



Temperature Compensated Crystal Oscillator

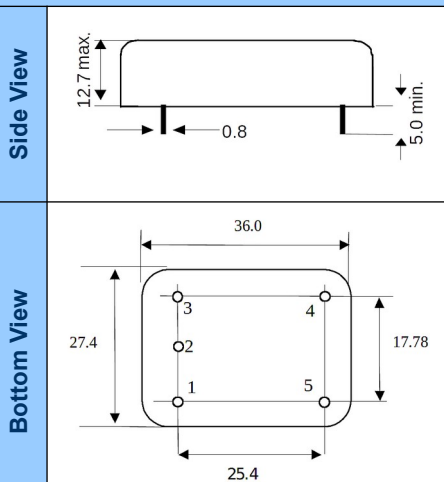
TCXO 1053

Features

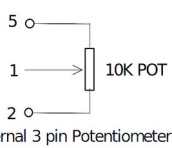
- Construction with Ruggedised Crystal
- Construction with 3 tier mount Crystal
- Custom Options available
- RoHS Compliant

Mechanical Specifications

Outline

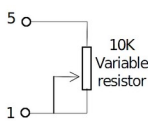


Option P



External 3 pin Potentiometer

Option R



External 2 pin variable resistor

▲ All dimensions are in mm. Tolerance is ± 0.1 mm, unless otherwise specified.

| Tests | Condition |
|--------------------|---|
| Vibration (Random) | 20 ~ 100 Hz, 6 dB/ Octave; 100 ~ 1000 Hz Constant 1000 ~ 2000 Hz, -6 dB/ Octave |
| Shock | 40g, 11 ms Half SineWave |

| Specifications | Variant | | | Option Codes |
|------------------------------------|--|---|---|-----------------------|
| | H | T | S | |
| Series: | TCXO 1053 | | | |
| Frequency Range: | 1 MHz ~ 150 MHz 8 MHz ~ 150 MHz | | | |
| Output Drive: | 15 pF HCMOS / TTL SineWave Other | | | Specify |
| Output Levels: | Logic '0' = +0.5 V (max.), '1' = +4.0 V (min.) Logic '0' = +0.4 V (max.), '1' = +2.4 V (min.) + 0 dBm (min.) into 50 Ω | | | |
| Rise/ Fall time: | 10 ns (max.) | | | |
| Waveform Symmetry: | 40:60 (max.) @ 2.5 V 40:60 (max.) @ 1.4 V | | | |
| Frequency Accuracy: | ± 1 ppm (max.) at 25°C $\pm 2^\circ\text{C}$ | | | |
| Temperature Stability: | Select from Table 1 | | | Specify |
| Operating Temperature Range (OTR): | Select from Table 1 | | | Specify |
| Supply Voltage, V_{dd} : | Select from Table 2 +5.0 V ($\pm 5\%$) +12.0 V ($\pm 5\%$) Others | | | 5 C Specify |
| Supply Current: | 20 mA (max.) (<20 MHz) 30 mA (max.) (20 ~ 50 MHz) 50 mA (max.) (>50 MHz) | | | |
| Supply Voltage Stability: | ± 0.1 ppm (max.) | | | |
| Frequency Adjustment Option: | ± 5 ppm (min.) by External Control Voltage ($0.5 V_{dd} \pm 0.5 V_{dd}$) ± 3 ppm (min.) by Internal Trimmer ± 5 ppm (min.) by external 3 pin Potentiometer ± 5 ppm (min.) by external 2 pin Variable Resistor None | | | V I P R N |
| Aging: | ± 1 ppm (max.) for First Year | | | |
| Storage Temperature Range: | -55°C to +125°C | | | |

■ Standard, □ Optional – please specify required code(s) when ordering.

