Electronic Concepts
Film Capacitor Innovation Without Limits

4ME12 SERIES
Metallized Polyester

High Voltage Metallized Polyester Capacitors

Type 4ME12 is a versatile metallized polyester capacitor that is produced in a wrap and fill, tubular configuration with axial wire leads.

FEATURES
- Compact size / lightweight
- Excellent capacitance stability
- Self-healing construction
- Voltage range of 1,000VDC to 15,000VDC
- Capacitance range of .001µF to 1.00µF

STANDARD CONFIGURATION
- Axial lead termination

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Specification Summary

Capacitance Range
.001µF to 1.00µF

Capacitance Tolerance
M=±20%, K=±10%

Operating Temperature Range
-40°C to +85°C

Enclosure/ Construction
Extended metallized polyester film

Voltage Rating
1,000VDC to 15,000VDC

Quality Control
Capacitors are tested 100% for:
o Capacitance
o Tolerance
o Dissipation Factor
o Dielectric withstanding Voltage
o Insulation Resistance
o Equivalent Series Resistance

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

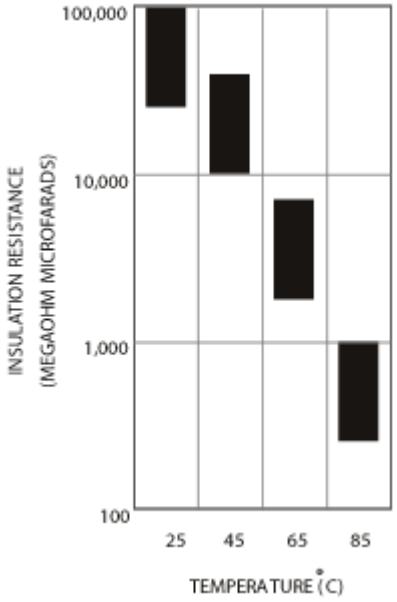
Environmental

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

Insulation Resistance

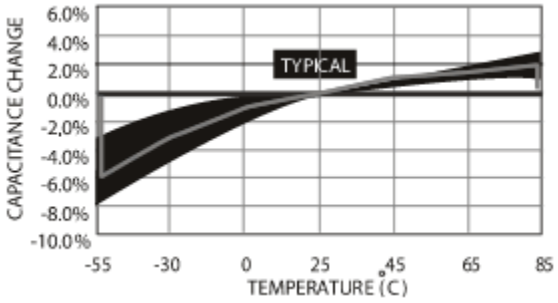
Temperature(°C)	25	85		
Megaohms x Microfarads	25,000	2,500		
Reference MIL-STD-202				



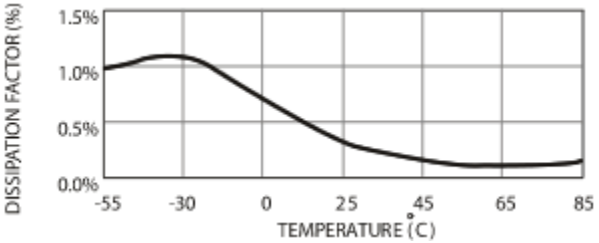
Dielectric Strength
Capacitors withstand a DC potential of 120% rated voltage applied between the terminals for five (5) minutes without permanent breakdown. Test voltage is applied and discharged through a resistance of 50,000 ohms minimum.

Capacitance Change

Temperature (°C)	-40	85		
Percentage Change (typical)	-6	+6		
Reference MIL-STD-202				



Dissipation Factor
When measured at 1 KHz and 25°C the dissipation factor will not exceed 1.0 percent.



