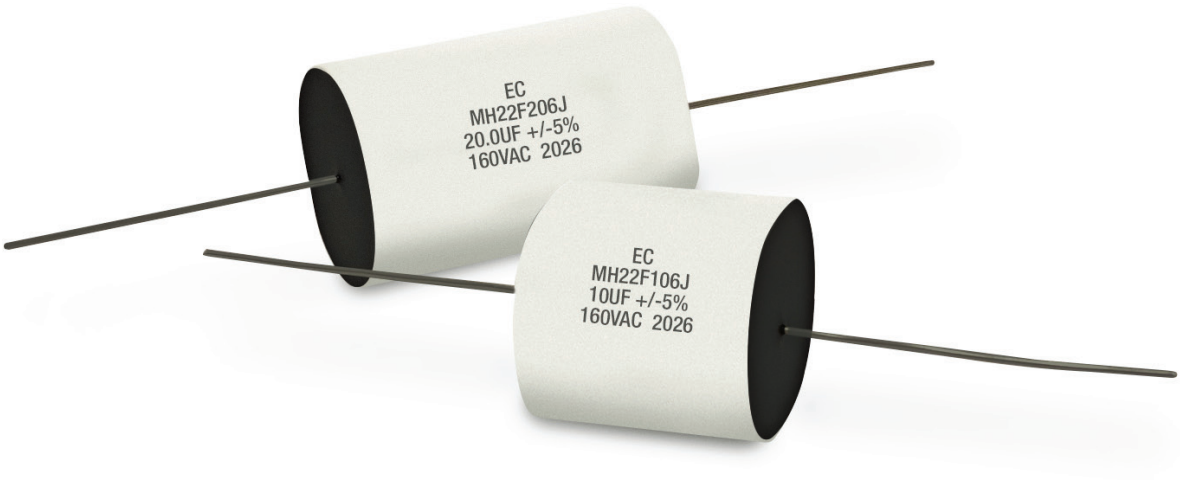
Electronic Concepts

"Film Capacitor Innovation without Limits"

MH2 SERIES
Metallized Plastic Film

Specifically developed for 400Hz 125°C AC filtering in aerospace and marine applications.



FEATURES

- Field proven reliability in 400Hz,125ºC AC filtering applications since 2002
- 125°C operation without derating
- Rated AC voltage: 160VAC at 400Hz
- Optimized form factor for space efficiency
- Dual screened through 100% burn-in at 125°C for DC peak voltage and 400Hz AC RMS
- Easily designed into other capacitance and voltage options with flexible mechanical envelope and packaging on request
- Environmental seal IAW MIL-PRF-55514 non-hermetic capacitors

STANDARD CONFIGURATION

- MH22 - axial leads

Specification Summary

Capacitance Range
2.0µF to 20.0µF

Capacitance Tolerance
Standard capacitance tolerance is ±5%. Tolerances of ±20%, ±10%, ±3% are available upon request.

Operating Temperature Range
-55°C to +125°C without derating

Enclosure/Construction
Polyester wrap with epoxy endfill

Voltage Rating
250VDC
160VAC

Quality Control
Capacitors are tested 100% for:

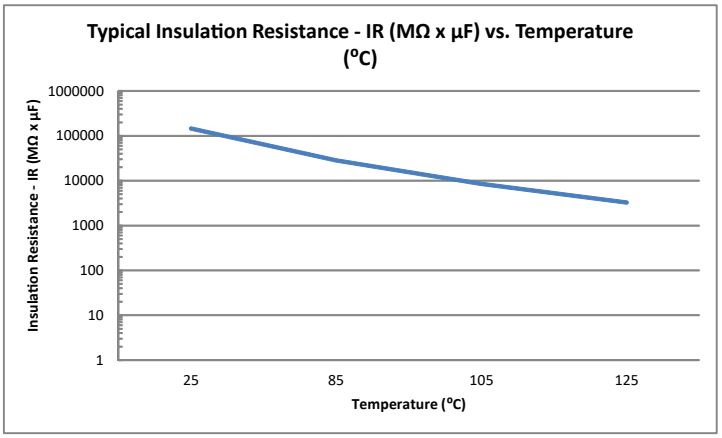
- Capacitance
- Tolerance
- Dissipation Factor
- Dielectric withstanding voltage
- Insulation Resistance
- 125°C Peak DC Burn-in
- 125°C 400Hz AC Burn-in

