

Fuzhou Xiangwei Electronic Co., Ltd

Fuzhou Xiangwei Electronic Co., Ltd. was established in 1998. We are a manufacturer that produces various EMI/RFI Filters and Capacitors.

Our enterprise has advanced capacitor production line and excellent examine equipment. Since our foundation, we have been specializing in the study and research of different types of feed through capacitors and ceramic capacitors. With more than five years' endeavor and development, we have succeeded in manufacturing all type EMI/RFI Filters(Feed-thru Capacitors) and capacitors, such as Solder Mount EMI Filter, Bolt Mount EMI Filter, Discoidal Multilayer Capacitors and some Custom Capacitors. They are used in national defense and communication, broadcast and television, instrument, automobile and electronic products, computer and electric appliance and other industries.

Our enterprise attained ISO9001:2000 certification in 2007. Moreover, our products all passed the evaluation of ROHS (Europe Environmental Protection) certification. Our products sell well in such countries and regions as Europe, Oceania, North America and Southeast Asia. Their reliable quality and favorable prices and our some years' experiences have won a good reputation from our clients.

With the business principle of "quality first, credit first, clients paramount", we hope to cooperate with any company at home and abroad. We are looking forward to developing for mutual benefits.



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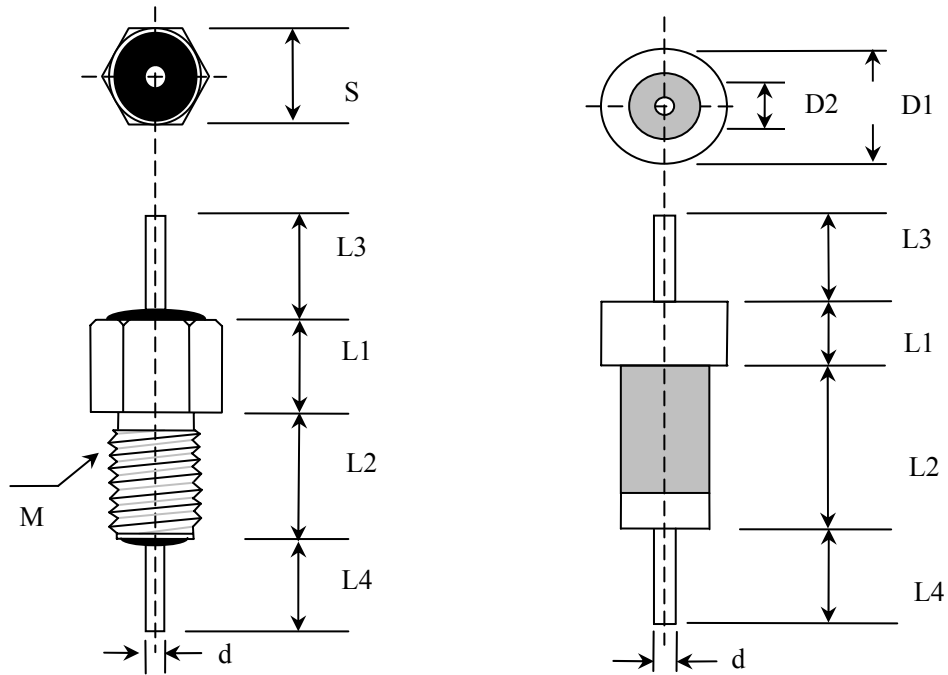
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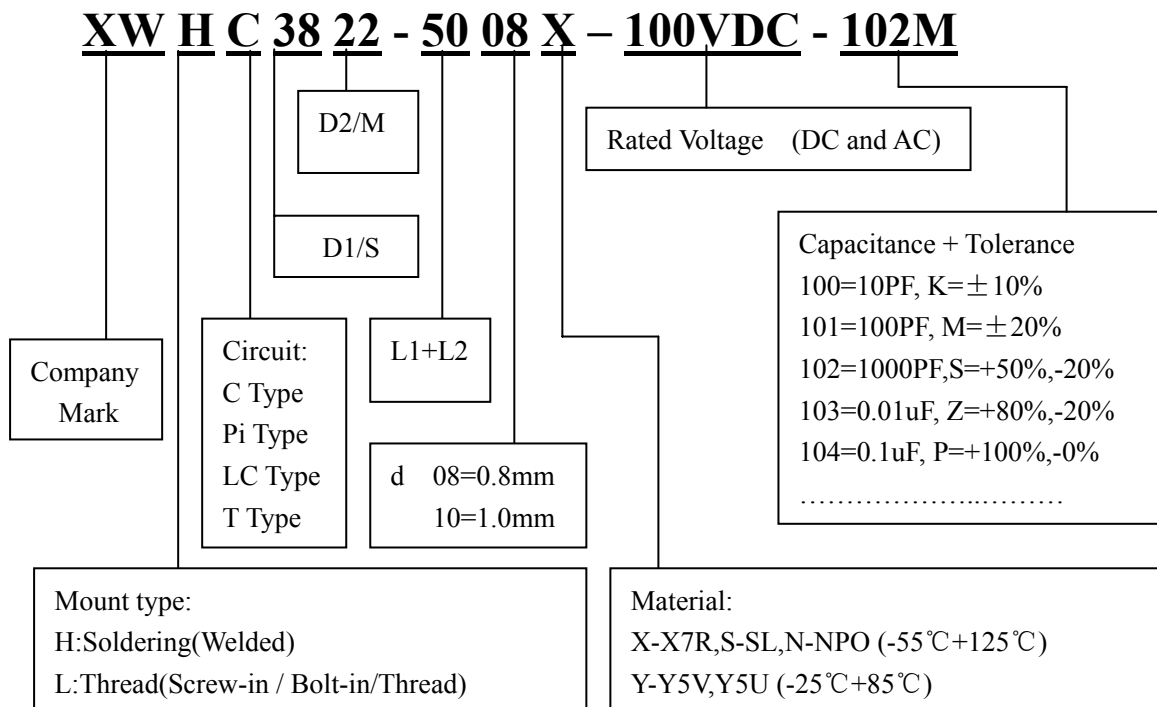
The products listed in this catalog are only a few of the thousands of variations that **XIANGWEI** produces. For Custom Component design, please contact us directly.

