

OVEN CONTROLLED CRYSTAL OSCILLATOR

AOCJY2 Series



RoHS
Compliant



21.0 x 21.0 x 11.0 mm

FEATURES:

- 21.0 x 21.0 x 11.0 mm Leaded- RoHS Compliant Reflow-able Package
- SC-Cut, High “Q” resonator based design
- Either Sinewave or CMOS RF output
- Available with ± 30 ppb over -40°C to $+75^{\circ}\text{C}$ operating temperature range
- Tighter Stabilities to ± 5.0 ppb over 0°C to $+50^{\circ}\text{C}$ also available
- Exceptional long-term Aging of ± 500 ppb max. over 10-Year Product Life
- Excellent close-in phase noise (-140 dBc/Hz Max. @100Hz offset; 10MHz carrier)

APPLICATIONS:

- Cellular Infrastructure
- Radar Systems
- Test & Measurement Equipment
- GPS Tracking with precision hold-over accuracy
- WiMax / WLAN

STANDARD SPECIFICATIONS:

| Parameters | Minimum | Typical | Maximum | Units | Notes |
|---------------------------------------------------------|------------------------------------------------------|---------------------|--------------|--------------------|------------------------------|
| RF Output | | | | | |
| Frequency | 10.00 | | 100.00 | MHz | Overall Frequency range |
| Standard Available Frequencies | 10.00, 12.80, 13.00, 26.00, 38.88, 40.00, 100.00 MHz | | | | |
| Waveform | | | | | |
| CMOS | | | | | |
| Level "1" (Logic High) | 0.9*Vdd | | | Volts | |
| Level "0" (Logic Low) | | | 0.1*Vdd | Volts | |
| Load | | 15 | | pf | |
| Rise & Fall Time | | | 6.0 | ns | |
| Duty Cycle | 45 | | 55 | % | |
| Waveform | | | | | |
| Sinewave | | | | | |
| Peak Power | 2.00 | | | dBm | |
| Output Load | | 50 | | Ω | |
| Short Term Stability | | 2×10^{-10} | | /second | Alan Variance |
| Operable Temperature Range | -40 | | 75 | $^{\circ}\text{C}$ | <i>See Stability Options</i> |
| Frequency Stability Options | | | | | |
| 0°C to $+50^{\circ}\text{C}$ (Note #1) | | | ± 5.00 | ppb | Default Spec. |
| -20°C to $+70^{\circ}\text{C}$ | | | ± 10.00 | ppb | Option “E” |
| -40°C to $+75^{\circ}\text{C}$ | | | ± 30.00 | ppb | Option “F” |
| Frequency Stability vs. Supply Voltage (Vdd $\pm 5\%$) | | | ± 5.00 | ppb | |
| Frequency Stability vs. Load Variation ($\pm 10\%$) | | | ± 5.00 | ppb | |
| Warm-Up @ 25°C | | | ± 100.00 | ppb | In ≤ 3 -minutes |
| Power Consumption @ turn on | | | 3.00 | Watts | |
| Power Consumption Steady State | | | 1.00 | Watts | |
| Supply Voltage (Vdd) | 3.13 | 3.30 | 3.46 | Volts | <i>See Options</i> |

Note #1: ± 5.00 ppb stability is only available for $F_0 \leq 40\text{MHz}$. For frequencies above 40MHz, the best available frequency stability is ± 10.00 ppb over -20°C to $+70^{\circ}\text{C}$

OVEN CONTROLLED CRYSTAL OSCILLATOR

AOCJY2 Series



RoHS
Compliant



21.0 x 21.0 x 11.0 mm

STANDARD SPECIFICATIONS - continued.

| Parameters | Minimum | Typical | Maximum | Units | Notes |
|----------------------------------------|--------------|----------|--------------|-------|--------------------------------|
| Aging | | | | | |
| Daily | | | ±1.0 | ppb | |
| First Year | | | ±100 | ppb | |
| 10-Years | | | ±500 | ppb | |
| Spectral Content | | | | | |
| Spurious Response | | | -35 | dBc | |
| Phase Noise (10MHz Carrier) @ 5V | | | | | |
| @ 1 Hz offset | | | -90 | dBc | |
| @ 10 Hz offset | | | -120 | dBc | |
| @ 100 Hz offset | | | -140 | dBc | |
| @ 1,000 Hz offset | | | -145 | dBc | |
| @ 10,000 Hz offset | | | -150 | dBc | |
| Electrical Frequency Adjustment | | | | | |
| Control Voltage Range (Vc) | 0.0 | | Vdd | Volts | |
| Frequency Pull Range | ±0.70 | | | ppm | |
| Frequency Pull Slope | | Positive | | | |
| Control Voltage Port Impedance | 10 | | | kΩ | Control Voltage Port Impedance |
| Center Control Voltage | (Vdd/2) -0.5 | Vdd/2 | (Vdd/2) +0.5 | Volts | Center Control Voltage |
| Reference Voltage (Vdd=3.3V) | 2.70 | 2.80 | 2.90 | Volts | Output @ Pin#5 |
| Reference Voltage (Vdd=5.0V) | 4.40 | 4.50 | 4.60 | Volts | Output @ Pin#5 |
| Storage Temperature | -40 | | +100 | °C | |

OPTIONS AND PART IDENTIFICATION (Left blank if standard)

AOCJY2 - - MHz - -

| Supply Voltage Option |
|-----------------------|
| Blank : 3.30V |
| A : 5.00V |

| Frequency in MHz |
|---------------------|
| Such as; 10.000 MHz |
| 26.000 MHz |
| 100.000 MHz |

| Temperature Options |
|---------------------|
| E : -20°C to +70°C |
| F : -40°C to +75°C |

| RF Output Options |
|-------------------|
| Blank : CMOS |
| SW : Sinewave |

OVEN CONTROLLED CRYSTAL OSCILLATOR

AOCJY2 Series



RoHS
Compliant



21.0 x 21.0 x 11.0 mm

OUTLINE DIMENSIONS



Bottom View



| PIN | FUNCTION: |
|-----|----------------------|
| 1 | Power Supply |
| 2 | Output |
| 3 | GND |
| 4 | Control Voltage |
| 5 | Reference Voltage/NC |

Unit:mm

PACKAGING: (20) units per tray



REFLOW PROFILE:



| | |
|--------------------------------------------------------|---------------------------|
| T _S max to T _L (Ramp-up Rate) | 3°C/second max. |
| Preheat | |
| Temperature Min. (T _S Min.) | 150°C |
| Temperature Typical (T _S Typ.) | 175°C |
| Temperature Max. (T _S Max.) | 200°C |
| Time (t _s) | 60 ~ 180 seconds |
| Ramp-up rate (T _L to T _P) | 3°C/second max. |
| Time Maintained Above: | |
| --Temperature (T _L)/Time (T _L) | 217°C/60 ~ 150 seconds |
| Peak Temperature (T _P) | 250°C max. for 10 seconds |
| Target Peak Temperature (T _P Target) | 250°C +0/-5°C |
| Time within 5°C of actual peak (t _p) | 20 ~ 40 seconds |
| Ramp-down Rate | 6°C/second max. |
| Tune 25°C to Peak Temperature (t) | 8 minutes max. |

ATTENTION: Abracon Corporation'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-dependant 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 Corporation is required. Please contact Abracon Corporation for more information.

ABRACON IS
ISO9001:2008
CERTIFIED



Visit www.abracon.com for Terms & Conditions of Sale **Revised: 07.03.11**
30332 Esperanza, Rancho Santa Margarita, California 92688
tel 949-546-8000 | fax 949-546-8001 | www.abracon.com



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.