

# Temperature Compensated Crystal Oscillators KT16 Series



## FEATURES

- Miniature SMD type (7.0x5.2.0x1.8mm)
- Frequency adjustment free after reflow soldering process
- AFC function available
- 2.7V, 3.0V, 3.3V drive available
- Frequency Stability =  $\pm 2$ ppm at 30 to +80°C

## APPLICATIONS

- PDC, GSM, CDMA, TDMA

## HOW TO ORDER

KT16 - D C V 30 L - 19.680M T

### Packaging

T = Tape and reel 4,000 pcs/reel

### Frequency (MHz)

12.800	14.850	19.440
13.000	16.800	19.680
14.400	19.200	19.800

### AFC Function

L = Yes

### Supply Voltage

28 = 2.8V, 30 = 3.0V

### Upper Operating Temp.

V = 80°C, T = 70°C, R = 60°C

### Lower Operating Temp.

C = -30°C, G = -10°C, E = -20°C

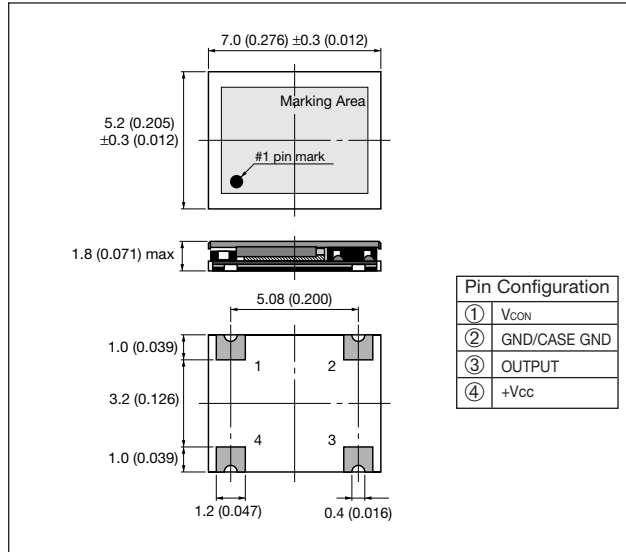
### Frequency Stability

K =  $\pm 5$ ppm, E =  $\pm 2.5$ ppm, D =  $\pm 2.0$ ppm

### Series

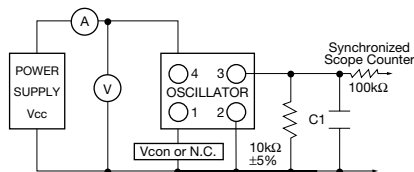
## DIMENSIONS

millimeters (inches)

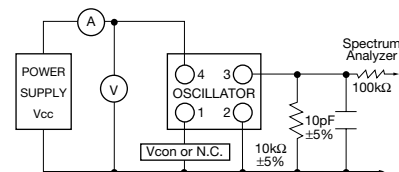


## TEST CIRCUIT

Test Circuit 1 (Amplitude)



Test Circuit 2 (Harmonics and Frequency)



## SPECIFICATIONS

Items	Code	Specifications		Unit	Remarks
		Cellular			
Supply Voltage	Vcc	2.7		V	—
		3.0			
		3.3			
Output Frequency	fo	26.000	19.440	MHz	—
		19.680	14.400		
		13.000	12.800		
Operating Temperature	Topr	-30 to +80		°C	—
Storage Temperature	Tstg	-40 to +85		°C	—
Frequency Stability	$\Delta f/fo$	$\pm 2.0$ max.		ppm	vs temperature (after reflow)
		$\pm 2.5$ max.		ppm	vs load
		$\pm 0.2$ max.		ppm	vs voltage
		$\pm 0.3$ max.		ppm	—
Aging Rate	Aging	$\pm 1.0$ max.		ppm/year	25°C $\pm 2$ °C
Output Voltage	Vout	0.8 min.		Vp-p	load 10k $\Omega$ /10pF
Supply Current	Icc	1.5 max.		mA	—
Trimmer Control Range	$\Delta f/C$	—		ppm	—
Voltage Control Range	$\Delta f/V$	$\pm 8.0$ to $\pm 15$		ppm	—
Harmonics	—	-3.0 max.		dBc	—