

### Unlytic<sup>®</sup> Miniature Series

The type UP37 miniature Unlytic<sup>®</sup> is the best choice for "Decoupling" in high-power converter designs.



#### FEATURES

- High voltage ratings
- Superior performance over temperature ranges -55°C to +105°C
- Dry construction (no harmful electrolytes)
- Non-polar
- Voltage ratings convenient for European designs
- Spade lug terminals for high current carrying capacity
- RoHS Compliant

#### STANDARD CONFIGURATION

- UP37: Board through-hole mount

# Specification Summary

## Capacitance Range

4.7 $\mu$ F to 35.0 $\mu$ F

## Capacitance Tolerance

Standard capacitance tolerance is  $\pm 10\%$ .

## Operating Temperature Range

-55°C to +85°C with 60% linear voltage derating from 85°C to 105°C

## Enclosure/Construction

Plastic case, epoxy filled

## Voltage Rating

500 VDC to 1500 VDC

## Quality Control

Capacitors are tested 100% for:

- Capacitance
- Tolerance
- Dissipation Factor
- Dielectric withstanding voltage
- Insulation Resistance
- Equivalent Series Resistance (ESR)

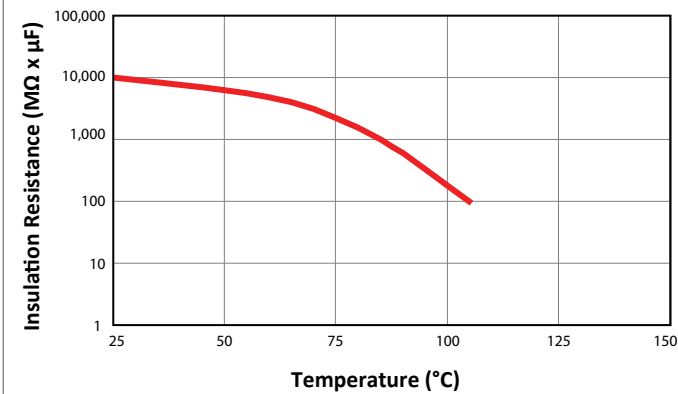
Process and inspection data are maintained on file and available upon special request.

## Environmental

Parameter	Method	Condition
Vibration	204	D
Shock	213	I
Humidity	106	-
Thermal Shock	107	A
Life	108	F
Reference MIL-STD-202		

# Characteristics

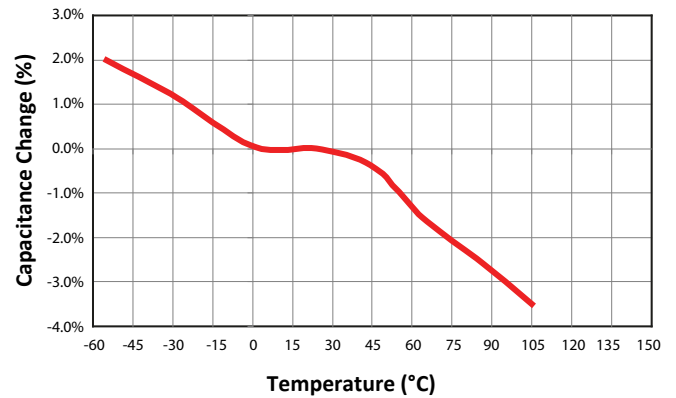
Insulation Resistance vs. Temperature



## Dielectric Strength

Capacitors withstand a DC potential of 1.3 x rated voltage for one (1) minute without damage or breakdown. Test voltage is applied and discharged through a minimum resistance of 100 OHM per volt minimum.