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How to Order:



Sample Chart



Note:

1. Show us the part number and order quantity, and then we will finish the remain things.
2. We accept the Custom Design of clients special request.
3. Free sample: 5 pieces. (except the special ones).

EMI/RFI Filters(Feed-thru Capacitors)

EMI(Electromagnetic Interference) Filters,also known as RFI (Radio Frequency Interference) Filters,basically are passive electronic devices that are used to suppress conducted interference that is found on a signal or power line.Electromagnetic Interference(EMI) is unacceptable electromagnetic emissions,natural or man-made,which result in the degradation or malfunction of electronic or electrical equipment.Radio Frequency Interference(RFI) is detrimental electrical energy in the frequency range,which is for the specific transmitted radio frequency. Major sources of EMI and RFI include microprocessors,switching power supplies,AC motors,and electrical power cords (which basically act as an antenna).

As mentioned previously,an EMI/RFI Filter is a passive electronic device (comprised of multiple components) for suppressing conducted interference found on any signal or power line.An EMI/RFI Filter will suppress the interference created by other equipment and the interference of the module or system itself,with the desired result being improvement to the immunity from EMI/RFI signals in the surrounding setting.EMI Filters can be found both in plastic as well as metal housings,in stand-alone,desktop or module configurations.

An EMI Filter works by presenting a significantly higher resistance to higher frequency content.In other words,the low pass design of the EMI/RFI Filter (the combination of shunting capacitors and series inductors) results in the restriction/impeding of the flow of high frequency signals,electively shorting it to ground.The final result of the EMI Filter is that it reduces and attenuates the unwanted signal strength,thereby having a minimal effect on other components or devices.EMI Filters are gauged by specifications including insertion loss,voltage rating,and current rating.In addition,there are numerous approval authorities and specifications,including UL,CSA,VDE and military specification.

There are a wide variety of EMI/RFI Filter applications,including(though not limited to):

1. Energy Management Systems
2. Computers
3. Automatic Lighting
4. AM Radio Equipment
5. Factory Automation Equipment
6. Implantable Medical Devices(Cochlear Implants,Cardiac Pacemakers,etc.)
7. Military / Space Electronic Modules
8. Radio Controls
9. Telecommunications
10. Televisions and Monitors
11. Laboratory Equipment

Electrical Configuration:

A number of different electrical configurations are available in EMI filters, including the common types shown opposite. A single element filter (a capacitor or an inductor) theoretically provides an insertion loss characteristic of 20dB per decade, a dual element filter (capacitor and inductor) 40dB per decade whilst a triple element filter (Pi or T configuration) theoretically yields 60dB per decade. In practice, the insertion loss curves do not exactly match the predictions, and the data of electrical configuration is made primarily on the source and load impedances and may also be influenced by the level of attenuation required at various frequencies.

C Filter

This is a feedthrough capacitor with low (hardly) inductance. It shunts high frequency noise to ground and is suitable for use with a high impedance source and load.

LC Filter

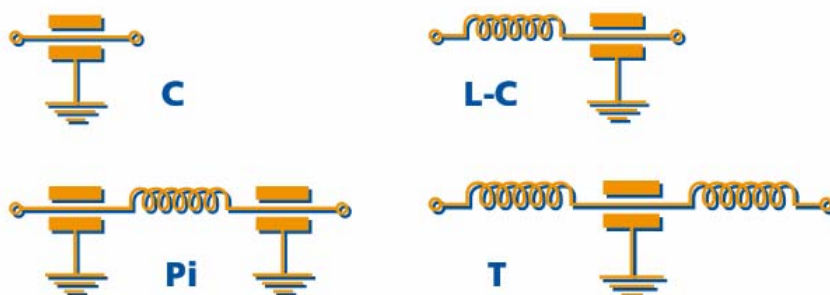
This is an EMI filter with an inductance element in combination with a capacitor. It is commonly used in a circuit with a low impedance source and a high impedance load (or vice versa).