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DETAIL DATA

EC PART NUMBER	MFD	1,000 VDC		2,000 VDC		4,000 VDC		6,000 VDC		8,000 VDC		10,000 VDC		15,000 VDC	
		L		P		S		U		V		W		Z	
		D	L	D	L	D	L	D	L	D	L	D	L	D	L
4ME12-102-	0.0010	-	-	-	-	-	-	-	-	0.294	1.937	0.337	2.312	0.387	3.125
4ME12-122-	0.0012	-	-	-	-	-	-	-	-	0.314	1.937	0.357	2.312	0.414	3.125
4ME12-152-	0.0015	-	-	-	-	-	-	0.307	1.562	0.342	1.937	0.368	2.312	0.451	3.125
4ME12-182-	0.0018	-	-	-	-	-	-	0.328	1.562	0.367	1.937	0.337	2.312	0.486	3.125
4ME12-222-	0.0022	-	-	-	-	0.304	1.188	0.355	1.562	0.398	1.937	0.360	2.312	0.528	3.125
4ME12-272-	0.0027	-	-	-	-	0.328	1.188	0.387	1.562	0.343	1.937	0.388	2.312	0.576	3.125
4ME12-332-	0.0033	-	-	-	-	0.355	1.188	0.418	1.562	0.371	1.937	0.417	2.312	0.628	3.125
4ME12-392-	0.0039	-	-	-	-	0.379	1.188	0.354	1.562	0.397	1.937	0.445	2.312	0.676	3.125
4ME12-472-	0.0047	-	-	-	-	0.326	1.188	0.381	1.562	0.429	1.937	0.480	2.312	0.734	3.125
4ME12-562-	0.0056	-	-	-	-	0.348	1.188	0.410	1.562	0.471	1.937	0.516	2.312	0.795	3.125
4ME12-682-	0.0068	-	-	-	-	0.376	1.188	0.445	1.562	0.510	1.937	0.560	2.312	0.868	3.125
4ME12-822-	0.0082	-	-	-	-	0.406	1.188	0.489	1.562	0.551	1.937	0.617	2.312	0.947	3.125
4ME12-103-	0.0100	-	-	-	-	0.440	1.188	0.531	1.562	0.600	1.937	0.662	2.312	1.040	3.125
4ME12-123-	0.0120	-	-	-	-	0.484	1.188	0.574	1.562	0.650	1.937	0.717	2.312	1.130	3.125
4ME12-153-	0.0150	-	-	0.309	1.062	0.531	1.188	0.632	1.562	0.717	1.937	0.793	2.312	-	-
4ME12-183-	0.0180	-	-	0.331	1.062	0.375	1.812	0.684	1.562	0.779	1.937	0.862	2.312	-	-
4ME12-223-	0.0220	-	-	0.358	1.062	0.407	1.812	0.749	1.562	0.853	1.937	0.946	2.312	-	-
4ME12-273-	0.0270	-	-	0.388	1.062	0.452	1.812	0.534	2.562	0.938	1.937	-	-	-	-
4ME12-333-	0.0330	-	-	0.421	1.062	0.490	1.812	0.581	2.562	1.030	1.937	-	-	-	-
4ME12-393-	0.0390	-	-	0.452	1.062	0.525	1.812	0.625	2.562	0.709	3.250	-	-	-	-
4ME12-473-	0.0470	0.302	1.062	0.497	1.062	0.568	1.812	0.678	2.562	0.771	3.250	-	-	-	-
4ME12-563-	0.0560	0.323	1.062	0.535	1.062	0.613	1.812	0.733	2.562	0.835	3.250	-	-	-	-
4ME12-683-	0.0680	0.347	1.062	0.581	1.062	0.667	1.812	0.800	2.562	0.913	3.250	-	-	-	-
4ME12-823-	0.0820	0.374	1.062	0.381	1.812	0.725	1.812	0.872	2.562	-	-	-	-	-	-
4ME12-104-	0.1000	0.405	1.062	0.413	1.812	0.793	1.812	-	-	-	-	-	-	-	-
4ME12-124-	0.1200	0.437	1.062	0.446	1.812	0.862	1.812	-	-	-	-	-	-	-	-
4ME12-154-	0.1500	0.489	1.062	0.498	1.812	0.956	1.812	-	-	-	-	-	-	-	-
4ME12-184-	0.1800	0.527	1.062	0.537	1.812	1.040	1.812	-	-	-	-	-	-	-	-
4ME12-224-	0.2200	0.574	1.062	0.585	1.812	1.143	1.812	-	-	-	-	-	-	-	-
4ME12-274-	0.2700	0.412	1.812	0.640	1.812	-	-	-	-	-	-	-	-	-	-
4ME12-334-	0.3300	0.457	1.812	0.699	1.812	-	-	-	-	-	-	-	-	-	-
4ME12-394-	0.3900	0.489	1.812	0.753	1.812	-	-	-	-	-	-	-	-	-	-
4ME12-474-	0.4700	0.528	1.812	-	-	-	-	-	-	-	-	-	-	-	-
4ME12-564-	0.5600	0.569	1.812	-	-	-	-	-	-	-	-	-	-	-	-
4ME12-684-	0.6800	0.618	1.812	-	-	-	-	-	-	-	-	-	-	-	-
4ME12-824-	0.8200	0.671	1.812	-	-	-	-	-	-	-	-	-	-	-	-
4ME12-105-	1.0000	0.733	1.812	-	-	-	-	-	-	-	-	-	-	-	-

