

### TYPE CRK, CRA (CERASONATOR®) kHz Band



CRK



CRA

#### Description

- Ceramic resonators using external capacitors/built-in capacitors for the kHz band designed and produced with application of Toko's experience relative to piezo materials, precision manufacturing and soldering technology.
- Applicable oscillation frequency range  
CRK: 380 to 680kHz  
CRA: 455 to 500kHz

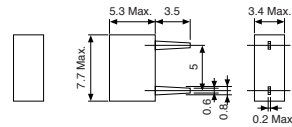
#### Features

- Precise oscillating frequency without adjustment.
- CRK type is soldered ceramic element, and High reliability.
- May be used with a variety of ICs.
- Load capacitors (C1, C2) not required for CRA type.

#### Applications

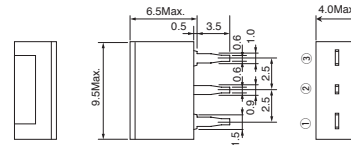
- Reference signal oscillations for — Microcomputers (household electronics, OA equipment)
- Remote controlling — TV's, VTRs, air-conditioners, CD players, lighting apparatus.
- Digital applications equipment including measuring instruments, communications equipment, toys, etc.

#### CRK



(Unit : mm)

#### CRA



(Unit : mm)

#### 概要

- 圧電材料技術、微細加工技術並びに、はんだ付技術を結集したC外付け/C内蔵kHz帯セラミック発振子
- 対応発振周波数範囲  
CRK : 380~680kHz  
CRA : 455~500kHz

#### 特長

- 無調整で高精度の発振周波数が得られる
- CRKタイプはセラミック素子はんだ付のため信頼性が優れている
- 各種ICとの組合せが容易
- CRAタイプは負荷容量 (C1, C2) が不要

#### 用途

- 各種マイコン用基準信号発生器 (各種家電機器、OA機器)
- 各種リモコン用基準信号発生器 (TV、VTR、エアコン、ブレーヤ、照明器具)
- 計測器、通信機器、玩具などのデジタル応用機器

### SELECTION GUIDE FOR STANDARD RESONATORS

#### TYPE CRK

東光品番	発振周波数	共振抵抗	発振周波数の温度特性	外付コンデンサ		備考
TOKO Part Number	Oscillation Frequency (kHz)	Resonant Impedance (Ω Max.)	Oscillation Frequency Temperature Stability (-20°C~+80°C)	C1 (pF)	C2 (pF)	Note
BP11DCRK400	400±0.5%	400	±0.3%	560	200	
BP11DCRK455	455±0.5%	400	±0.3%	560	200	
BP11DCRK480	480±0.5%	400	±0.3%	560	200	
BP11DCRK500	500±0.5%	400	±0.3%	560	200	
BP11DCRK600	600±0.5%	400	±0.3%	470	200	
BP11DCRK680	680±0.5%	400	±0.3%	470	200	

#### TYPE CRA

東光品番	発振周波数	共振抵抗	発振周波数の温度特性	負荷容量		備考
TOKO Part Number	Oscillating Frequency (kHz)	Resonance Impedance (Ω Max.)	Oscillation Frequency Temperature Stability (-20°C~+80°C)	C1 (pF)	C2 (pF)	Note
DCRA455	455±0.5%	3.0	±0.3%	Built-in	Built-in	External appearance differs
DCRA480	480±0.5%	3.0	±0.3%	Built-in	Built-in	
DCRA500	500±0.5%	3.0	±0.3%	Built-in	Built-in	

- Oscillation frequency tolerance can be designed to a desired level.
- TOKO performs matching evaluation for all types of ICs. Please contact us regarding applicable products.

- 発振周波数は、任意の周波数とすることが可能です。
- 各種ICとのマッチング評価を行っていますので、対応品番をお問い合わせ下さい。

#### Oscillation frequency test circuit 発振周波数 測定回路

