

DC Link Filter Capacitor

The UNLYTIC® MP3 SERIES represent the "best" choice for high power DC filter applications because of the combination of physical and electrical properties it offers.



FEATURES

- Long Life: > 100,000 Hours
- Low ESR
- High RMS Current Capability
- High Surge Voltage Capability: 1.5 x VDC
- Integrated Mounting Flange
- Cost effective Design
- Reference MIL-STD 202 & IEC 61071
- Flexible, Dry Film Fully Encapsulated construction
- RoHS Compliant

STANDARD CONFIGURATION

- MP31 Male Terminals
- MP32 Female Terminals

Specification Summary

Capacitance Range

70µF to 1100µF

Capacitance Tolerance

Standard capacitance tolerance is ±10%.
(Other tolerances available upon request)

Operating Temperature Range

-40°C to +85°C (+105°C upon special request)
Hot Spot Temperature Calculation: $H.S. = Tamb + (I^2 \times ESR) \times Rth$.
Failure Rate: 100FIT

Enclosure/Construction

Thermal plastic with high current terminals.

Voltage Rating

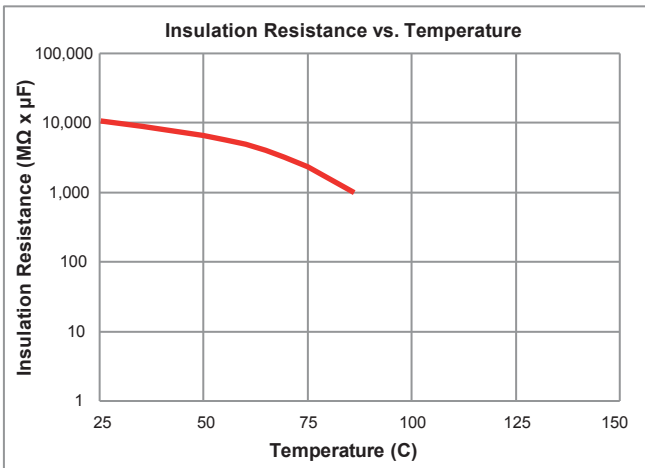
500 VDC to 2400 VDC

Environmental

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

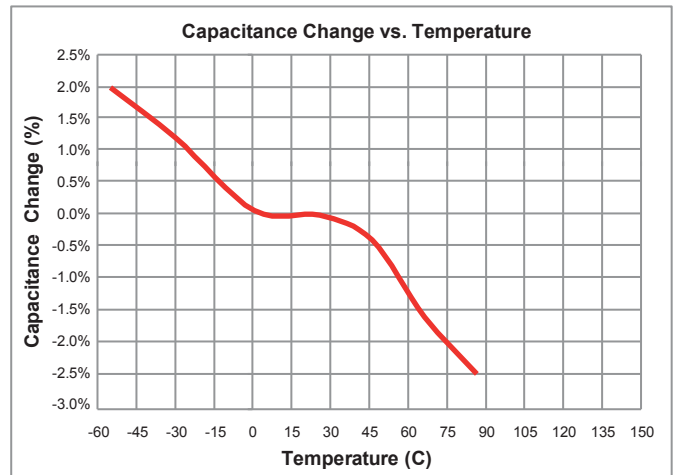
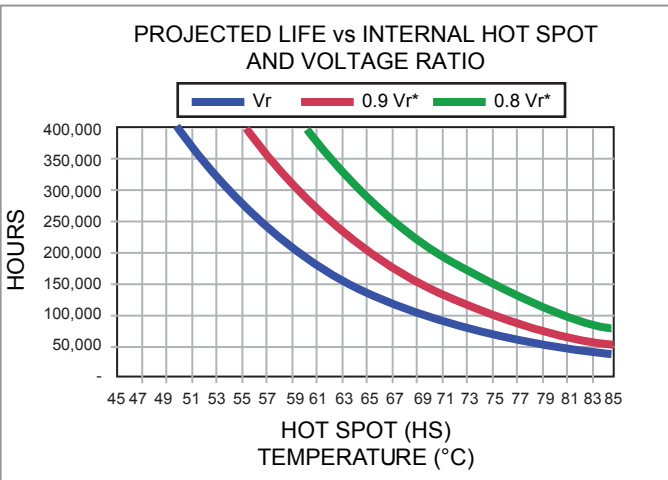
Reference MIL-STD-202

