

5.0V SINEWAVE SMD VOLTAGE CONTROLLED OSCILLATOR

AVSS SERIES



14.3 x 8.7 x 5.0 mm

FEATURES:

- 14.3 x 8.7 x 5.0 True SMT – RoHS Compliant Reflow-able Package
- AT-Cut high “Q” resonator based design
- Available with -40°C to +85°C operating temperature range
- Excellent close-in phase noise (-135 dBc/Hz @ 1kHz offset – 28 MHz carrier)
- Designed with “Tuned Output Stage” to drive 50Ω systems

APPLICATIONS:

- Cellular Infrastructure
- Phase Locked Loop based systems & communication cards
- Hand held instruments requiring excellent receiver sensitivity
- Ideally suited for 50Ω systems requiring Low Total Harmonic Distortion
- Systems requiring Low power consumption into 50Ω's

STANDARD SPECIFICATIONS:

PARAMETERS	
ABRACON P/N	AVSS Series
Frequency Range	10.00 MHz to 100.00 MHz
Operating Temperature	-20° C to + 70° C (see options)
Storage Temperature	-40° C to + 85° C
Frequency Stability vs. Ambient Temp. Operating Temp. Aging (1st Year) Aging (10 Years) Vdd ± 5%	± 5 ppm ± 50 ppm max. (see options) ± 5 ppm max., ± 2ppm typ. ± 15 ppm max. ± 1 ppm
Supply Voltage (Vdd)	5.0 V ± 5%
Current Consumption (Idd)	35mA Max.
Output Load	50 Ω (Sinewave)
Output Power	0±2dBm
Voltage Control	0 to Vdd
Center Voltage Control	Vdd/2
Transfer Function	Positive
Modulation Linearity	+/-10% Max.
Start-up Time	5ms max.
Phase Jitter RMS	5ps max.
Pullability	± 25ppm (see options)
Spurious Response	-60 dBc max.
Harmonics	-15 dBc max.
Typical Phase Noise @ 28 MHz Carrier	-90 dBc/Hz @ 10Hz offset, -122 dBc/Hz @ 100Hz offset, -135 dBc/Hz @ 1kHz offset, -150 dBc/Hz @ 10kHz offset, -155 dBc/Hz @ 100kHz offset
3dB Modulation Bandwidth	20kHz typ, 10kHz min.

OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

AVSS - Frequency - □ - □ - □ - □ - □

Supply voltage	
A	5.0V ± 5%

Operating Temp.	
D	-10°C to 60°C
F	-30°C to 70°C
N	-30°C to 85°C
L	-40°C to 85°C

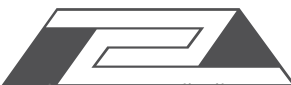
Packaging	
Blank	Bulk
T	Tape and Reel

Overall Freq. Stability	
Blank	± 50 ppm
R	± 25 ppm
K	± 30 ppm
H	± 35 ppm

Pullability	
Blank	± 25ppm
N40	± 40ppm
N50	± 50ppm
N75*	± 75ppm
N100*	± 100ppm

* = Please check with Abracon for availability

ABRACON IS
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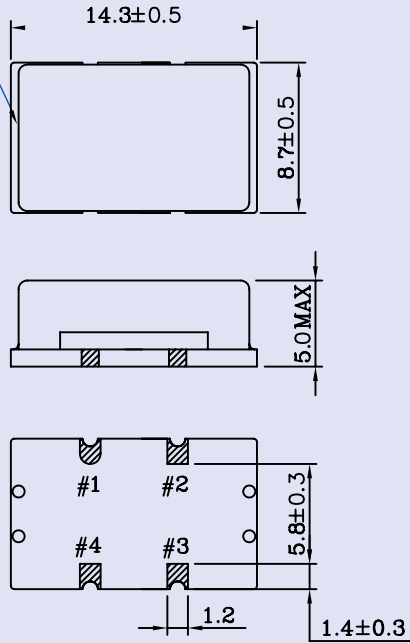
AVSS SERIES



14.3 x 8.7 x 5.0 mm

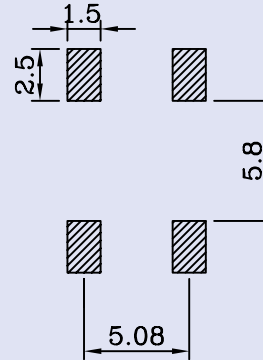
OUTLINE DRAWING:

Internal Trim Access Hole (Option)
 $\phi 2.5 \pm 0.3$



Dimensions: mm

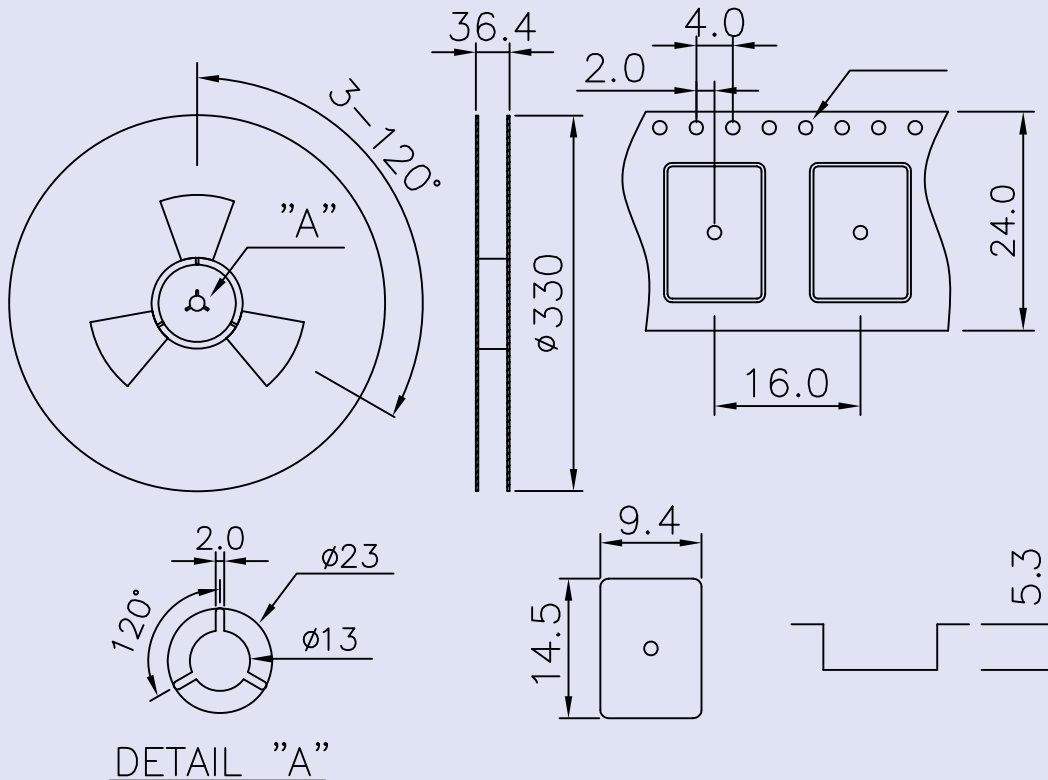
Recommended solder pattern



PIN	FUNCTION
1	Voltage Control
2	Ground
3	RF Output
4	VDD

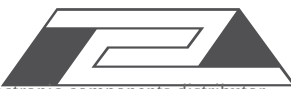
Note: It is recommended to use an approximately $0.01 \mu\text{F}$ bypass capacitor between PIN 2 and 4.

TAPE & REEL: Tape and reel 1,000pcs/reel



Dimensions: mm

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