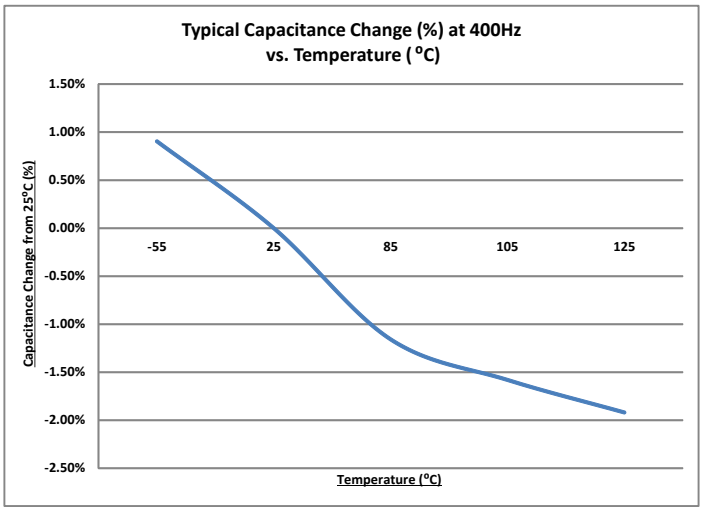
Process and inspection data are maintained on file and available upon special request.

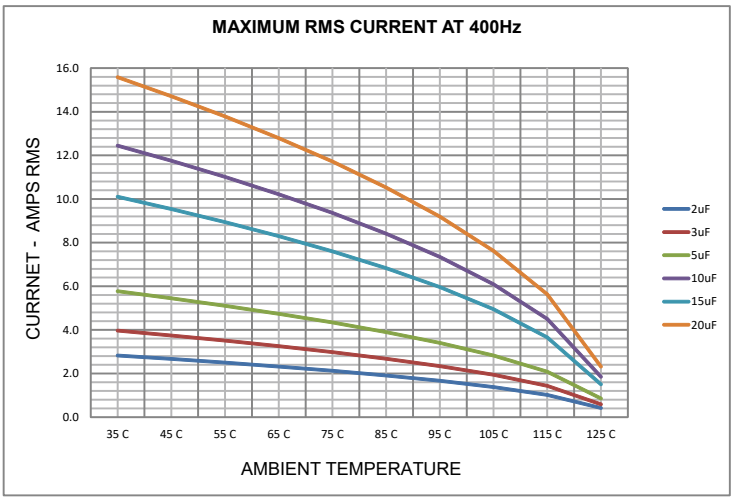
Environmental

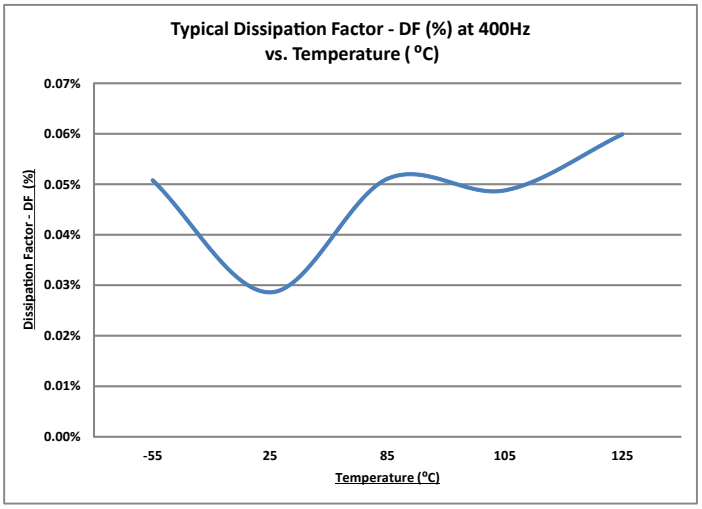
Parameter	Method	Condition
Vibration	204	D
Immersion	104	B
Shock	213	I
Humidity	106	-
Thermal Shock	107	A
Life	108	F
Reference MIL-STD-202		

