

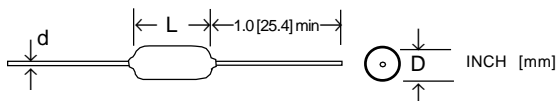
# AXIAL LEAD CERAMIC CAPACITORS MULTILAYER CERAGOLD™ CONSTRUCTION

## CEA SERIES



- ☐ Conformal coated, miniature sizes, 0.3pF - 2.2uF
- ☐ Wide range of capacitance, tolerance, TC, and voltage
- ☐ COG (NPO), X7R, Z5U and Y5V temperature coefficients
- ☐ Popular values available from stock

RCD's CEA Series features *Ceragold™* high-density multi-layer construction enabling an expanded range of values. Bodies are insulated with a proprietary flame retardant epoxy coating for superior environmental protection and dielectric strength. Non-standard values, increased voltage ratings, custom marking, military screening, cut & formed leads, etc., are available. Matched sets and networks also available. Custom components are an RCD specialty!



### SPECIFICATIONS

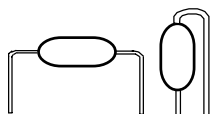
| RCD Type | WVDC <sup>1</sup> | CAPACITANCE RANGE |                |                      | L<br>(Body Length, Max) | D<br>(Body Diameter, Max) | d<br>(Lead Dia)             |
|----------|-------------------|-------------------|----------------|----------------------|-------------------------|---------------------------|-----------------------------|
|          |                   | COG (NPO)         | X7R            | Z5U/Y5V <sup>2</sup> |                         |                           |                             |
| CEA05    | 25                | 0.3 - 1000pF      | 100pF - 0.15uF | 1000pF - 1.0uF       | 0.150<br>[3.8]          | .100<br>[2.54]            | .018 ±.003<br>[0.45 ±.08]   |
|          | 50                | 0.3 - 1000pF      | 100pF- 0.10uF  | 1000pF - 0.47uF      |                         |                           |                             |
|          | 100               | 0.5 - 820pF       | 100pF- 0.01uF  | 1000pF- 0.068uF      |                         |                           |                             |
| CEA10    | 25                | 0.5 - 2700pF      | 100pF - 0.22uF | 1000pF - 1.2uF       | 0.170<br>[4.32]         | .100<br>[2.54]            | .018 ±.003<br>[0.45 ±.08]   |
|          | 50                | 0.5 - 2200pF      | 100pF- 0.10uF  | 1000pF - 1.0uF       |                         |                           |                             |
|          | 100               | 0.5 - 1000pF      | 100pF- 0.033uF | 1000pF- 0.10uF       |                         |                           |                             |
| CEA12    | 25                | 0.5 - 5600pF      | 100pF - 1.0uF  | 1000pF - 2.2uF       | 0.200<br>[5.1]          | .118<br>[3.0]             | .018 ± .003<br>[0.45 ± .08] |
|          | 50                | 0.5 - 4700pF      | 100pF- 0.47uF  | 1000pF - 1.0uF       |                         |                           |                             |
|          | 100               | 0.5 - 3300pF      | 100pF- 0.10uF  | 1000pF- 0.10uF       |                         |                           |                             |

### DIELECTRIC CHARACTERISTICS (typical)

| ITEM  | COG (NPO)  | X7R                                     | Y5V (Z5U) <sup>2</sup>                                 |
|---|--|---|--|
| Cap. Range, E12 values                              | 0.3 pF- 5,600 pF   | 100 pF - 1uF                            | 1,000 pF - 2.2uF                                       |
| Capacitance Tolerance                               | <10pF: ±.1pF, .25pF, .5pF (std)<br>≥10pF: ±1%, ±2%, ±5%(std), ±10% | ±5%, ±10% (std),<br>±20%                | ±20% (std), +80/- 20%                                  |
| Operating Temperature Range                         | -55°C to +125°C  | -55°C to +125°C                         | -30°C to +85°C   |
| Temperature Characteristics                         | 0 ± 30ppm/°C <sup>3</sup>  | ±15% max over op.temp range             | +22%/-82% (+22%/-56%)<br>max over operating temp range |
| Aging (cap loss/decade hr)                          | negligible   | 2%                                      | 7%   |
| Voltage Coef (ΔC@ max V)                            | negligible   | -50% to +10% typ                        | -80% to +20% typ                                       |
| Dissipation Factor (1KHz)                           | 0.15% (+25°C & +125°C)<br>1.0VRMS, 1MHz for values <1000pF         | 2.5% Max., 1VRMS                        | 4.0% Max. 0.5 VRMS                                     |
| Insulation Resistance 25°C (MIL-STD-202-METHOD-302) | 100GΩ or 1000MΩ-uF<br>whichever is less                            | 100GΩ or 1000MΩ-uF<br>whichever is less | 10GΩ or 1000MΩ-uF<br>whichever is less                 |
| Dielectric Strength                                 | 2.5x rated VDC   | 2.5x rated VDC                          | 2.5x rated VDC   |
| Life Test (1000 hours)                              | 2x rated voltage @+125°C<br>ΔC<3% or 0.25pF wig                    | 2x rated voltage at +125°C<br>ΔC<20%    | 1.5x rated voltage at +85°C<br>ΔC<30%                  |

### Cut & Forming

Wide range of styles and sizes available... horizontal, vertical mount, snap-in kinks, etc. Consult factory.



#### Footnotes:

- <sup>1</sup> Expanded range available, consult factory
- <sup>2</sup> Y5V is standard, Z5U is avail. (Y5V & Z5U are considered interchangeable)
- <sup>3</sup> ±60ppm <10pF

### P/N DESIGNATION: CEA10 - 102 - J 101 G T W

**RCD Type** CEA10  
**Option Code:** (leave blank if standard)  
**Capacitance Code** 2 significant digits & multiplier:  
 R5=0.5pF, 1R0=1pF, 100=10pF, 101=100pF, 102=1000pF,  
 103=.01uF (10,000pF), 104=.1uF(100,000pF), 105=1uF  
**Tolerance:** F=1%, G=2%, J=5%, K=10%, M=20%,  
 Z=+80%/-20%, B=±0.1pF, C=±0.25pF, D=±0.5pF  
**Voltage Code:** 025=25V, 050=50V, 101=100V, 201=200V  
**Dielectric:** G=COG(NPO), R=X7R, V=Y5V (U=Z5U)  
**Packaging:** B=Bulk, A=Ammo, T=Tape & Reel (5K pcs/reel typ)  
**Termination:** W= Lead-free, Q= Tin/Lead  
 (leave blank if either is acceptable)