Characteristics



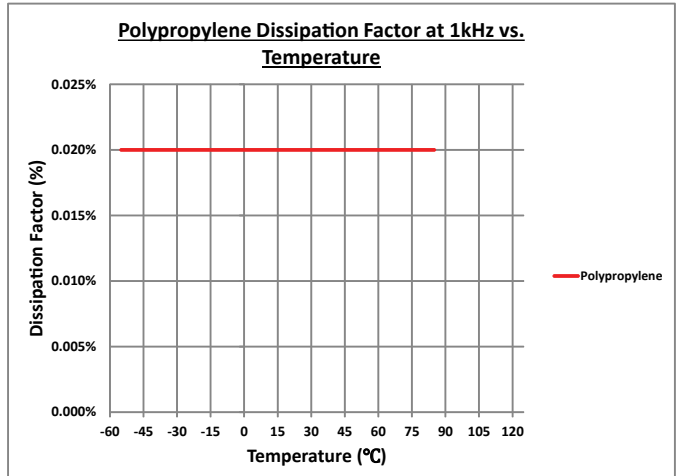
Dielectric Strength

Capacitors withstand a DC potential of 120% rated voltage for one (1) minute without damage or breakdown. Test voltage is applied and discharged through a resistance of 1 OHM per volt minimum, and at 25°C.



Dissipation Factor

Polypropylene has an intrinsic dissipation factor of less than 0.00021 over the operating temperature range and frequencies to 1MHz.



