

Unlytic® UL31 / UL32 / UL34 / UL35 Series

The UL31 / UL32 / UL34 / UL35 UNLYTIC® UL3 SERIES represents the "best" choice for high power DC applications because of the combination of physical and electrical properties it offers.



FEATURES

- Inductance as low as 25nH (less than 12nH available)
- Low ESR
- Current carrying capability to 110 amps
- Withstands hostile environments
- Integrated mounting flanges
- RoHS compliant

STANDARD CONFIGURATION

- UL31/UL35 Male Terminal
- UL32/UL34 Female Terminal
- UL31/UL32 Standard ESL
- UL34/UL35 Special Low ESL

Specification Summary

Capacitance Range

6.5μF to 300.0μF

Capacitance Tolerance

Standard capacitance tolerance is ±10%.

Tolerances of ±5% and ±20% are also available.

Operating Temperature Range

-55°C to +105°C

Enclosure/Construction

Ulytic polypropylene potted in a thermoplastic housing. Terminals are tin plated brass.

Voltage Rating

500 VDC to 2200 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.

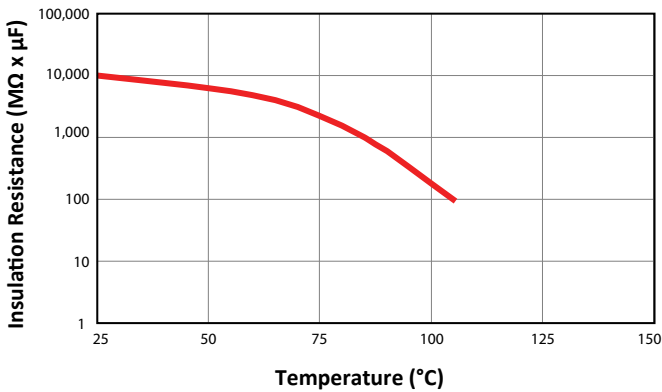
Environmental

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

Reference MIL-STD-202

Characteristics

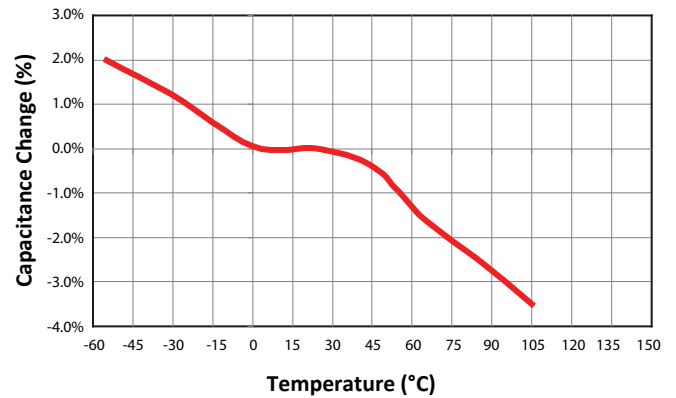
Insulation Resistance vs. Temperature



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.

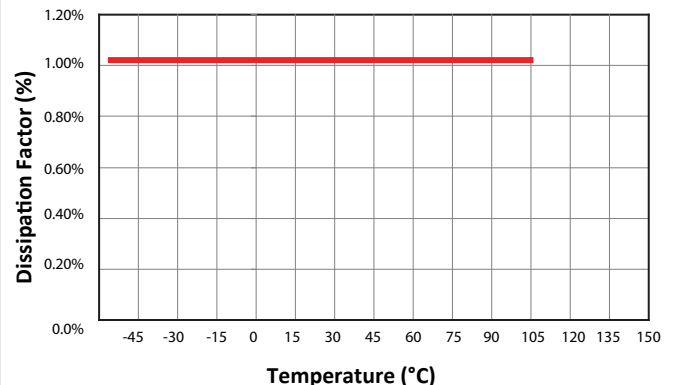
Capacitance Change at 1kHz vs. Temperature



Dissipation Factor

Polypropylene has an intrinsic dissipation factor of less than 2.1x 10⁻⁴ over the operating temperature range of -55°C to +105°C and frequencies to 1MHz.

