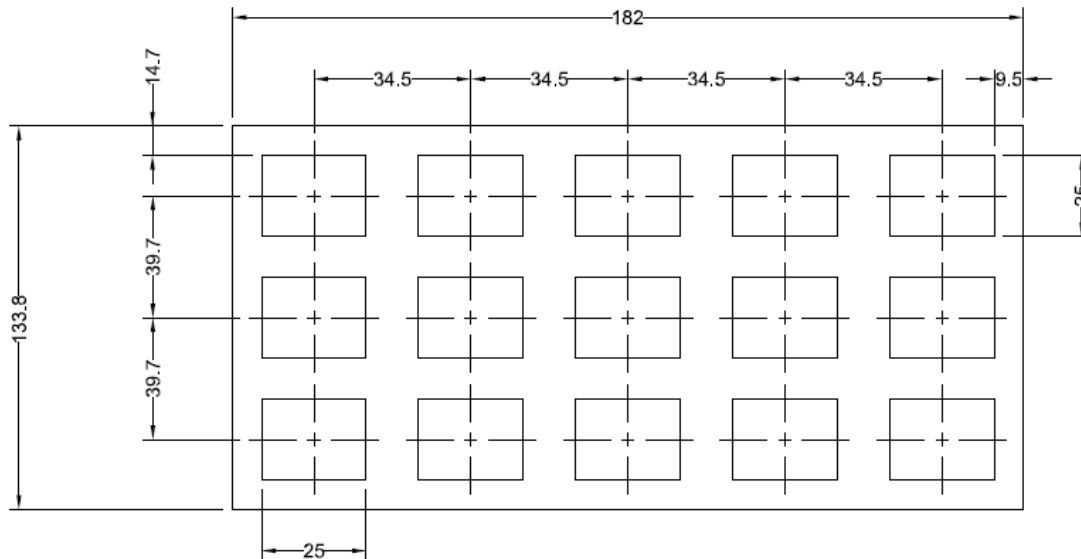
ESD Sensitive



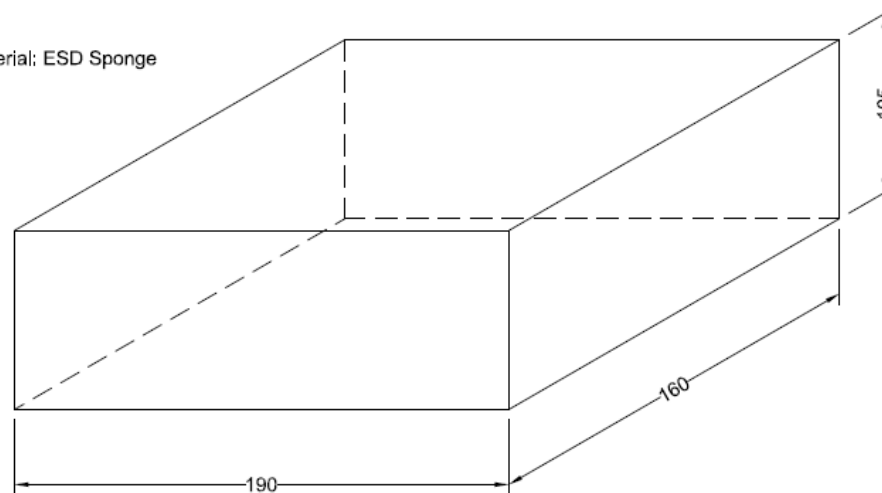
25.4 x 22 x 12 mm
RoHS/RoHS II Compliant
MSL Level = 1

Packaging

(15) units per tray



Trap Material: ESD Sponge



Dimensions: mm

ATTENTION: Abracon LLC's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependent Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon LLC is required. Please contact Abracon LLC for more information.



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 06-03-20

ABRACON IS
ISO9001-2015
CERTIFIED

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [OCXO Oscillators](#) category:

Click to view products by [Abracon](#) manufacturer:

Other Similar products are found below :

[AOCTQ5-V-10.000MHz-I3-SW](#) [AOCTQ5-X-10.000MHz-M10-SW](#) [AOCTQ5-V-10.000MHz-I5](#) [AOCTQ5-X-10.000MHz-I3-SW](#) [AOCTQ5-V-10.000MHz-M10](#) [SIT8102AC12-33E-98.30400Y](#) [8208AI23-33E26.000](#) [ECOC-2522-40.000-3GS](#) [AOCJY2A-10.000MHz-F-SW](#) [AOCJY3B-10.000MHz-E-SW](#) [AOCJY4A-10.000MHz-SW](#) [AOCJY3-10.000MHz-E-SW](#) [AOC1409VAUC-20.0000C](#) [AOC1409XAUC-20.0000C](#) [AOC2012VAJC-12.8000C](#) [AOC2012VAJC-25.0000C](#) [AOC2012XAJC-10.0000C](#) [AOC2012XAJC-12.8000C](#) [AOC2012XAJC-19.4400C](#) [AOC2012XAJC-25.0000C](#) [AOC2522BVAUC-20.0000](#) [AOC2522BVAUC-12.8000](#) [AOC2522BVAUC-38.8800](#) [AOCJY-100.000MHZ](#) [AOCJY-100.000MHz-E](#) [AOCJY-100.000MHz-F](#) [AOCJY1-100.000MHz](#) [AOCJY1-10.000MHZ](#) [AOCJY1-10.000MHz-E-SW](#) [AOCJY1A-100.000MHz](#) [AOCJY1A-10.000MHz](#) [AOCJY-20.000MHz](#) [AOCJY-20.000MHZ-F](#) [AOCJY2-10.000MHz](#) [AOCJY2-10.000MHZ-E](#) [AOCJY2-100.000MHZ-E](#) [AOCJY3-10.000MHz](#) [AOCJY-38.880MHz](#) [AOCJY3B-10.000MHz](#) [AOCJY3B-10.000MHz-E](#) [AOCJY4B-10.000MHz-SW](#) [AOCJY5-10.000MHz](#) [AOCJY6-10.000MHz-1](#) [AOCJY7TQ-X-100.000MHz-1](#) [AOCJYR-10.000MHz-M5625LF](#) [AOCJY1A-100.000MHz-E](#) [AOCJY2-10.000MHZ-E-SW](#) [AOCJY-38.880MHZ-E](#) [AOCJY3A-100.000MHZ-F](#) [LFOCXO063800BULK](#)