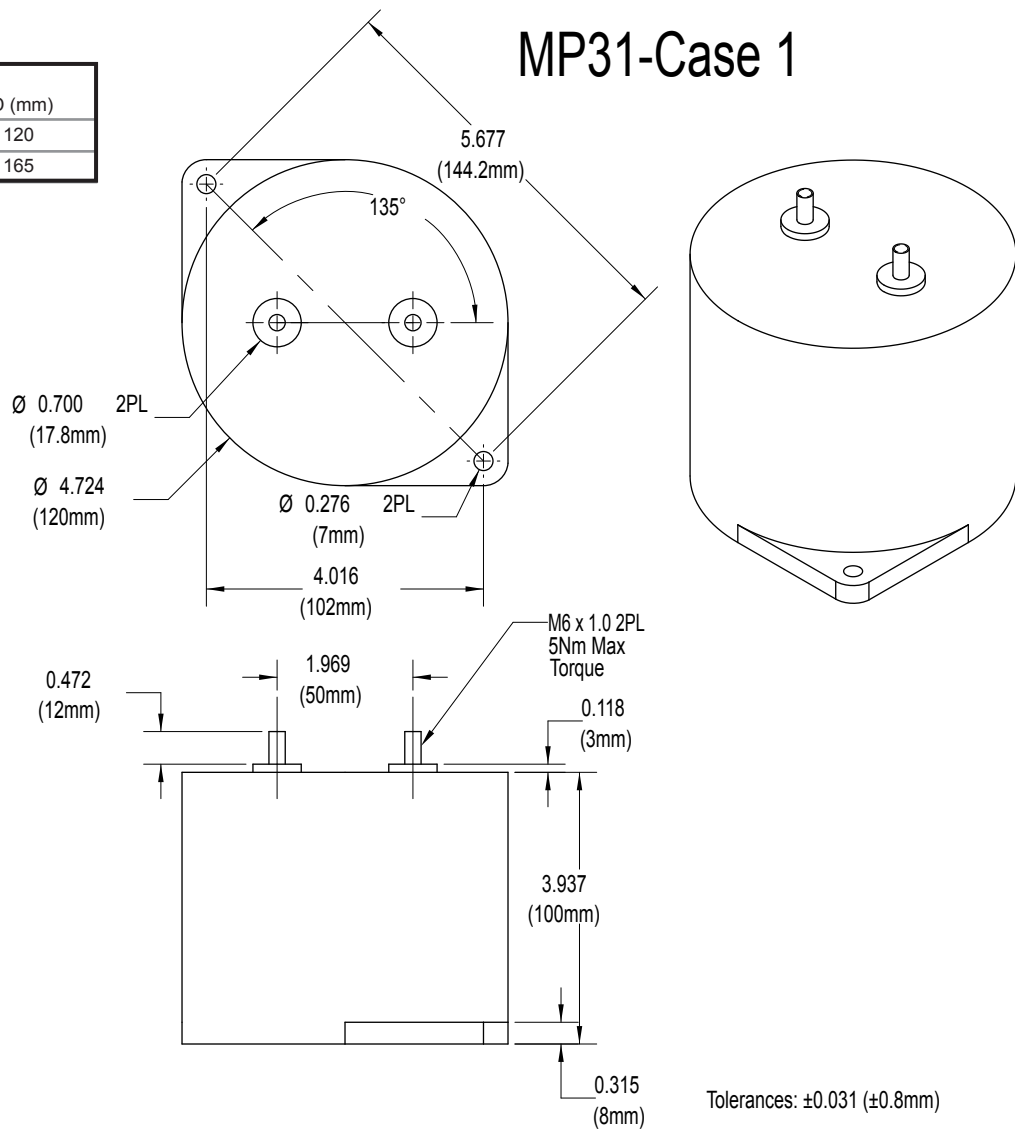
Detail Data

PART NUMBER	VDC	CAP	CASE	ESR Fres	ESL nH	Fres kHz	IPEAK AMPS	dv/dt V/μs	Max RMS Current (10 kHz)				Rth °C/W
									25°C	45°C	65°C	85°C	
MP3_BA1350	500	1350	1	1.7	50	119.4	14,067	10	102	86	67	40	2.5
MP3_BC1000	600	1000	1	2.0	50	22.5	12,157	12	95	80	63	38	2.5
MP32BC1500	600	1500	2	1.4	30	23.7	20,569	14	184	160	131	94	2.4
MP3_BG0750	800	750	1	2.3	50	25.9	10,420	14	87	74	58	35	2.5
MP32BG1150	800	1150	2	1.7	30	27.1	17,741	15	169	147	120	87	2.4
MP3_BL0500	1000	500	1	2.8	50	31.8	8,684	17	81	68	53	32	2.5
MP32BL0950	1000	950	2	1.8	30	29.8	16,284	17	163	142	116	84	2.4
MP3_BN0335	1200	335	1	3.4	50	38.9	6,982	21	71	61	47	28	2.5
MP32BN0650	1200	650	2	2.2	30	36.0	13,370	21	147	128	105	75	2.4
MP3_BR0250	1400	250	1	3.9	50	45.0	6,078	24	67	57	44	27	2.5
MP32BR0500	1400	500	2	2.5	30	41.1	11,999	24	142	123	101	72	2.4
MP3_BT0190	1600	190	1	4.5	50	51.6	5,280	28	62	53	41	25	2.5
MP32BT0375	1600	375	2	2.9	30	47.5	10,285	27	130	113	93	67	2.4
MP3_CA0120	2000	120	1	5.8	50	64.9	4,168	35	55	47	37	22	2.5
MP32CA0240	2000	240	2	3.6	30	59.3	8,228	34	117	101	83	60	2.4
MP3_CB0085	2400	85	1	6.8	50	77.2	3,543	42	51	43	34	20	2.5
MP32CB0165	2400	165	2	4.4	30	71.5	6,788	41	105	92	75	54	2.4