Pi Filter

This is an EMI filter with 2 capacitors and an inductive element between them. Ideally, it should be used where both source and load impedances are high.

T Filter

This is an EMI filter with 2 series inductive elements separated by one feedthrough capacitor. It is suitable for use where both source and load impedances are low.



Source and load impedances

Insertion loss figures are normally published for a 50 Ohms source and 50 Ohms load circuit. In practice the impedance values will probably be very different, which could result in either an increase or decrease in insertion loss. The electrical configuration of the filter (the capacitor/inductor combination) should be chosen to optimize the filter performance for that particular source/load impedance situation. An estimate of insertion loss for source and load impedance other than 50 Ohms can be supplied. Please contact our Sales Office.

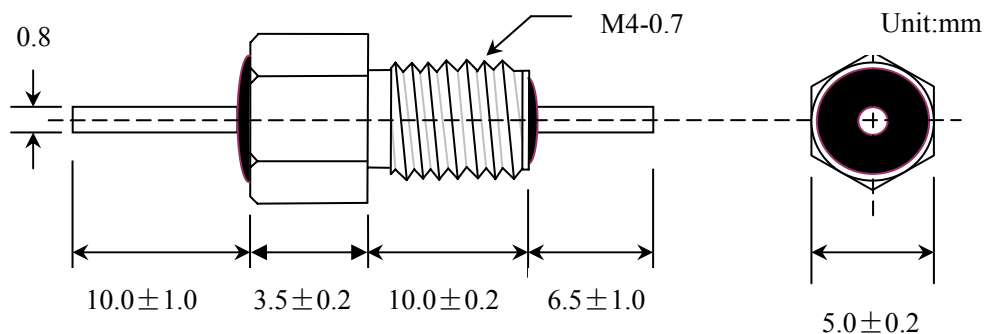
Bolt Mount EMI Filter (Bolt-in Filter)



Bolt Mount EMI Filters provide increased filtering in HF through MICROWAVE frequency spectrums from 100KHz through 10 GHz. The larger hex size means that much higher values of capacitance are available and that a 125 VAC/400 Hz rating is available in certain values. Also designed for mounting in a tapped bulkhead with the standard nut and lock washer provided, it is optimum in medium to low impedance circuits where significant amounts of capacitance to ground can be tolerated. In the “L” and “Pi” section versions an internal ferrite bead element provides both inductance and series resistance (lossy characteristic) which improves the insertion loss rolloff to 40dB and 60dB per decade respectively.

Note:

1. Pi design offers steeper insertion loss rolloff.
2. Features rugged monolithic discoidal capacitor construction.
3. Epoxy seal on both ends.



Example:

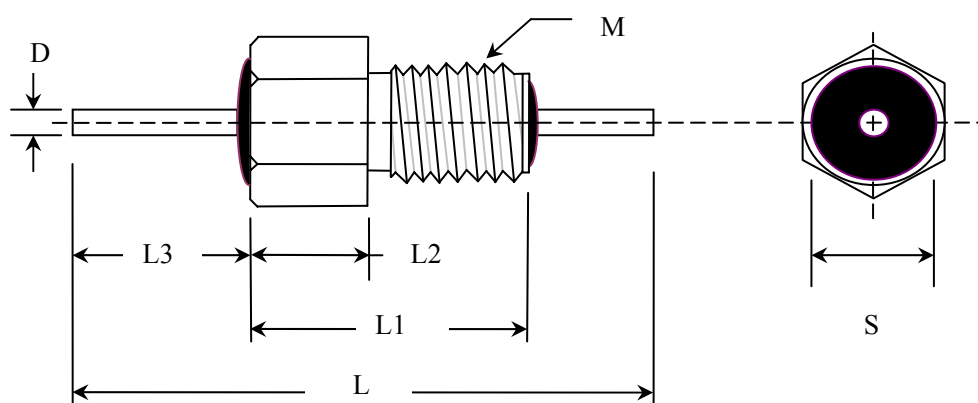
XWLPi5040-13508X-100VDC -332Z

Technical parameter:

1. Rated Voltage: 100VDC
2. Rated Current: 10A
3. Capacitance and Tolerance: 3300PF*2 +80%,-20%
4. Insulation Resistor: >10000M Ohms
5. Dissipate Factor: <3%
6. Withstand Voltage: 200VDC, one minute No Short Circuit, No Failure.
7. Temperature Feature: -55 °C to +125 °C
8. Circuit Type: Pi Type
9. Dimension Tolerance: L±0.5mm, W±0.2mm, M / d±0.1mm