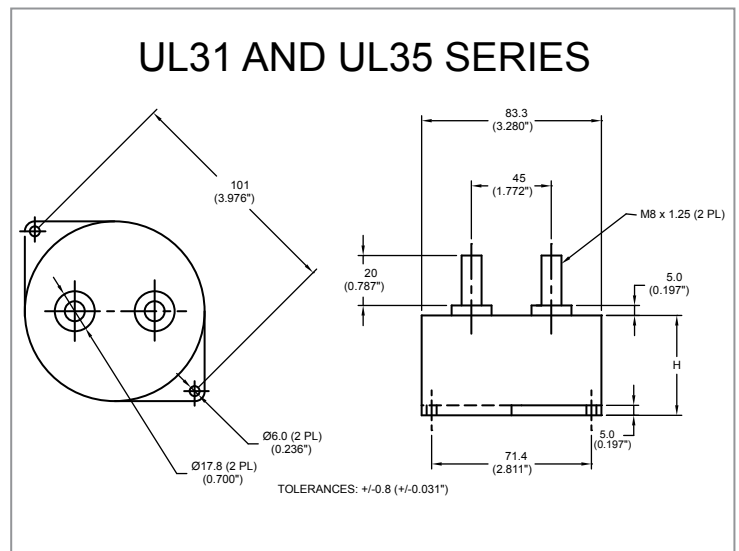
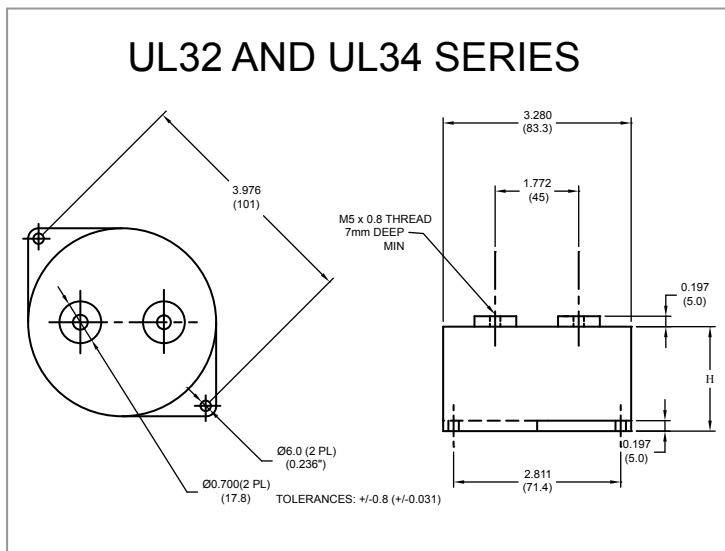
Dissipation Factor at 1kHz vs. Temperature



