fordahl

*FREQUENCY CONTROL PRODUCTS*

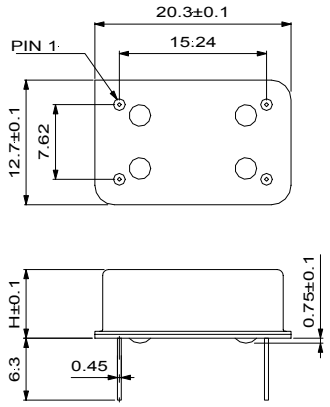
# DIL 14 PACKAGE TCXO

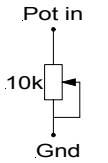
# DFA 14-K (5 V) & DFA 14-L (3.3 V)

| KEY FEATURES |
|---|
| **2 to 52 MHz** |
| **Tight stability** |
| **Analogue temperature compensation** |
| **APPLICATIONS** |
| **SDH/Sonet/Microwave** |

| Function | DFA 14 |
|---|---|
| NC/Pot in/Vco | 1 |
| GND | 7 |
| Output | 8 |
| Vcc | 14 |

H = 8.50 mm




Option Y

| TYPE | DFA 14-KH | DFA 14-KO | DFA 14-LH | DFA 14-LO |
|---|---|---|---|---|
| Frequency Range | 2 to 52 MHz | 2 to 52 MHz | 2 to 45 MHz | 2 to 45 MHz |

| ELECTRICAL SPECIFICATIONS | | | | |
|---|---|---|---|---|
| supply voltage | 5 V ± 5 % | 5 V ± 5 % | 3.2 V to 3.6 V | 3.2 V to 3.6 V |
| supply current ( no loa)d ≤ 25 MHz | ≤ 10 mA | ≤ 5 mA | ≤ 5 mA | ≤ 5 mA |
| ≤ 35 MHz | ≤ 20 mA | ≤ 20 mA | ≤ 15 mA | ≤ 15 mA |
| > 35 MHz | ≤ 30 mA | ≤ 30 mA | ≤ 20 mA | ≤ 20 mA |
| output load | HCMOS 15 pF or 2 TTL | clipped sine 20kΩ//5 pF | HCMOS 15 pF or 1 TTL | clipped sine 20kΩ//5 pF |
| duty cycle @ 2.5V (LH @ 1.65 V) | ≤ 45/55...55/45 % | | ≤ 45/55...55/45 % | |
| rise/fall times (10 to 90 %) | ≤ 10 ns | | ≤ 10 ns | |
| high/low levels or output amplitude | ≥ 3.5 V/ ≤ 0.5 V | ≥ 2 V p-p | ≥ 2.7 V/ ≤ 0.2 V | ≥ 1.5 V p-p |
| start-up | ≤ 10 ms @ 4.75 V | ≤ 10 ms @ 4.75 V | ≤ 10 ms @ 3.2 V | ≤ 10 ms @ 3.2 V |
| remarks | duty cycle for frequencies > 30 MHz is 40/60%…60/40% | | | |

| FREQUENCY STABILITY | | | detailed tolerances [ ppm ] | | | |
|---|---|---|---|---|---|---|
| type | temperature range | model code | stability versus: temperature | Vcc range | load ± 10 % | ageing |
| all types | -10 to 60°C | D1 | ≤ ± 1 | ≤ ± 0.1 | ≤ ± 0.1 | ≤ ± 1 |
| | -20 to 70°C | C1 | ≤ ± 1 | | | |
| | | C2 | ≤ ± 2 | | | |
| | -30 to 75°C | N2 | ≤ ± 2 | | | |
| DFA 14-K types | -40 to 85°C | E5 | ≤ ± 5 | ≤ ± 0.1 | ≤ ± 0.1 | ≤ ± 1 |
| | | E3 | ≤ ± 3 | | | |
| | | E2 | ≤ ± 2 | | | |
| remarks | | | factory calibration if no trimming option ≤ ± 1 ppm | | | |
| | | | ageing is 1st year at 25°C | | | |
| | | | DFA S7-L : Vcc range ≤ ± 0.3 ppm ( f ≥ 30 MHz ) | | | |

| OPTIONS | CODE | |
|---|---|---|
| external voltage control | V | DFA 14-K : 2.5 V ± 2 V ≥ ± 5 ppm, positive slope<br>DFA 14-L : 1.5 V ± 1.5 V ≥ ± 5 ppm, positive slope |
| internal trimmer | A | ≥ ± 5 ppm |
| external potentiometer | Y | 10 kΩ ≥ ± 5 ppm (not available with internal trimmer) |

| ORDERING CODE | type + option code + frequency + model code |
|---|---|
| Example | DFA 14-KHAV 8.192 MHz E2 |