Pin Configuration:

| Pin | Option N & I | Option V | Option P | Option R |
|-----|----------------|-----------------|------------------------|--------------------------------------|
| 1 | No Connection | Control Voltage | POT Wiper End | Variable Resistor one end |
| 2 | No Connection | No Connection | POT one End | No Connection |
| 3 | Supply Voltage | Supply Voltage | Supply Voltage | Supply Voltage |
| 4 | Output | Output | Output | Output |
| 5 | Ground | Ground | Ground (POT other end) | Ground (Variable Resistor other end) |

Temperature Compensated Crystal Oscillator

Table 1

| OTR Codes | Stability Codes | | X | Y | Z | P |
|-----------|-----------------------------|----------------|-----------|---------|-----------|---------|
| | Temperature Stability | | ± 0.5 ppm | ± 1 ppm | ± 1.5 ppm | ± 2 ppm |
| A | Operating Temperature Range | 0°C to +50°C | | | | |
| B | | 0°C to +60°C | | | | |
| F | | 0°C to +70°C | | | | |
| D | | -10°C to +60°C | | | | |
| E | | -10°C to +70°C | | | | |
| C | | -20°C to +70°C | | | | |
| G | | -30°C to +80°C | | | | |
| H | | -30°C to +85°C | | | | |
| I | | -40°C to +85°C | | | | |

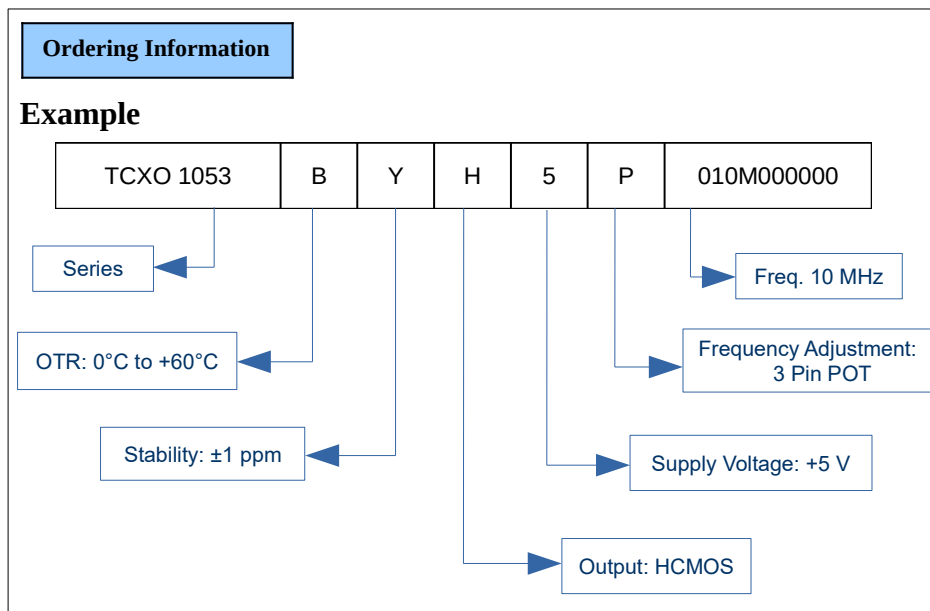
Denotes Available Denotes not Available

Table 2

| Supply Voltage | 3.3 V | 5 V | 9 V | 10 V | 12 V | 15 V |
|----------------|-------|-----|-----|------|------|------|
| Code | 3 | 5 | 9 | A | C | F |

Typical SSB Phase Noise

| | |
|----------|--------------|
| @ 10 Hz | - 65 dBc/ Hz |
| @ 100 Hz | -100 dBc/ Hz |
| @ 1 KHz | -125 dBc/ Hz |
| @ 10 KHz | -130 dBc/ Hz |



Specifications subject to change without notice

Rev. Date: 3rd April 2021

Note: Not all combination of options are available. Other specifications may be available upon request.

Doc. No.: AE/DS/P.O/005

ISSUE 00

REVISION 01

Page 2 of 2

Andhra Electronics Pvt. Ltd.

Plot No.: 34 & 35, IDA,
Kakinada-533 005
Andhra Pradesh, India
URL: www.andhraelec.com

Phone: +91 884 234 2203
Fax: +91 884 234 1145
e-mail: info@andhraelec.com