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●Metric threads(Ci: Circuit; Tol: Tolerance; Cu: Current; WV: Working Voltage; Diel: Dielectric):

Part No.	Specification	Dimension							Ci	Cap	Tol	Cu	W.V	Diel
		S	M	D	L	L1	L2	L3						
L3325-001	LC3325-6608X-50V-102Z	3.3	M2.5-0.45	0.8	30.3	6.6	3	8	C	1000pF	Z	7A	50VDC	X7R
L3325-002	LC3325-6608S-50V-101M	3.3	M2.5-0.45	0.8	30.3	6.6	3	8	C	100pF	M	7A	50VDC	SL
L3325-003	LC3325-6608Y-50V-332Z	3.3	M2.5-0.45	0.8	30.3	6.6	3	8	C	3300pF	Z	7A	50VDC	Y5V
L3325-004	LC3325-6608N-50V-100P	3.3	M2.5-0.45	0.8	30.3	6.6	3	8	C	10pF	Z	7A	50VDC	NPO
L4030-001	LC4030-7008N-50V-100Z	4	M3-0.5	0.8	30.3	7	3	8.3	C	10pF	Z	7A	50VDC	NPO
L4030-002	LC4030-7008Y-50V-201Z	4	M3-0.5	0.8	30.3	7	3	8.3	C	200pF	Z	7A	50VDC	Y5P
L4030-003	LC4030-7008Y-50V-471Z	4	M3-0.5	0.8	30.3	7	3	8.3	C	470pF	Z	7A	50VDC	Y5P
L4030-004	LC4030-7008X-50V-102Z	4	M3-0.5	0.8	30.3	7	3	8.3	C	1000pF	Z	7A	50VDC	X7R
L4030-005	LC4030-7008Y-50V-332Z	4	M3-0.5	0.8	30.3	7	3	8.3	C	3300pF	Z	7A	50VDC	Y5V
L4030-006	LC4030-7008S-50V-101Z	4	M3-0.5	0.8	17	7	3	5	C	100pF	Z	7A	50VDC	SL
L4030-007	LC4030-7008S-50V-101Z	4	M3-0.5	0.8	30.3	7	3	8.3	C	100pF	Z	7A	100VDC	SL
L4030-008	LC4030-7008X-50V-103Z	4	M3-0.5	0.8	30.3	7	3	8.3	C	0.01uF	Z	7A	50VDC	X7R
L4030-009	LC4030-7008X-100V-103M	4	M3-0.5	0.8	30.3	7	3	8.3	C	0.01uF	M	7A	100VDC	X7R
L4030-010	LC4030-7008X-100V-472M	4	M3-0.5	0.8	30.3	7	3	8.3	C	4700pF	M	7A	100VDC	X7R
L4030-011	LC4030-7008X-16V-104Z	4	M3-0.5	0.8	30.3	7	3	8.3	C	0.1uF	Z	7A	16VDC	X7R
L4030-012	LC4030-7008X-100V-223M	4	M3-0.5	0.8	30.3	7	3	8.3	C	0.022uF	M	7A	100VDC	X7R
L4030-013	LC4030-7008X-50VAC-102Z	4	M3-0.5	0.8	30.3	7	3	8.3	C	1000pF	Z	7A	50VAC	X7R
L4030-014	LC4030-7008Y-100V-222Z	4	M3-0.5	0.8	30.3	7	3	8.3	C	2200pF	Z	7A	100VDC	Y5U
L4030-015	LC4030-7008-100V	4	M3-0.5	0.8	30.3	7	3	8.3	C	0		7A	100VDC	
L4030-016	LC4030-7008S-100V-101M	4	M3-0.5	0.8	30.3	7	3	8.3	C	100pF	M	7A	100VDC	SL
L4030-017	LC4030-7008X-100V-102Z	4	M3-0.5	0.8	30.3	7	3	8.3	C	1000pF	Z	5A	100VDC	X7R
L4030-018	LC4030-7008Y-100V-332Z	4	M3-0.5	0.8	30.3	7	3	8.3	C	3300pF	Z	7A	100VDC	Y5V
L4030-019	LC4030-7008N-200V-100Z	4	M3-0.5	0.8	30.3	7	3	8.3	C	10pF	Z	7A	200VDC	NPO
L4030-020	LC4030-7008X-100V-103M	4	M3-0.5	0.8	28.3	7	3	8.3	C	0.01uF	M	10A	100VDC	X7R
L4030-021	LC4030-7008S-100V-101M	4	M3-0.5	0.8	30.3	7	3	8.3	C	100pF	M	7A	100VDC	SL
L4030-022	LC4030-7008X-200V-102Z	4	M3-0.5	0.8	30.3	7	3	8.3	C	1000pF	Z	7A	200VDC	X7R
L4030-023	LC4030-7008S-100V-500Z	4	M3-0.5	0.8	30.3	7	3	8.3	C	50pF	Z	7A	100VDC	SL
L5040-001	LPI5040-8208X-100V-102P	5	M4-0.7	0.8	28.3	8.2	3.2	9.3	PI	1000pF*2	P	7A	100VDC	X7R

