

LOW JITTER CRYSTAL OSCILLATOR



14.3 X 8.7 X 5.5 mm

ABLJO

RoHS/RoHS II Compliant and Pb free



FEATURES:

- High "Q", 3rd Overtone Crystal Technology
- Ultra Low Jitter performance 0.10 ps Max. (12kHz to 20MHz)
- Standard LVC MOS RF Output
- Wide Operating Temperature (-40°C to +85°C) standard
- ±40 ppm Max. All inclusive Stability (including Aging) over 10-years
- (17) Standard Frequencies between 80MHz & 200MHz
- 9x14mm RoHS Compliant SMT package

APPLICATIONS:

- Avionics
- COTS - Military communications
- Low Phase Noise Signal Sources
- High Definition TV
- Test & Measurement
- Ultra Low Jitter RF Communication Circuitry

STANDARD SPECIFICATIONS

| Parameters | Minimum | Typical | Maximum | Units | Notes |
|---|---|---------|---------------------|---------------|-----------------------|
| RF Output Frequency Range | 80.00 | | 200.00 | MHz | |
| Standard Available Frequencies | 80.00MHz, 81.920MHz, 92.160MHz, 96MHz, 98.304MHz, 100MHz, 106.250MHz, 120MHz, 122.880MHz, 125MHz, 150MHz, 155.520MHz, 156.250MHz, 160MHz, 184.32MHz, 187.5MHz, and 200MHz | | | | |
| Supply Voltage | 3.135 | 3.300 | 3.465 | Volts | |
| Current Drain | | | | | |
| 80MHz ~ 99.999MHz | | | 25.00 | mA | |
| 100MHz ~ 149.999MHz | | | 30.00 | mA | |
| 150MHz ~ 200MHz | | | 40.00 | mA | |
| Waveform | LVC MOS | | | | |
| V _{OH} | 0.1*V _{dd} | | | Volts | |
| V _{OL} | | | 0.1*V _{dd} | Ω | |
| Symmetry | 45 | 50 | 55 | % | |
| Rise & Fall Times | | | 3.0 | ns | |
| Operating Temperature Range | -40 | | +85 | °C | |
| Frequency Stability | | | | | |
| Over (-40° C to +85°C) | | | ±25.00 | ppm | |
| ALL effects, including Aging | | | ±40.00 | ppm | |
| Storage Temperature Range | -40 | | +85 | °C | |
| Aging | | | | | |
| First Year | | | ±2.00 | ppm | |
| 5-Years | | | ±5.00 | ppm | |
| 10-Years | | | ±7.00 | ppm | |
| Phase Noise (100MHz Carrier) | | | | | V _{dd} =3.3V |
| @ 10 Hz offset | | -70 | | dBc/Hz | |
| @ 100 Hz offset | | -105 | | dBc/Hz | |
| @ 1,000 Hz offset | | -135 | | dBc/Hz | |
| @ 10,000 Hz offset | | -144 | -140 | dBc/Hz | |
| @ 25,000 Hz offset | | -150 | -145 | dBc/Hz | |
| @ 100,000 Hz offset | | -155 | -150 | dBc/Hz | |
| Integrated RMS Phase Jitter (12kHz ~ 20MHz BW) | | 75 | 100 | Femto Seconds | 0.10 ps Max. |



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STANDARD SPECIFICATIONS - continued

| Parameters | Minimum | Typical | Maximum | Units | Notes |
|---------------------------------|---------|----------|---------|-------|-------|
| Electrical Frequency Adjustment | | | | | |
| Control Voltage Range (Vc) | 0.0 | | 3.30 | Volts | |
| Frequency Pull Range | ±45.00 | | | ppm | |
| Frequency Pull Slope | | Positive | | | |
| Control Voltage Port Impedance | 10 | | | kΩ | |
| Center Control Voltage | 1.45 | 1.65 | 1.85 | Volts | |
| Control Port Linearity | | | ±10 | % | |

