



# ELECTRONIC CONCEPTS INC.

## COMPONENT SPECIFICATION SHEET

□ ISSUANCE SPECIFICATIONS

1. E.C.I. PART NUMBER: UL4-15948K
2. DATE ISSUED: 07/21/2000
3. REVISION LEVEL: A

□ COMPONENT DESCRIPTION

METALLIZED POLYPROPYLENE DIELECTRIC EXTENDED ELECTRODE CONSTRUCTION PROTECTED IN AN INSULATING TAPE WRAP WITH EPOXY FILL. LEADS ARE TINNED COPPER SPADE LUGS FOR MOUNTING TO PCB.

□ ELECTRICAL SPECIFICATIONS

1. **NOMINAL CAPACITANCE (MICROFARADS): 10.0 mFD.**
  - TEST FREQUENCY (KILOHERTZ): 1KHZ
  - TEST TEMPERATURE ( $^{\circ}$ C): +25C
2. **TOLERANCE (%): +/- 10%**
3. **CAPACITANCE CHANGE OVER TEMPERATURE +/-2.5%**
  - OVER THE TEMPERATURE RANGE OF  $-55^{\circ}$ C TO  $+85^{\circ}$ C.
4. **D.C. VOLTAGE RATING (VOLTS-D.C.): 800 VDC**
  - TEMPERATURE RANGE ( $^{\circ}$ C):  $-55^{\circ}$ C to  $+85^{\circ}$ C
5. **DISSIPATION FACTOR (%) MAXIMUM: 1%**
  - TEST FREQUENCY (KILOHERTZ): 1KHZ
  - TEST TEMPERATURE ( $^{\circ}$ C):  $+25^{\circ}$ C
6. **INSULATION RESISTANCE (MEGOHMS) MINIMUM: 500 megohms**
  - TEST VOLTAGE (VOLTS-D.C.): 500 VDC
  - TEST TEMPERATURE ( $^{\circ}$ C):  $+25^{\circ}$ C
  - CHARGE TIME: 2 minutes max
7. **STORAGE TEMPERATURE RANGE ( $^{\circ}$ C):  $-55^{\circ}$ C to  $+85^{\circ}$ C**
8. **OPERATING TEMPERATURE RANGE ( $^{\circ}$ C):  $-55^{\circ}$ C to  $+85^{\circ}$ C** Operation to  $+105^{\circ}$ C is possible with linear voltage derating of 50% from  $+85^{\circ}$ C to  $+105^{\circ}$ C.

**9. DIELECTRIC STRENGTH (VOLTS-D.C.) MAXIMUM: 1100 VDC**

- TEST TIME: 1 minute
- APPLIED AND DISCHARGED THROUGH ONE OHM PER VOLT MINIMUM
- TEST TEMPERATURE (°C): +25°C

**10. E.S.R. (OHMS) MAXIMUM: .005**

- TEST FREQUENCY (KILOHERTZ): 100 KHZ
- TEST TEMPERATURE (°C): +25°C
- SPECIFICATION NOTE: THE ESR IS BASED ON RESISTANCE READINGS THAT WOULD BE TAKEN AT RESONANT FREQUENCY WHERE CAPACITIVE AND INDUCTIVE REACTANCES OF THE UNIT WOULD CANCEL OUT LEAVING ONLY TRUE RESISTANCE. RLC METER READINGS AT FIXED FREQUENCY MAY SHOW VARIANCES THAT ARE NOT REFLECTIVE OF THE TRUE ESR.

