VA2 SERIES: 9.3X8.5mm VCXO OSCILLATOR, HCMOS, +5.0 VDC

DESCRIPTION: A crystal controlled, high frequency, highly stable, voltage controlled oscillator, adhering to HCMOS Standards. The output can be Tri-stated to facilitate testing or combined multiple clocks. This oscillator is ideal for today's automated assembly environments.

APPLICATIONS AND FEATURES:

- **Common Frequencies: 16.384 MHz; 19.44 MHz; 27 MHz; 38.88 MHz; 51.84 MHz; 77.76 MHz**
- **+5.0 VDC HCMOS**
- **Frequency Range from 1 to 100 MHz**

■ ELECTRICAL PARAMETERS:

PARAMETER	SYMBOL	TEST CONDITIONS*1	VALUE	UNIT
Nominal Frequency	fo		1.000 ~ 100.000	MHz
Supply Voltage	Vcc		+5.0 ±5%	VDC
Supply Current	Is		35.0 MAX	mA
Output Logic Type			HCMOS	
Load		Connected from output to ground	15	pF
Output Voltage Levels	Voh Vol		0.9 * Vcc MIN 0.1 * Vcc MAX	VDC VDC
Duty Cycle	DC	Measured at 50% of Vcc	40/60 to 60/40 or 45/55 to 55/45	%
Rise / Fall Time	tr / tf	Measured at 20/80% and 80/20% Vcc Levels	6.0 MAX *2	ns
Jitter	J	RMS, Fj = 12 kHz…20 MHz	1 TYP	ps
Overall Frequency Stability	Δf/fc	Op. Temp., Aging, Load, Supply and Cal. Variations	*3	ppm
Control Voltage Range	VC	Positive slope; 10% linearity MAX	0 to +5.0	VDC
Settability	Vfo		+2.5 ± 0.5	VDC
Absolute Pull Range	APR	Minimum guaranteed freq. pull over Δf/fc	See Part Numbering	ppm
Input Impedance	Zin		10 MIN	kΩ
Modulation Bandwidth	BW	-3 dB	10 MIN	kHz
Pin 1 Output Enabled Output Disabled	En Dis	High Voltage or No Connect Ground	0.7•Vcc MIN 0.3•Vcc MAX	VDC VDC
Absolute voltage range	Vcc(abs)	Non-Destructive	-0.5…+7.0	VDC

*1 Test Conditions Unless Stated Otherwise: Nominal Vcc, Nominal Load, +25 ±3°C
*2 Frequency Dependent
*3 Not All APR's Available With All Temperature Ranges—Please Consult Factory For Availability

■ ENVIRONMENTAL PARAMETERS:

PARAMETER	SYMBOL	TESTCONDITIONS*1	VALUE	UNIT
Operating temperature range	Ta		SEE PART NUMBER TABLE	°C
Storage temperature range	T(stg)		-55…+90	°C

■ PART NUMBERING SYSTEM:

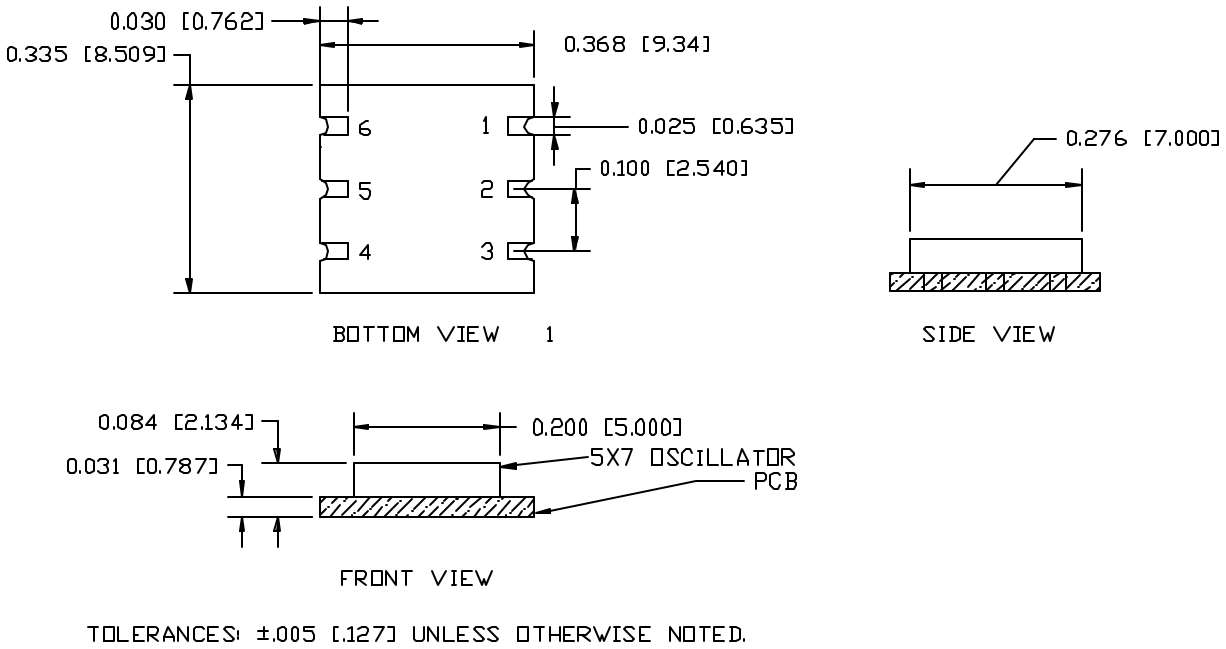
SERIES	SYMMETRY	TEMPERATURE RANGE (°C)	APR (ppml)	FREQUENCY (MHz)
VA2: VCXO with HCMOS Output	A: 40/60 to 60/40% T: 45/55 to 55/45%	R: 0…+50 S: 0…+70 U: -20…+70 W: 0….+85 V: -40…+85	F: ±32 ppm H: ±50 ppm K: ±70PPM G: ±80 ppm J: ±100 ppm L: ±130 ppm	1.000…100.000

EXAMPLE: VA2ASH-38.880

VCXO Oscillator, 9.3X8.5mm Package, +5.0 VDC Supply Voltage, HCMOS Output, Standard Symmetry, 0…+70°C Operating Temperature Range, ±50 ppm APR, 38.880 MHz

Please consult the factory for any custom requirements.

■ MECHANICAL PARAMETERS:



OUTLINE TOLERANCE:
±0.006" / 0.15mm
(Unless otherwise specified)

PIN FUNCTIONS:
[1] VOLTAGE CONTROL
[2] ENABLE / DISABLE
[3] CASE GROUND
[4] OUTPUT
[5] NO CONNECT
[6] SUPPLY VOLTAGE

MARKING:
TBD

***0.01μF external by-pass**
filter is recommended as seen on solder pattern.

- **TAPE AND REEL**