L5040-002	LC5040-8010X-100V-102S	5	M4-0.5	1	28.3	8	4	10.3	C	1000pF	S	10A	100VDC	X7R
L5040-003	LC5040-6508X-50V-103M	5	M4-0.7	0.8	35	6.5	3	12	C	0.01uF	M	7A	50VDC	X7R
L5040-004	LC5040-6008S100V-500M	5	M4-0.7	0.8	35	6	2.5	12	C	50pF	M	7A	100VDC	SL
L5040-005	LC5040-8208Y-200V-472Z	5	M4-0.7	0.8	28.3	8.2	3.2	8	C	4700pF	Z	7A	200VDC	Y5V
L5040-006	LC5040-8210Y-100V-471Z	5	M4-0.7	1	28.3	8.2	3.2	11.5	C	470pF	Z	10A	100VDC	Y5P
L5040-007	LC5040-8210S-100V-101M	5	M4-0.7	1	28.3	8.2	3.2	11.5	C	100pF	M	10A	100VDC	SL
L5040-008	LC5040-8010X-100V-102S	5	M4-0.7	1	28.3	8	4	10.3	C	1000pF	S	10A	100VDC	X7R
L5040-009	LPI5040-13508X-100V-332Z	5	M4-0.7	0.8	35	13.5	3.5	12	PI	3300pF*2	Z	7A	100VDC	X7R
L5040-010	LC5040-13508X-100V-102Z	5	M4-0.7	0.8	30.3	13.5	6	5	C	1000pF	Z	7A	100VDC	X7R
L5040-011	LC5040-13510X-100V-102Z	5	M4-0.7	1	35	13.5	3.5	11.5	C	1000pF	Z	10A	100VDC	X7R
L5040-012	LPI5040-12008X-100V-222S	5	M4-0.7	0.8	28.3	12	5	7	PI	2200pF*2	S	7A	100VDC	X7R
L5040-013	LC5040-13510X-500V-102Z	5	M4-0.7	1	25.5	13.5	3.5	6	C	1000pF	Z	10A	500VDC	X7R
L5040-014	LC5040-13008Y-100V-332Z	5	M4-0.7	0.8	30.3	13	6	5	C	3300pF	Z	7A	100VDC	Y5V
L5040-015	LC5040-6508X-100V-102M	5	M4-0.7	0.8	35	6.5	3	12	C	1000pF	Z	7A	100VDC	X7R
L5040-016	LC5040-8208-100V-102Z	5	M4-0.7	0.8	28.3	8.2	3.2	11.5	C	1000pF	Z	7A	100VDC	X7R
L5040-017	LC5040-13008X-100V-222Z	5	M4-0.7	0.8	30.3	13	6	5	C	2200pF	Z	7A	100VDC	X7R
L5040-018	LC5040-7508X-50V-102Z	5	M4-0.5	0.8	22	7.5	2.5	9.5	C	1000pF	Z	7A	50VDC	X7R
L6040-001	LC6040-7510X-100V-102Z	6	M4-0.7	1	28.3	7.5	3.5	11.5	C	1000pF	Z	10A	100VDC	X7R
L6040-002	LC6040-7510Y-200V-471Z	6	M4-0.7	1	28.3	7.5	3.5	11.5	C	1000pF	Z	10A	200VDC	Y5P
L6040-003	LC6040-7512X-100V-102Z	6	M4-0.7	1.2	35	7.5	3.5	13	C	1000pF	Z	15A	100VDC	X7R
L6040-004	LC6040-7512X-100V-332Z	6	M4-0.7	1.2	35	7.5	3.5	13	C	3300pF	Z	15A	100VDC	X7R
