

PROGRAMMABLE CRYSTAL OSCILLATOR

AP3S



RoHS
Compliant



3.2 x 2.5 x 1.1mm

FEATURES:

- Performance comparable to fixed frequency oscillator
- Lowest peak-to-peak jitter
- Low supply current
- Short lead time
- Suitable for mass production
- Alternative to long lead-time XO's

For Small
Quantities,
Delivery Time
is 1-5 days

ELECTRICAL SPECIFICATIONS:

| 3.3V, 2.5V, 1.8V OPERATION | | | | |
|---|--|---------------------------------------|----------|---------------------------------------|
| Characteristics | Unit | Minimum | Typical | Maximum |
| Frequency Range 3.3V | MHz | 0.8 | -- | 110 |
| 2.5V | MHz | 0.8 | -- | 90 |
| 1.8V | MHz | 0.8 | -- | 75 |
| Operation Temp. Range * (See Options) | °C | -10 | -- | 60 |
| Frequency Stability Over Operating Temp * (See Options) | ppm | -100 | -- | 100 |
| Input Voltage (Operating Vdd) 3.3V | V | 2.97 | 3.3 | 3.63 |
| 2.5V | V | 2.25 | 2.5 | 2.75 |
| 1.8V | V | 1.62 | 1.8 | 1.98 |
| Input Current 3.3V | mA | -- | -- | 25 |
| 2.5V | mA | -- | -- | 15 |
| 1.8V | mA | -- | -- | 10 |
| Output Type | CMOS | | | |
| Output Load | pF | -- | 15 | -- |
| "0" level | V | -- | -- | 3.3V = 0.33, 2.5V = 0.25, 1.8V = 0.18 |
| "1" level | V | 3.3V = 2.97, 2.5V = 2.25, 1.8V = 1.62 | | -- |
| Symmetry | % | 45 | 50 | 55 |
| Standby Current | uA | -- | -- | 10 |
| Rise Time (10%->90% Vdd) | nSec | -- | 2.5 | -- |
| Fall Time (90%->10% Vdd) | nSec | -- | 2.5 | -- |
| Tri-state Function (Input to pin 1) | pin 1 : High or Open , pin 3 : Enable pin 1 : Low , pin 3 : Disable | | | |
| Jitter peak-to-peak** | pSec | -- | 30 to 70 | -- |

* Inclusive of calibration @ 25°C, operating temperature range, input voltage variation, aging, shock, and vibration

** Jitter performance depends on programming parameter and output frequency. Please contact ABRACON for additional info.

OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

AP3S□-Frequency-□-□-□-□

| Supply Voltage | | Operating Temp. | | Freq. Stability | | PIN 1(OPTION) | | Packaging | |
|----------------|-------|-----------------|----------------|-----------------|--------|----------------------|-----|-----------|---------------|
| Blank* | 3.3 V | I | 0°C to +50°C | Y(*) | ±10ppm | **Blank | OE | B | Bulk |
| 1 | 2.5 V | D | -10°C to +60°C | J(**) | ±20ppm | **B | PDB | T | Tape and Reel |
| 2 | 1.8 V | E | -20°C to +70°C | R | ±25ppm | Ask for Tube Package | | | |
| | | F | -30°C to +70°C | K | ±30ppm | | | | |
| | | N | -30°C to +85°C | H | ±35ppm | | | | |
| | | L | -40°C to +85°C | B | ±40ppm | | | | |
| | | | | C | ±50ppm | | | | |

*3.3V : Standard

* Available for 0°C to +50°C and -10°C to +60°C only.

** Contact ABRACON for -40°C to +85°C.

** OE: Tri-state the output buffer.

** PDB: Tri-state the output buffer and shut off the oscillator, <10µA when PDB enabled.



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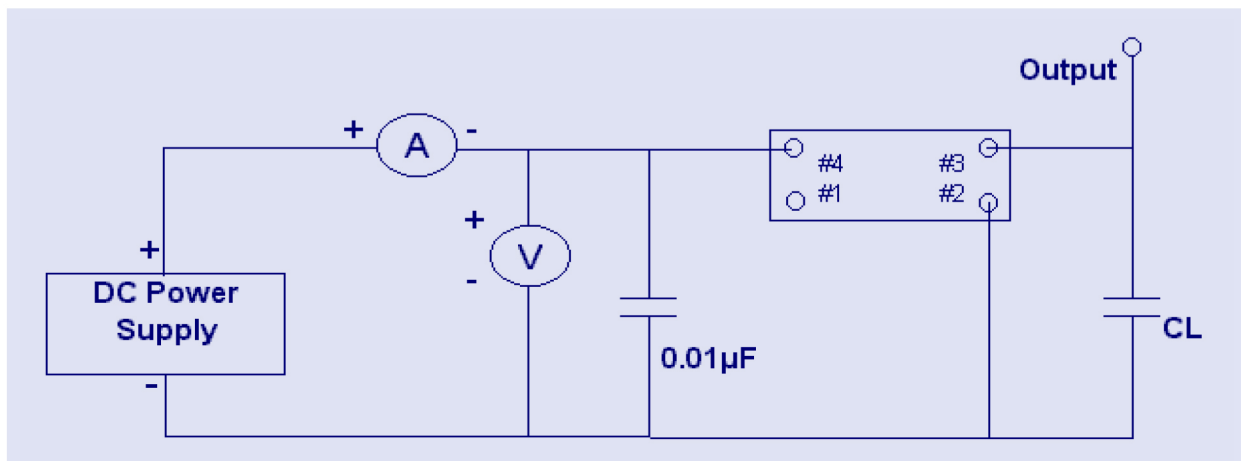