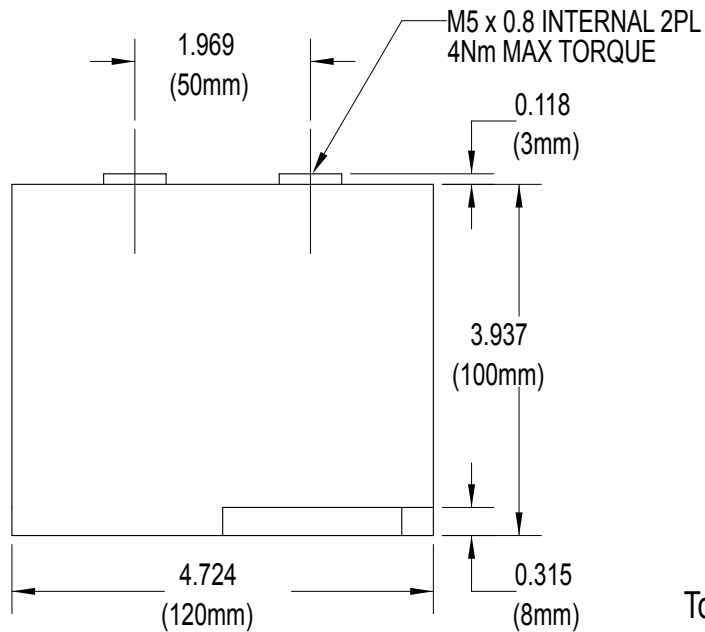
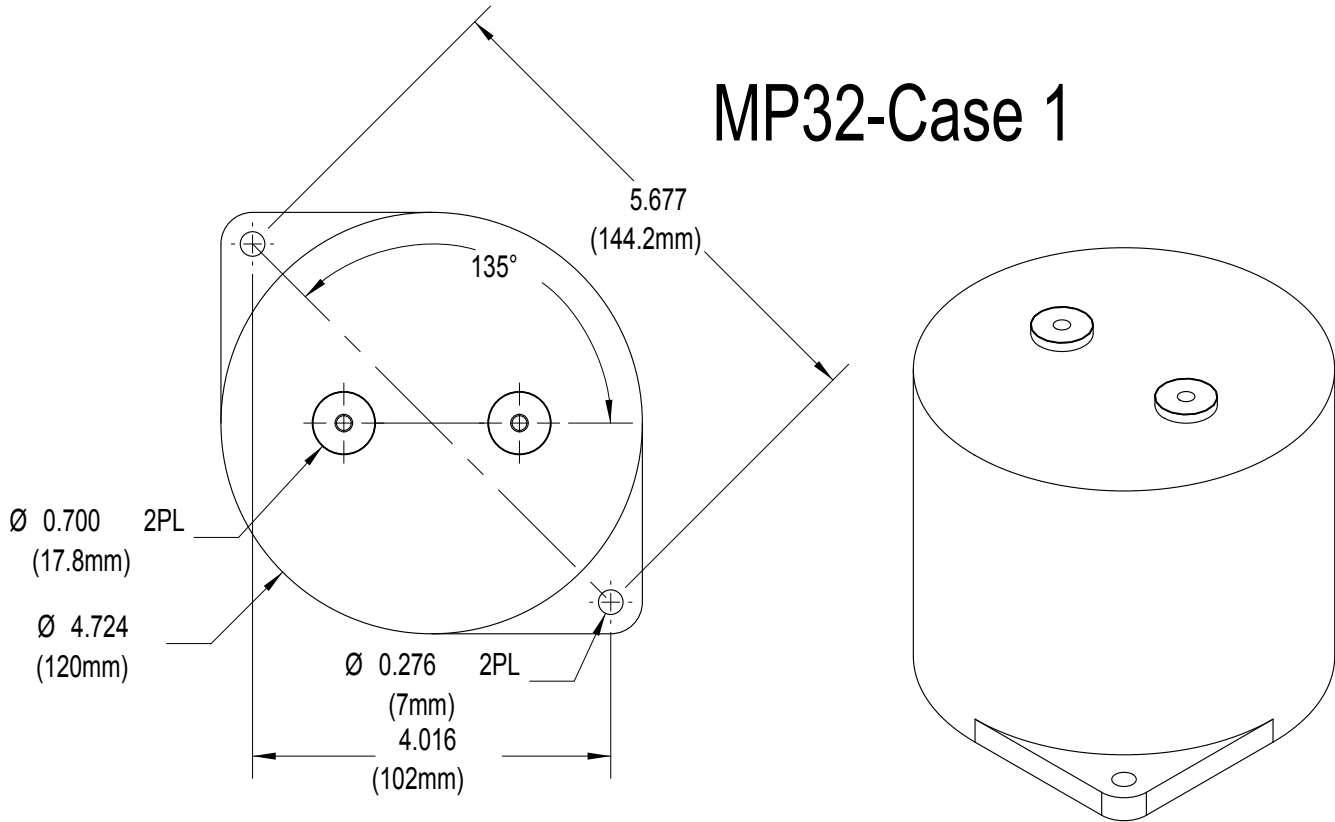
NOTE: The 4th character of the part number represents the style.