L6040-005	LC6040-7510X-100V-332Z	6	M4-0.7	1	31.5	7.5	3.5	11.5	C	3300pF	Z	10A	100VDC	X7R
L6040-006	LC6040-7510S-100V-151M	6	M4-0.7	1	28.3	7.5	3.5	11.5	C	150pF	Z	10A	100VDC	SL
L6040-007	LC6040-7510N-100V-331M	6	M4-0.7	1	28.3	7.5	3.5	11.5	C	330pF	M	10A	100VDC	NPO
L6040-008	LC6040-7510X-100V-103M	6	M4-0.7	1	28.3	7.5	3.5	11.5	C	0.01uF	M	10A	100VDC	X7R
L6040-009	LC6040-7510X-100V-222Z	6	M4-0.7	1	28.3	7.5	3.5	11.5	C	2200pF	Z	10A	100VDC	X7R
L6040-010	LC6040-7510X-100V-104M	6	M4-0.7	1	28.3	7.5	3.5	11.5	C	0.1uF	M	10A	100VDC	X7R
L6040-011	LC6040-7510X-100V-332Z	6	M4-0.7	1	28.3	7.5	3.5	11.5	C	3300pF	Z	10A	100VDC	X7R
L6040-012	LC6040-7510X-100V-472M	6	M4-0.7	1	28.3	7.5	3.5	11.5	C	4700pF	M	10A	100VDC	X7R
L6040-013	LC6040-7510N-100V-471M	6	M4-0.7	1	28.3	7.5	3.5	11.5	C	470pF	M	10A	100VDC	NPO
L6040-014	LC6040-8510X-100V-102Z	6	M4-0.7	1	28.3	8.5	2.5	12	C	1000pF	Z	10A	100VDC	X7R
L6040-015	LC6040-11010X-300V-103M	6	M4-0.7	1	28.3	11	4	10.5	C	0.01uF	M	10A	300VDC	X7R
L6040-016	LC6040-11010X-100V-104M	6	M4-0.7	1	28.3	11	4	10.5	C	0.1uF	M	10A	100VDC	X7R
L6040-017	LC6040-11010X-100V-102Z	6	M4-0.7	1	28.3	11	4	10.5	C	1000pF	Z	10A	100VDC	X7R
L6040-018	LPI6040-16008X-50V-103Z	6	M4-0.7	0.8	35	16	11	7.5	PI	0.01uF*2	Z	7A	50VDC	X7R
L6040-019	LC6040-7510X-200V-102Z	6	M4-0.7	1	28.3	7.5	3.5	11.5	C	1000pF	Z	10A	200VDC	X7R
L6040-020	LC6040-7510X-63V-102Z	6	M4-0.7	1	28.3	7.5	3.5	11.5	C	1000pF	Z	10A	63VDC	X7R
L6040-021	LC6040-8510X-100V-103M	6	M4-0.7	1	28.3	8.5	2.5	12	C	0.01uF	M	10A	100VDC	X7R
L6040-022	LC6040-8510X-50V-104M	6	M4-0.7	1	28.3	8.5	2.5	12	C	0.1uF	M	10A	50VDC	X7R
L6040-023	LC6040-7508X-100V-103M	6	M4-0.7	0.8	28.3	7.5	3.5	12	C	0.01uF	M	7A	100VDC	X7R
L6040-024	LC6040-8510S-100V-101Z	6	M4-0.7	1	28.3	8.5	2.5	12	C	100pF	Z	10A	100VDC	SL
L6040-025	LC6040-7510X-100V-202Z	6	M4-0.7	1	28.3	7.5	3.5	11.5	C	2000pF	Z	10A	100VDC	X7R