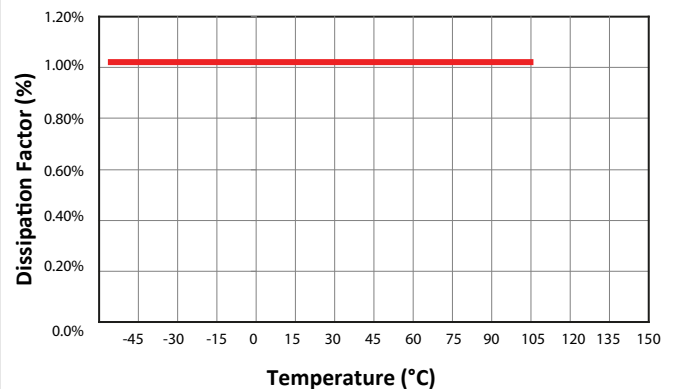
Capacitance Change at 1kHz vs. Temperature



## Dissipation Factor

Polypropylene has an intrinsic dissipation factor of less than  $2.1 \times 10^{-4}$  over the operating temperature range of -55°C to +105°C and frequencies to 1MHz.

Dissipation Factor at 1kHz vs. Temperature

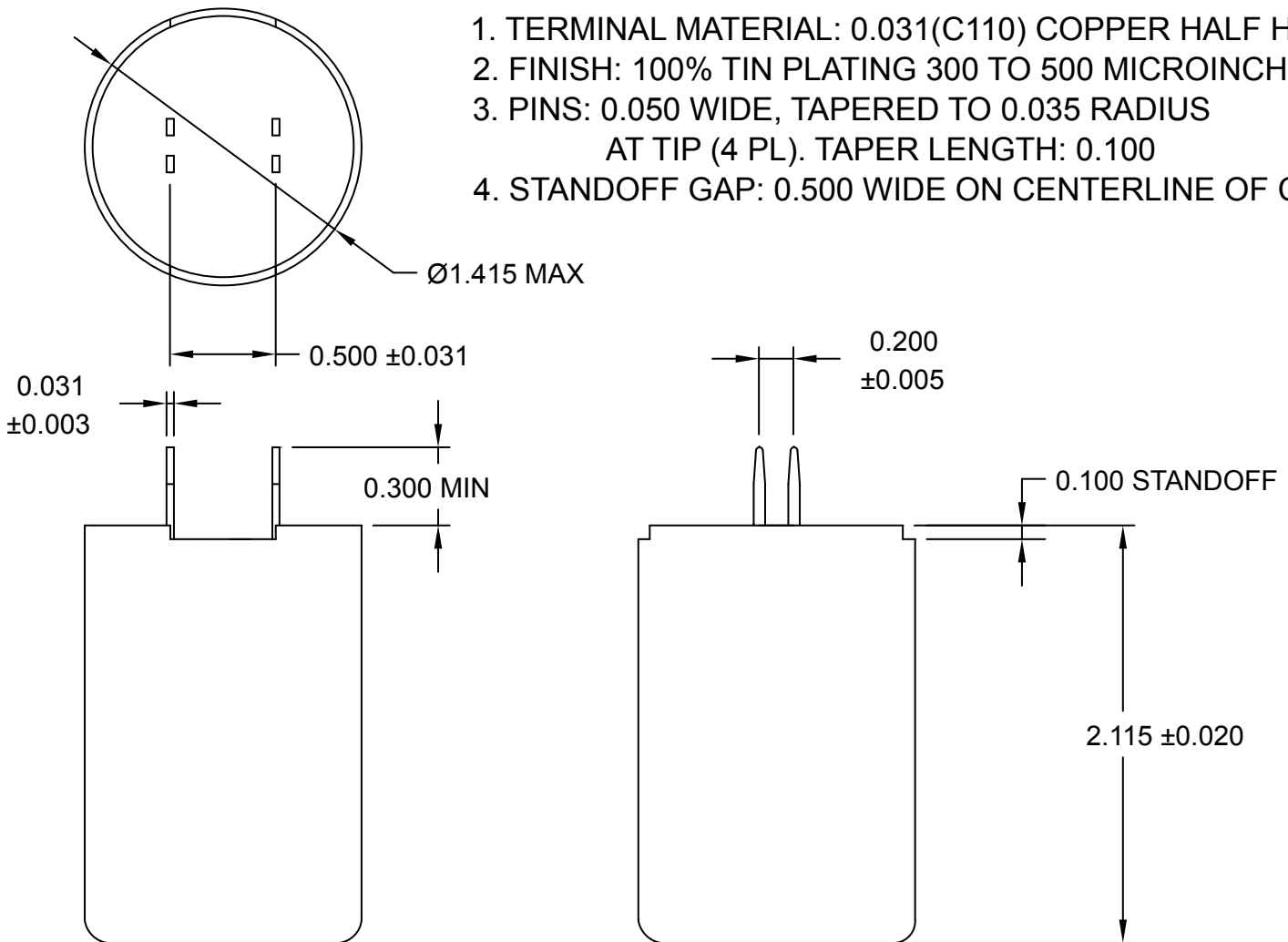


# Detail Data

PART NUMBER	VOLTAGE VDC	VALUE ( $\mu$ F)	ESR (OHMS)	TEMPERATURE			I pk (AMPS)	dv/dt (V/ $\mu$ s)	ESL (nH)	Fres (kHz)
				25°C	50°C	75°C				
UP37BA0350	500	35	0.009	22.6	18.5	14.0	861	25	35	143
UP37BC0300	600	30	0.011	20.4	16.9	12.4	844	25	35	155
UP37BF0200	750	20	0.013	18.8	15.6	11.4	703	35	35	189
UP37BJ0140	900	14	0.015	17.3	14.4	10.5	591	42	35	226
UP37BL0100	1000	10	0.017	15.7	13.0	9.5	492	49	35	268
UP37BN0070	1200	7	0.020	13.6	11.3	8.3	394	56	35	320
UP37BS0047	1500	4.7	0.023	12.7	10.5	7.7	331	70	35	391

60% LINEAR VOLTAGE DERATING FROM 85°C TO 105°C. NOT INTENDED FOR USE IN AC APPLICATIONS.

# Style



1. TERMINAL MATERIAL: 0.031(C110) COPPER HALF HARD
2. FINISH: 100% TIN PLATING 300 TO 500 MICROINCHES
3. PINS: 0.050 WIDE, TAPERED TO 0.035 RADIUS AT TIP (4 PL). TAPER LENGTH: 0.100
4. STANDOFF GAP: 0.500 WIDE ON CENTERLINE OF CASE

## Additional Information

UNLYTIC® technology provides a dry film solution for electrolytic capacitor replacement, offering ten (10) times the current density and three (3) times the over voltage protection. For safety, eliminates the possibility of caustic electrolyte leakage and its harmful effects to the environment.

For Switching power supplies where high voltages at elevated temperatures in addition to high dv/dt as well as peak current are also required.

## How to Order

TYPE Unlytic® Polypropylene	→	<b>UP37</b>
VOLTAGE BA=500VDC, BC=600VDC, BF=750VDC, BJ=900VDC, BL=1000VDC, BN=1200VDC, BS=1500VDC	→	<b>BA</b>
CAPACITANCE IN PICOFARADS Last 3 characters represent capacitance to 1 significant digit. 350 = 35.0µF	→	<b>0350</b>

### Marking And Date Code

All capacitors are marked with company initials "EC", corporate logo or EC trademark—in addition to type UP37, capacitance, tolerance, rated DC working voltage and date code. The first two digits of the date code represent the year, the second two digits the week, i.e., 1252 is the 52nd week of 2012, 1202 is the second week of 2012.

### Quality Assurance

Major emphasis is placed on quality assurance. EC is an ISO 9001 and AS9100 Certified Company. Raw material inspection and the use of SPC manufacturing procedures assure the highest quality standards. Procedures are fully described in the EC Quality Control Manual. Electronic Concepts will continue to advance the state-of-the-art by utilizing leading edge technology, compact capacitor designs and establishing reliability procedures.

## Sales Offices

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