TYPICAL PHASE NOISE PERFORMANCE @ 156.25MHZ CARRIER



OPTIONS AND PART IDENTIFICATION:

ABLJO - [] - Frequency (MHz) - [] []

Frequency Pull Option

| | |
|-------|----------------------|
| Blank | XO (Fixed Frequency) |
| V | VCXO (±45 ppm min.) |

Tape & Reel Options

| | |
|-------|-------------------------|
| Blank | < 250 units on cut tape |
| T | 1,000 units per reel |
| T2 | 250 units per reel |

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OUTLINE DIMENSIONS:



Recommended Soldering Pattern



| Pin | Function | |
|-----|----------|------|
| | VCXO | XO |
| 1 | Vc | N.C. |
| 2 | N.C. | |
| 3 | GND | |
| 4 | Output | |
| 5 | N.C. | |
| 6 | Vdd | |

Dimensions: inches (mm)

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. |

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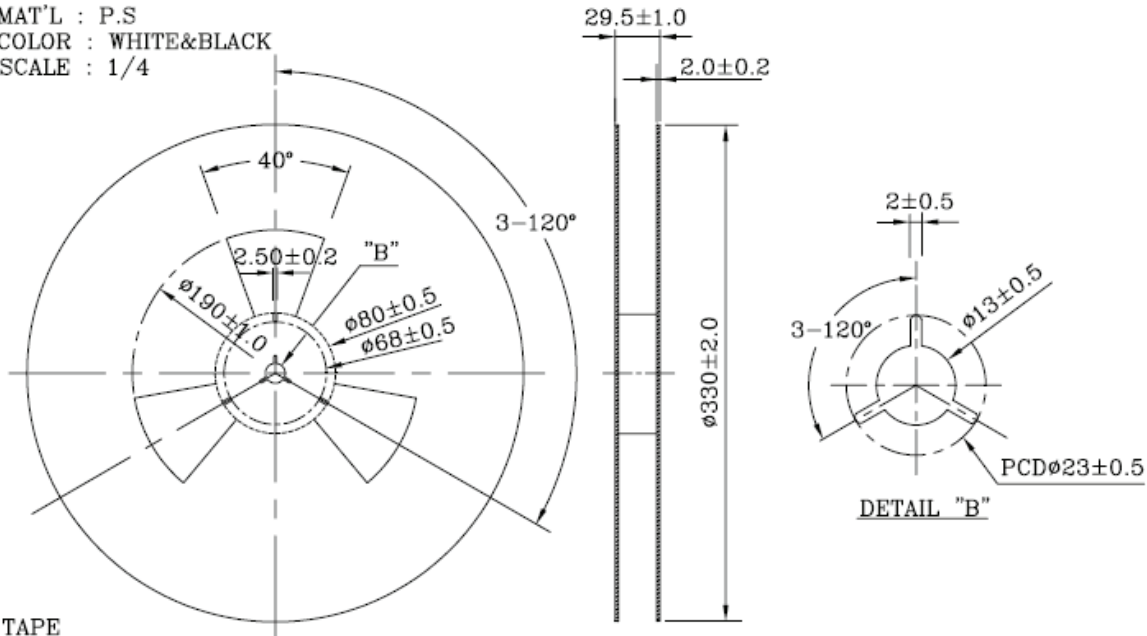


TAPE & REEL:

Packaging: (1,000) units per reel standard, (250) units per reel available (option # T2)

REEL

MAT'L : P.S
COLOR : WHITE&BLACK
SCALE : 1/4



TAPE

MAT'L : P.S
COLOR : WHITE&BLACK
REFERENCE R=0.5



1. COVER TAPE : 21mm(WIDTH) * 0.06mm(t) MAT'L : PET
2. COLOR : WHITE

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30332 Esperanza, Rancho Santa Margarita, California 92688

tel 949-546-8000 | fax 949-546-8001 | www.abracon.com



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- 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.