Detail Data

UL31, 32, 34 AND UL35															
ELECTRICAL SPECIFICATIONS															
PART NUMBER	VOLTAGE VDC	VALUE µF	CASE "H" mm	ESL FOR UL31 AND UL32		ESL FOR UL34 AND UL35		I pk	dv/dt	E.S.R. mOHMS	CURRENT RATING (AMPS RMS) 10 kHz TO 100 kHz CONTINUOUS				
				"L" nH	Fres kHz	"L" nH	Fres kHz				AMBIENT TEMPERATURE				
											25°C	45°C	65°C	85°C	105°C
UL3_Q157K	500	150	40	25	82.2	12	118.6	5769	38	0.47	110.3	95.7	78.5	56.3	13.4
UL3_Q207K	500	200	51	32	62.9	15	91.9	5809	29	0.57	105.4	91.5	75.1	53.9	12.8
UL3_Q277K	500	275	64	50	42.9	25	60.7	5672	21	0.77	97.21	84.4	69.3	49.7	11.8
UL3_Q307K	500	300	79	55	39.2	27	55.9	5022	17	1.70	77.1	66.9	54.9	39.4	9.4
UL3_K107K	600	100	40	25	100.7	12	145.3	4396	44	0.62	91.2	79.2	65.0	46.6	11.1
UL3_K157K	600	150	51	32	72.6	15	106.1	4979	33	0.67	96.8	84.0	68.9	49.9	11.8
UL3_K207K	600	200	64	50	50.3	25	71.2	4714	24	0.93	87.0	75.7	62.0	44.5	10.6
UL3_K257K	600	250	79	55	42.9	27	61.3	4782	19	1.79	77.4	67.2	55.1	39.6	9.4
UL3_N706K	800	70	40	25	120.3	12	173.7	3846	55	0.71	88.0	76.4	45.0	45.0	10.7
UL3_N107K	800	100	51	32	89.0	15	129.9	4149	41	0.80	89.5	77.7	63.8	45.7	10.9
UL3_N137K	800	130	64	50	62.4	25	88.3	3830	29	1.15	78.8	68.4	56.1	40.3	9.6
UL3_N167K	800	160	79	55	53.7	27	76.6	3826	24	2.20	69.2	60.1	49.3	35.4	8.4
UL3_BL356K	1000	35	40	25	170.1	12	245.6	2692	77	1.02	72.6	63.0	51.7	37.1	8.8
UL3_BL506K	1000	50	51	32	125.8	15	183.8	2905	58	1.16	74.1	64.3	52.8	37.8	9.0
UL3_BL706K	1000	70	64	50	85.1	25	120.3	2887	41	1.53	69.6	60.4	49.6	35.6	8.5
UL3_BL806K	1000	80	79	55	75.9	27	108.3	2678	33	3.20	57.5	49.9	40.9	29.4	7.0
UL3_L256K	1200	25	40	25	201.3	12	290.6	2198	88	1.26	63.7	55.3	45.4	32.5	7.8
UL3_L356K	1200	30	51	32	150.4	15	219.7	2324	66	1.45	64.0	55.5	45.6	32.7	7.8
UL3_L506K	1200	50	64	50	100.7	25	142.4	2357	47	1.87	61.3	53.2	43.7	31.3	7.5
UL3_L606K	1200	60	79	55	87.6	27	125.0	2296	38	3.74	52.8	45.9	37.6	27.0	6.4
UL3_M186K	1500	18	40	25	237.3	12	342.4	1978	110	1.42	62.8	54.5	44.7	32.1	7.6
UL3_M256K	1500	.25	51	32	177.9	15	259.9	2075	83	1.64	62.7	54.4	44.7	32.0	7.6
UL3_M356K	1500	35	64	50	120.3	25	170.1	2062	59	2.15	59.1	51.3	42.1	30.2	7.2
UL3_M406K	1500	40	79	55	107.3	27	153.1	1913	48	4.49	48.9	42.4	34.8	25.0	5.9
UL3_BX106K	1800	10	40	25	318.3	12	459.4	1596	160	1.67	57.3	49.7	40.8	29.3	7.0
UL3_BX156K	1800	15	51	32	229.7	15	335.5	1719	115	1.91	58.0	50.3	41.3	29.6	7.1
UL3_BX206K	1800	20	64	50	159.2	25	225.1	1559	78	2.79	50.1	43.5	35.7	25.6	6.1
UL3_BX276K	1800	27	79	55	130.6	27	186.4	1549	57	5.56	43.5	37.8	31.0	22.2	5.3
UL3_S655K	2200	6.5	40	25	394.8	12	569.9	1297	199	2.06	51.9	45.1	37.0	26.5	6.3
UL3_S905K	2200	9.0	51	32	296.6	15	433.2	1289	143	2.56	49.0	42.5	34.9	25.0	6.0
UL3_S126K	2200	12	64	50	205.5	25	290.6	1170	97	3.72	42.5	36.9	30.2	21.7	5.2
UL3_S176K	2200	17	79	55	164.6	27	234.9	1220	727	7.08	38.4	33.3	27.3	19.6	4.7

Style



Additional Information

The UNLYTIC® UL3 SERIES, with its introduction, the designer has a film capacitor for high power filter systems that will maximize space utilization, performance and reliability. With the added potential for measurable production cost savings.

The combination of physical and electrical properties it offers encompasses low inductance with high current carrying capability – and a low profile to make the most efficient use of system space and increased cooling efficiency. Plus an in-house developed, “specific to the task” thermoplastic formulation for the enclosure, improves thermal conductivity. There is also an integrated flange with pre-drilled holes to simplify mounting.

How to Order

TYPE UNLYTIC® Metallized Polypropylene	→	UL
STYLE UL31, UL32, UL34, UL35	→	31
VOLTAGE DC Voltage Rating: Q = 500 VDC, K = 600, etc.	→	Q
CAPACITANCE IN PICO FARADS The first two digits are significant, the third represents the number of zeros (e.g 157=150,000,000pF)	→	157
Tolerance Standard tolerance is ±10%. Tolerances of ±20% and ±5% are also available.	→	K

Marking And Date Code

All capacitors are marked with company initials "EC", corporate logo or EC trademark—in addition to type UL3, 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.

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