Characteristics









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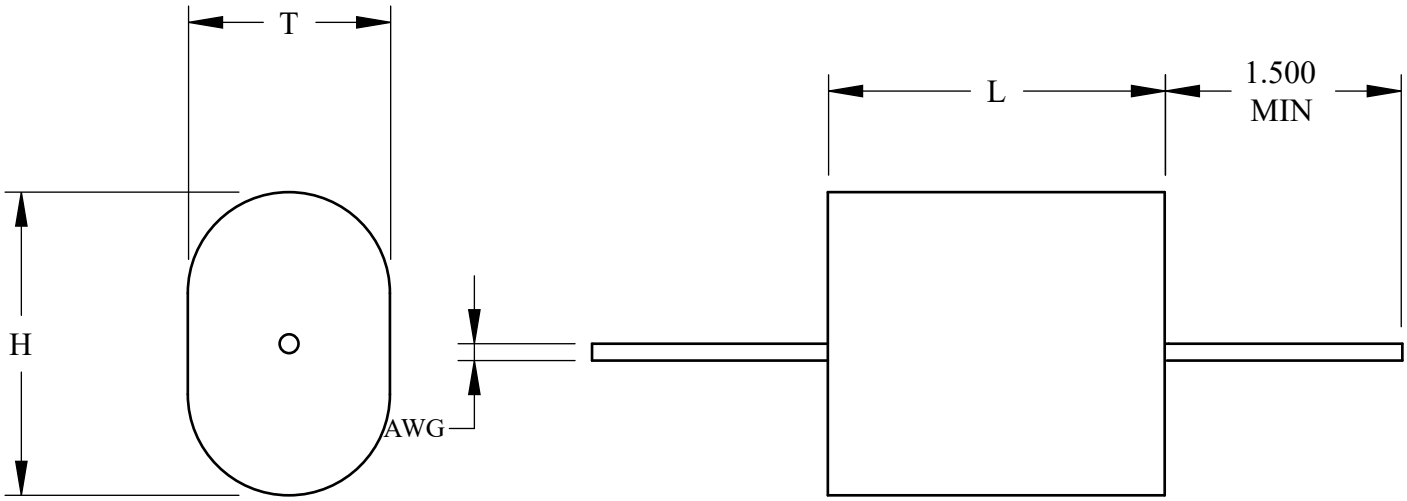
Detail Data

PART NUMBER	VALUE	VDC	VAC	I Peak AMPS	dv/dt V/us	ESR (10kHz) mOHM	ESL nH	Fres kHz	MAX "T"	MAX "H"	MAX "L"	"AWG"
MH22F205_	2.00	250	160	207	103	10	20	796	0.600	1.000	1.000	#18
MH22F305_	3.00	250	160	310	103	7	20	650	0.700	1.200	1.000	#16
MH22F505_	5.0	250	160	314	63	6	25	449	0.750	1.250	1.500	#16
MH22F106_	10.0	250	160	628	63	4	25	317	1.100	1.550	1.500	#16
MH22F156_	15.0	250	160	432	29	5	57	172	0.900	1.400	2.500	#16
MH22F206_	20.0	250	160	607	76	4	57	149	1.100	1.550	2.500	#16

Notes: Other values and voltages available upon request.

Style



Additional Information

The MH2 series of pressed wrap and fill capacitors are specifically designed for 400Hz AC filtering. The MH2 is a non-hermetic option offering better weight, cost, packaging efficiency and design flexibility when board potting or sealed systems do not require traditional hermetic sealed capacitors. The MH2 series combines ECI's specialized 125ºC metallized dielectric system with unique proprietary processing, testing, and screening. The MH2 series provides superior performance and electrical characteristics to traditional 125ºC dielectric choices like polycarbonate or PPS. ECI's critical process development and testing insures our customers receive only the highest reliability capacitors field-proven in military aerospace and naval applications since 2002.

Common applications include generator and inverter output filters in military aerospace and naval power systems, and ground based vehicle inverters. The technology is easily designed into custom capacitor requirements from a fraction of a microfarad to several hundred microfarads and 400Hz voltages to 250vac or higher at 125ºC. Please contact us for your specific design requirements.

How to Order

TYPE Metallized Plastic Film →	**MH2**
STYLE 2=Polyester wrap with epoxy endfill, axial leads →	**2F**
CAPACITANCE IN PICOFARADS The first two digits are significant figures, the third digit represents the number of zeros to follow to express the capacitance in picofarads. →	**205**
TOLERANCE Standard tolerance is ±5%. Tolerances of ±20%, ±10%, ±3% are available upon request. →	**J**

Marking And Date Code

All capacitors are marked with company initials "EC", corporate logo or EC trademark—in addition to type MH2, capacitance, tolerance, rated AC 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 9001:2015 and AS9100D 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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