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L6040-026	LC6040-7508X-500V-103Z	6	M4-0.7	0.8	28.3	7.5	3.5	11.5	C	0.01uF	Z	5A	500VDC	X7R
L6040-027	LC6040-8510X-63V-332M	6	M4-0.7	1	40	8.5	2.5	11.5	C	3300pF	M	10A	63VDC	X7R
L6040-028	LC6040-7510S-100V-101Z	6	M4-0.7	1	28.3	7.5	3.5	11.5	C	100pF	Z	10A	100VDC	SL
L6040-029	LC6040-7510X-100V-303Z	6	M4-0.7	1	28.3	7.5	3.5	11.5	C	0.03uF	Z	10A	100VDC	X7R
L6040-030	LC6040-7510N-100V-102J	6	M4-0.7	1	28.3	7.5	3.5	11.5	C	1000pF	J	10A	100VDC	NPO
L6040-031	LC6040-7510N-100V-101M	6	M4-0.7	1	28.3	7.5	3.5	12	C	100pF	M	10A	100VDC	NPO
L6040-032	LC6040-7510N-100V-2pF	6	M4-0.7	1	28.3	7.5	3.5	12	C	2pF		10A	100VDC	NPO
L6040-033	LC6040-7510X-300V-102Z	6	M4-0.7	1	28.3	7.5	3.5	12	C	1000pF	Z	5A	300VDC	X7R
L6040-034	LC6040-7510X-100V-332Z	6	M4-0.7	1	57	7.5	3.5	21	C	3300pF	Z	10A	100VDC	X7R
L6040-035	LC6040-8510X100V-582Z	6	M4-0.7	1	28.3	8.5	2.5	12	C	5800pF	Z	10A	100VDC	X7R
L6050-001	LC6050-10008X-100V-102Z	6	M5-0.8	0.8	35	10	4	10.5	C	1000pF	Z	7A	100VDC	X7R
L6050-002	LC6050-10010X-100V-102P	6	M5-0.8	1	35	10	4	10.5	C	1000pF	P	10A	100VDC	X7R
L6050-003	LC6050-10008X-100V-222Z	6	M5-0.8	0.8	35	10	4	10.5	C	2200pF	Z	7A	100VDC	X7R
L6050-004	LC6050-10008X-100V-332Z	6	M5-0.8	0.8	35	10	4	10.5	C	3300pF	Z	7A	100VDC	X7R
L6050-005	LC6050-10010X-100V-332Z	6	M5-0.8	1	35	10	4	10.5	C	3300pF	Z	10A	100VDC	X7R
L6050-006	LC6050-10008Y-100V-472Z	6	M5-0.8	0.8	35	10	4	10.5	C	4700pF	Z	7A	100VDC	Y5V
L6050-007	LC6050-10010X-100V-472M	6	M5-0.8	1	35	10	4	10.5	C	4700pF	M	10A	100VDC	X7R
L6050-008	LPI6050-10008X-100V-102P	6	M5-0.8	0.8	28.3	7	3	10.5	PI	1000pF*2	P	7A	100VDC	X7R
L6050-009	LC6050-10010X-100V-332Z	6	M5-0.8	1	28.3	10	4	10.5	C	3300pF	Z	10A	100VDC	X7R
L6050-010	LC6050-10008X-250V-102Z	6	M5-0.8	0.8	57	10	4	20	C	1000pF	Z	7A	250VDC	X7R
L6050-011	LC6050-10008Y-250V-472Z	6	M5-0.8	0.8	30.3	10	4	10.5	C	4700pF	Z	7A	250VDC	Y5V
L6050-012	LC6050-10008X-50V-104Z	6	M5-0.8	0.8	35	10	4	10.5	C	0.1uF	Z	7A	50V	X7R
L6050-013	LC6050-10008X-250V-142Z	6	M5-0.8	0.8	35	10	4	10.5	C	1400pF	Z	7A	250VDC	X7R
L6050-014	LC6050-15512X-500V-102S	6	M5-0.8	1.2	28.3	16	4.5	7	C	1000pF	S	15A	500VDC	X7R
L6050-015	LC6050-10008X-500V-152M	6	M5-0.8	0.8	35	10	4	10.5	C	1500pF	M	10A	500VDC	X7R
L6050-016	LC6050-10008X-200V-102Z	6	M5-0.8	0.8	35	10	4	10.5	C	1000pF	Z	7A	200VDC	X7R
L8050-001	LC8050-10015X-200V-102Z	8	M5-0.8	1.5	32	10	6	8	C	1000pF	Z	20A	200VDC	X7R
L8050-002	LC8050-11015X-200V-102Z	8	M5-0.8	1.5	35	11	6	11.5	C	1000pF	Z	20A	200VDC	X7R
L8050-003	LC8050-11010X-1KV-103M	8	M5-0.8	1	35	11	6	11.5	C	0.01uF	M	10A	1KVDC	X7R
L8050-004	LC8050-11010X-200V-102Z	8	M5-0.8	1	35	11	6	11.5	C	1000pF	Z	10A	200VDC	X7R
L8050-005	LC8050-11015X-50V-152M	8	M5-0.8	1.5	35	11	6	11.5	C	1500pF	M	20A	50VDC	X7R
L8050-006	LC8050-11015N-500V-101M	8	M5-0.8	1.5	35	11	6	11.5	C	100pF	M	25A	500VDC	NPO
L8050-007	LC8050-10010X-500V-102Z	8	M5-0.8	1	35	10	6	11.5	C	1000pF	Z	10A	500VDC	X7R
L8050-008	LC8050-10015X-200V-332Z	8	M5-0.8	1.5	35	10	6	11.5	C	3300pF	Z	20A	200VDC	X7R
L8050-009	LC8050-11010X-100V-104M	8	M5-0.8	1	35	11	6	11.5	C	0.1uF	M	10A	100VDC	X7R
L8050-010	LC8050-11015X-250V-223K	8	M5-0.8	1.5	35	10	6	11.5	C	0.022uF	K	15A	250VDC	X7R
L8050-011	LC8050-11008X-200V-472Z	8	M5-0.8	0.8	35	11	6	11.5	C	1000pF	Z	7A	200VDC	X7R
L8060-001	LC8060-9010X-200V-102Z	8	M6-1.0	1	28.3	9	4	10.5	C	1000pF	Z	10A	200VDC	X7R
L8060-002	LC8060-9008X-200V-222Z	8	M6-1.0	0.8	30.3	9	4	7	C	2200pF	Z	7A	200VDC	X7R
L8060-003	LC8060-9008X-200V-472M	8	M6-1.0	0.8	30.3	9	4	7	C	4700pF	M	7A	200VDC	X7R
L8060-004	LC8060-9010X-200V-103M	8	M6-1.0	1	28.3	9	4	10.5	C	0.01uF	M	10A	200VDC	X7R
L8060-005	LC8060-9010X-500V-683M	8	M6-1.0	1	28.3	9	4	10.5	C	0.068uF	M	10A	500VDC	X7R

