

# KT14 Series SMD Crystal Clock Oscillators

## Temperature Compensated

### FEATURES

- 1) Ultra low profile SMD type (9.0x7.0x1.7mm)
- 2) Frequency adjustment free after reflow soldering process
- 3) AFC function available (option)
- 4) 2.8, 3.0, 3.3V drive available
- 5) 2000 pieces per reel
- 6) Sold in increments of 2000 pieces

### HOW TO ORDER

**KT14 - E C T 28 L - 19.440M T**

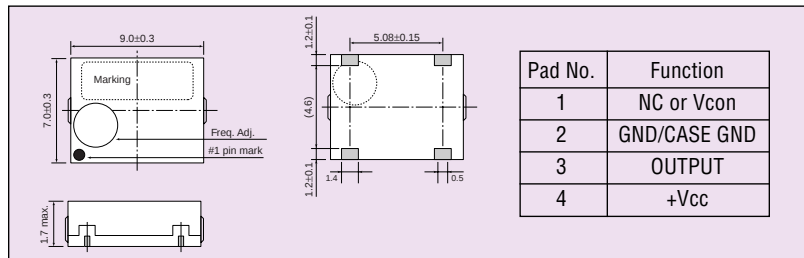
- ① Type
- ② Frequency stability: D=±2ppm, E=±2.5ppm, K=±5ppm
- ③ Lower operating temp.: C=-30°C; E=-20°C, G=-10°C
- ④ Upper operating temp.: R=60°C; T=70°C; V=80°C
- ⑤ Supply voltage: 28=2.8V; 50=3.0V
- ⑥ AFC function; V=with; N=without; L=with (trimmerless)
- ⑦ Frequency: See table below.
- ⑧ Packaging: T=Tape and reel



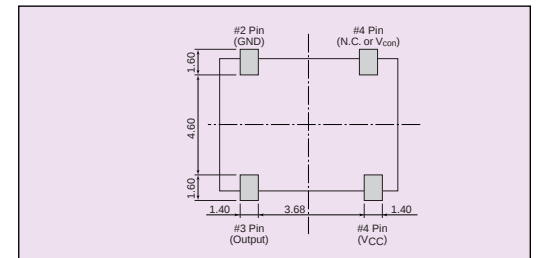
### SPECIFICATIONS

| Parameters            | Code  | Specification |                  | Unit     | Remarks                  |
|-----------------------|-------|---------------|------------------|----------|--------------------------|
|                       |       | PHS           | Cellular         |          |                          |
| Supply voltage        | Vcc   | 2.8V±5%       | 2.8V±5%          | V        | —                        |
|                       |       |               | 3.0V±5%          |          |                          |
|                       |       |               | 3.3V±5%          |          |                          |
| Output Frequency      | Fout  | 19.200        | 13.000           | MHz      | —                        |
|                       |       |               | 14.400           |          |                          |
|                       |       |               | 14.850           |          |                          |
|                       |       |               | 16.800           |          |                          |
| Operating Temp.       | Topr  | -10 ~ 60      | -30 ~ 80 max.    | °C       | —                        |
| Storage Temp.         | Tstr  | -20 ~ 70      | -40 ~ 85         | °C       | —                        |
| Frequency Stability   | f/fo  | ±2.5 max.     | ±2.0 max.        | ppm      | vs. Temp. (After Reflow) |
|                       |       |               | ±2.5 max.        |          | vs. Load                 |
|                       |       |               | ±0.2 max.        |          | vs. Voltage              |
| Aging Rate            | Aging | ±1.0 max.     | —                | ppm/year | 1 Year                   |
| Output Voltage        | Vout  | 1.0 min.      | —                | Vp-p     | Load 10K/10pF            |
| Supply Current        | Icc   | 2.0 max.      | —                | mA       | No Load                  |
| Trimmer Control Range | f/C   | ±3.0 min.     | —                | ppm      | —                        |
| Voltage Control Range | f/V   | —             | ex: ±8.0 ~ ±15.0 | ppm      | 1.5V±1V, 2.5±1V          |
| Harmonics             | —     | —             | -3.0 max.        | dBc      | —                        |

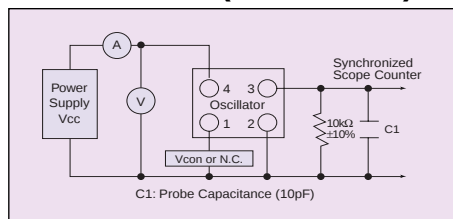
### DIMENSIONS



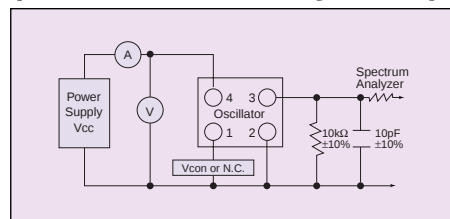
### RECOMMENDED LAND PATTERN



### TEST CIRCUIT (AMPLITUDE)



### TEST CIRCUIT (HARMONICS & FREQUENCY)



### RECOMMENDED REFLOW PROFILE (IR REFLOW)