**11. E.S.L. (NANOHENRIES) TYPICAL: 22 nH**

**12. RESONANT FREQUENCY (KILOHERTZ) TYPICAL: 345 KHZ**

**13. PEAK CURRENT (AMPS) MAXIMUM: 842 amps**

**14. DV/DT (VOLTS PER MICROSECOND): 84 V/uS**

**PERFORMANCE SPECIFICATIONS**

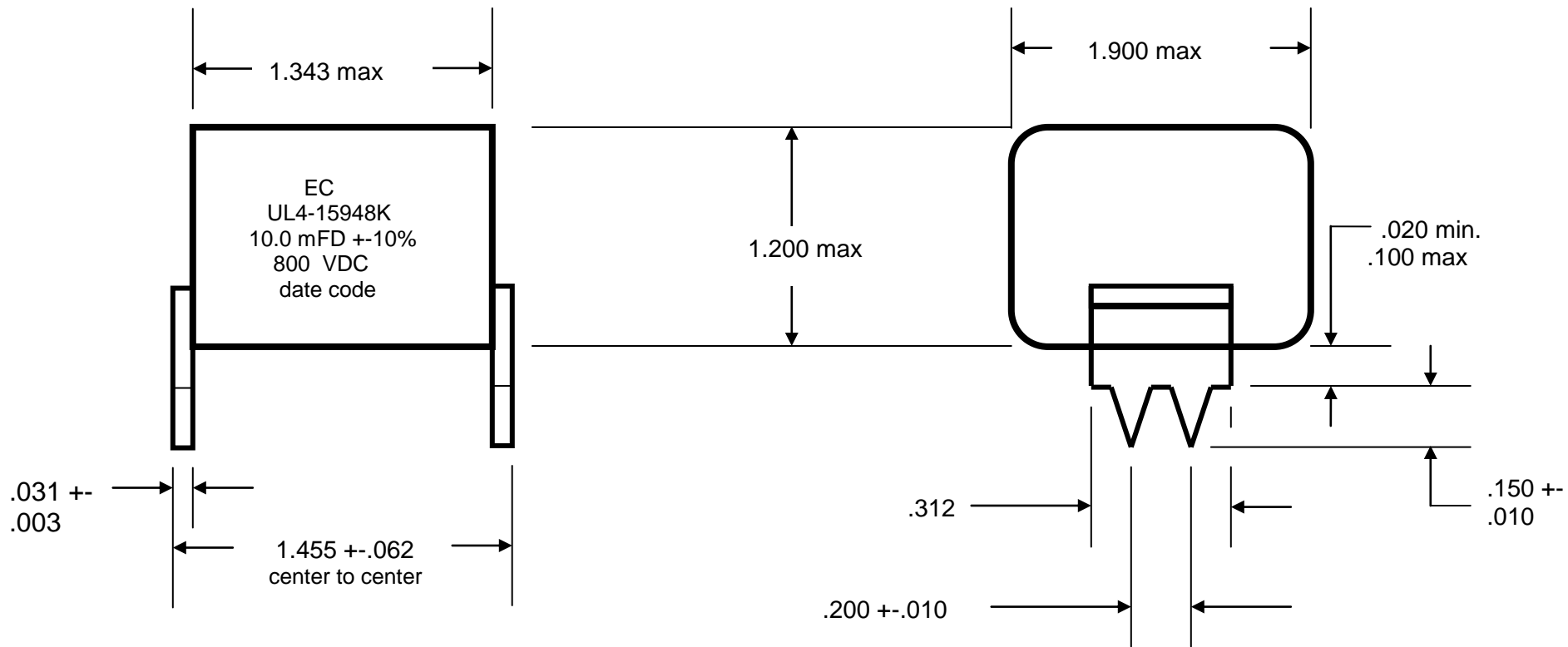
**RMS CURRENT RATING IN AMPS VS. TEMPERATURE AND FREQUENCY**

| <b><u>AMBIENT TEMPERATURE (°C)</u></b> | <b><u>FREQUENCY 20 KHZ TO 100 KHZ</u></b> |  |
|--|---|--|
|  |   |  |
| +25°C                                  | 23.3 amps                                 |  |
| +55°C                                  | 16.6 amps                                 |  |
| +75°C                                  | 10.0 amps                                 |  |
| +85°C                                  | 3.3 amps                                  |  |

Current limits given reflect maximum hot spot temperature permissible in capacitor center as a result of the ambient temperature and the I<sup>2</sup>R heat rise. When an "\*" is shown the current given is limited by the terminal required.

**MECHANICAL SPECIFICATIONS**  
**SEE ATTACHED DRAWING**

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Notes:

Drawing is not to scale

Terminal pins are .050 +/- .005 tapered to .035 +/- .003

Terminal pins or leads are tinned copper.