Style

CASE NO.	H (mm)	D (mm)
1	100	120
2	100	165

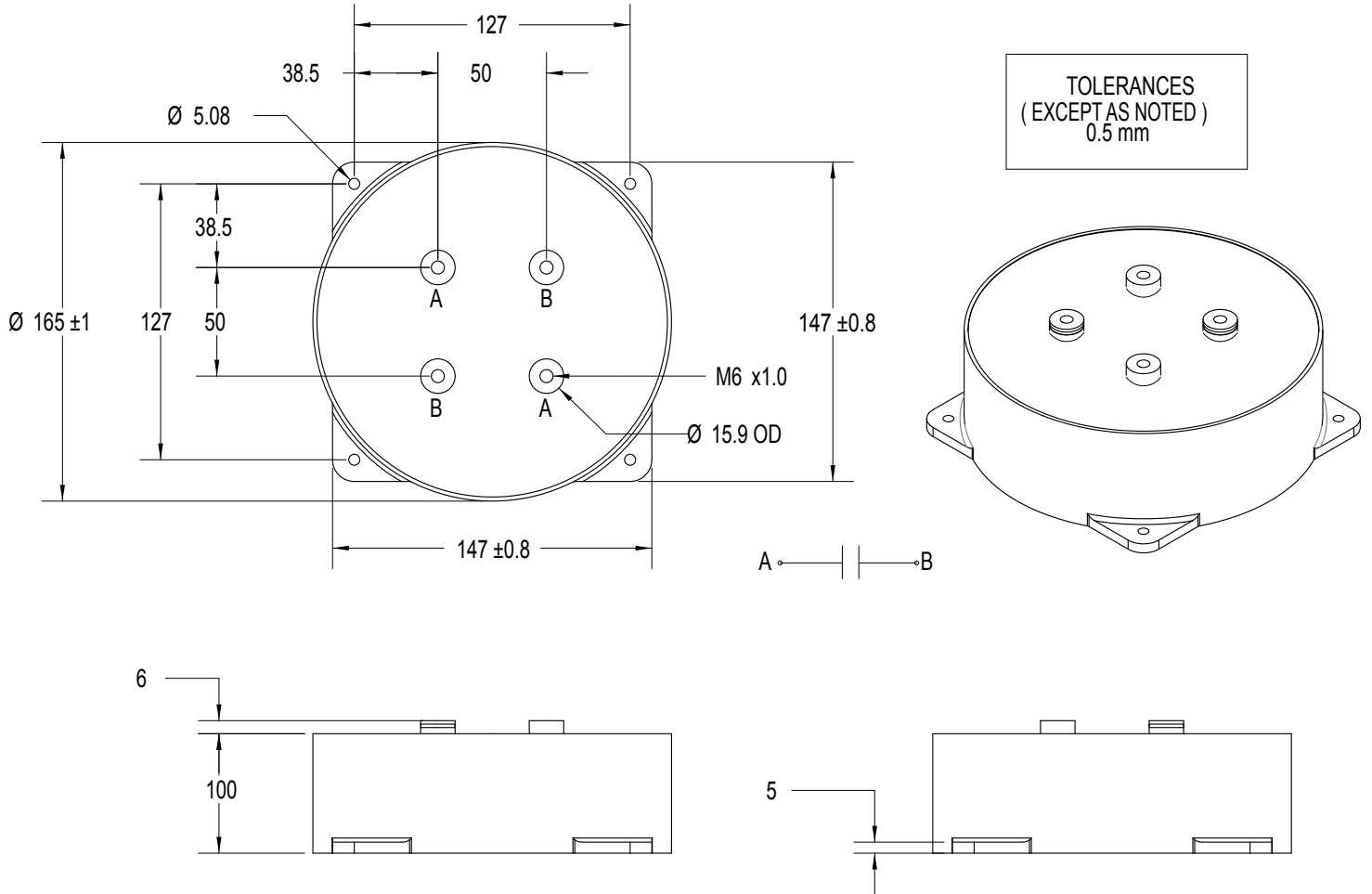


MP32-Case 1



Tolerances: ± 0.031 ($\pm 0.8\text{mm}$)

MP3-Case 2



Additional Information

The MP3 capacitor series further enhances the existing UL3 product offering. The MP3 incorporates the established UNLYTIC® film technology with new cost effective packaging, which provides higher storage capacity and voltage creepage protection. The capacitor is isolated from the outer case, allowing for simple package and connection mounting. The product series is well suited for bulk DC storage, especially useful in DC link converter/inverter applications.

How to Order

TYPE Metallized Polypropylene	→	MP3
STYLE '1' Male Thread (case 1 only), '2' Female Thread	→	1
VOLTAGE DC Voltage Rating: BA = 500VDC, BC = 600VDC, BG = 800VDC, BL = 1000VDC, BN = 1200VDC, BR = 1400VDC, BT = 1600VDC, CA = 2000VDC, CB = 2400VDC	→	BC
CAPACITANCE IN MICROFARADS Capacitance in μF (e.g. 0105 = 105 μF)	→	0105

Marking And Date Code

All capacitors are marked with company initials "EC", corporate logo or EC trademark—in addition to type MP3, 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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