Note: The fifth number of the part number represents the DC Voltage (i.e. L=1,000 VDC, P=2,000 VDC, etc.). Additionally, the tenth character of the part number represents the capacitance tolerance: M=±20%, K=±10%.

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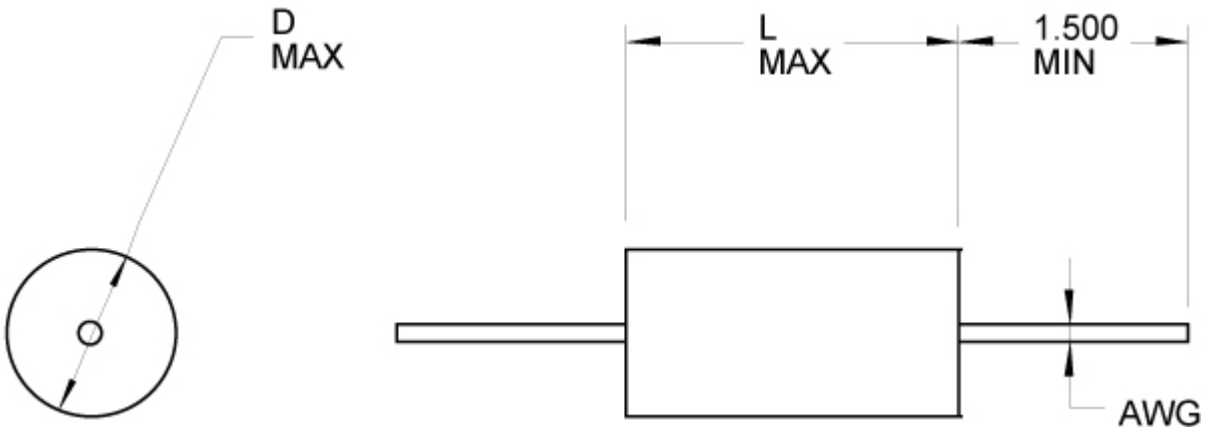
MECHANICAL DATA



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SAFETY PRECAUTIONS AND APPLICATION NOTE

SAFETY PRECAUTIONS: Type 4ME12 High Voltage Metallized Polyester Capacitors have high insulation resistance and will retain a charge for several days unless an external discharge path is provided. In addition, discharged capacitors may build up a residual charge due to dielectric absorption. Care must be taken to assure that capacitors are properly discharged, and equipment should be designed to prevent contact with charged capacitors to avoid the possibility of serious shock. After voltage is applied to the capacitors, the terminals should be short circuited for a period of three (3) hours before handling.

APPLICATION NOTE: Please contact Electronic Concepts for instructions before using the 4ME12 capacitor, in applications where high peak currents and/or reverse voltage are involved.

HOW TO ORDER

TYPE High voltage metallized polyester	**4ME**
STYLE / VOLTAGE Cylindrical, axial wire leads / 1,000VDC - 15,000VDC	**12 S**
CAPACITANCE IN PICOFARADS The first two digits are significant, the third represents the number of zeros (e.g. 104 = 100,000 pfd = .1mfd)	**104**
TOLERANCE M=±20%, K=±10%	**M**

Marking And Date Code
All capacitors are marked with company initials "EC", corporate logo or EC trademark—in addition to type 4ME12, 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., 0952 is the 52nd week of 2009, 0902 is the second week of 2009.

Quality Assurance
Major emphasis is placed on quality assurance. EC is an ISO 9001-2000 and AS9100:2004 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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Rev. B

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