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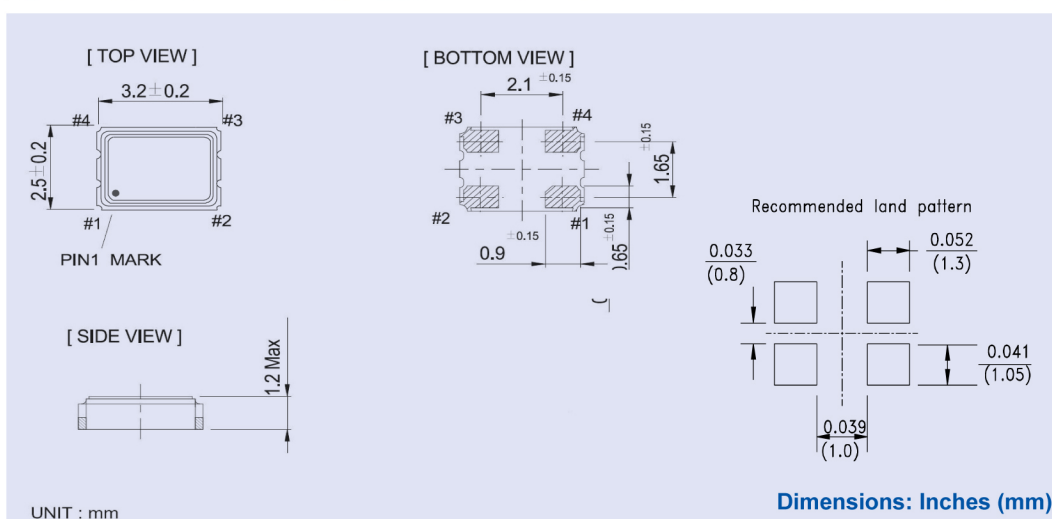


3.2 x 2.5 x 1.1mm

TEST CIRCUIT:



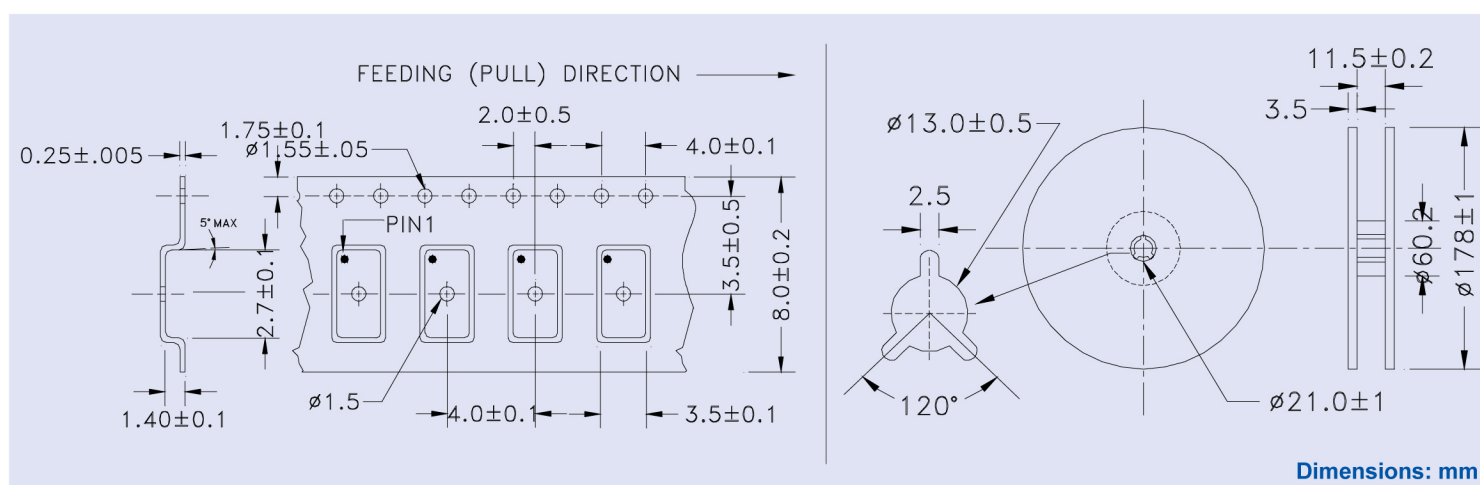
OUTLINE DRAWING:



| PIN | CONNECTION |
|-----|---------------|
| # 1 | STAND-BY / OE |
| # 2 | GND/CASE |
| # 3 | OUTPUT |
| # 4 | VDD |

Note: It is recommended to use an approximately 0.01µF bypass capacitor between PIN 2 and 4.

TAPE & REEL:



ABRACON IS
ISO 9001 / QS 9000
CERTIFIED



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