L8060-006	LC8060-9008X-100V-104M	8	M6-1.0	0.8	30.3	9	4	7	C	0.1uF	M	7A	100VDC	X7R
L8060-007	LC8060-9010X-100V-155Z	8	M6-1.0	1	28.3	9	4	10.5	C	1.5uF	Z	10A	100VDC	X7R
L8060-008	LC8060-9010X-100V-822Z	8	M6-0.75	1	28.3	9	4	10.5	C	8200pF	Z	10A	100VDC	X7R
L8060-009	LC8060-9010X-100V-105Z	8	M6-1.0	1	28.3	9	4	10.5	C	1uF	Z	10A	100VDC	X7R
L8060-010	LC8060-11015X-50V-103M	8	M6-1.0	1.5	35	11	6	10.5	C	0.01uF	M	20A	50VDC	X7R
L8060-011	LC8060-9008X-50V-472Z	8	M6-1.0	0.8	30.3	9	4	7	C	4700pF	Z	7A	50VDC	X7R
L8060-012	LC8060-11008X-250VAC-102Z	8	M6-1.0	0.8	35	11	6	9	C	1000pF	Z	7A	250VAC	X7R
L8060-013	LC8060-11015Y-250VAC-332Z	8	M6-1.0	1.5	35	11	6	9	C	3300pF	Z	20A	250VAC	Y5V
L8060-014	LC8060-11015Y-250VAC-502Z	8	M6-1.0	1.5	35	11	6	9	C	5000pF	Z	20A	250VAC	Y5V
L8060-015	LC8060-9008X-100V-102Z	8	M6-1.0	0.8	30.3	9	4	7	C	1000pF	Z	7A	100VDC	X7R
L8060-016	LC8060-11015Y-250VAC-202Z	8	M6-1.0	1.5	35	11	6	9	C	2000pF	Z	20A	250VAC	X7R
L8060-017	LC8060-9010X-50V-205M	8	M6-1.0	1	28.3	9	4	10.5	C	2uF	M	10A	50VDC	X7R
L8060-018	LC8060-11015X-150VAC-222Z	8	M6-1.0	1.5	35	11	6	9	C	2200pF	Z	20A	150VAC	X7R
L8060-019	LC8060-9010X-250V-104M	8	M6-1.0	1	28.3	9	4	10.5	C	0.1uF	M	10A	250VDC	X7R
L8060-020	LC8060-11015S-250VAC-101S	8	M6-1.0	1.5	35	11	6	9	C	100pF	S	20A	250VAC	SL
L8060-021	LC8060-11015X-250VAC-222Z	8	M6-1.0	1.5	35	11	6	9	C	2200pF	Z	20A	250VAC	X7R
L8060-022	LC8060-9010X-100V-104M	8	M6-1.0	1	28.3	9	4	7	C	0.1uF	M	10A	100VDC	X7R
L8060-023	LC8060-9010X-100V-334M	8	M6-1.0	1	28.3	9	4	10.5	C	0.33uF	M	10A	100VDC	X7R
L8060-024	LC8060-9008X-200V-202Z	8	M6-1.0	0.8	30.3	9	4	7	C	2000pF	Z	7A	200VDC	X7R
L10080-001	LC10080-15015X-200V-102Z	10	M8-0.75	1.5	35	15	7	10	C	1000pF	Z	20A	200VDC	X7R
L10080-002	LC10080-15015Y-250VAC-222Z	10	M8-0.75	1.5	35	15	7	10	C	2200pF	Z	20A	250VAC	Y5U
L10080-003	LC10080-15015X-500V-102Z	10	M8-0.75	1.5	35	15	7	10	C	1000pF	Z	20A	500VDC	X7R
L10080-004	LC10080-15015X-200V-472M	10	M8-0.75	1.5	35	15	7	10	C	4700pF	Z	20A	200VDC	X7R
L10080-005	LC10080-15015X-100V-472M	10	M8-0.75	1.5	35	15	7	10	C	4700pF	Z	1A	100VDC	X7R
L10080-006	LC10080-15015X-300V-153Z	10	M8-0.75	1.5	35	15	7	10	C	0.015uF	Z	20A	300VDC	X7R
L120100-001	LC120100-15015X-200V-472M	12	M10-1.5	1.5	35	15	7	10	C	4700pF	M	20A	200VDC	X7R

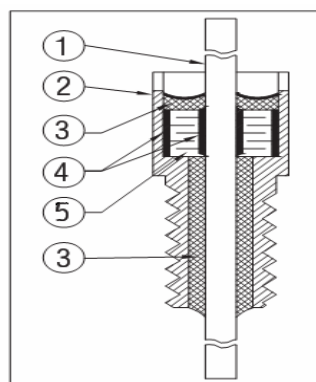
●UNC and UNF Threads:

Part No.	Dimension							Ci	Cap	Tol	Cu	Vol	Diel
	S	M	D	L	L1	L2	L3						
L8-32UNC-2A-001	5	8-32UNC-2A	0.8	28.3	5.4	1.7	12.5	PI	1500pF*2	Z	7A	100VDC	X7R
L8-32UNC-2A-002	5	8-32UNC-2A	1	28.3	5.1	1.52	12.5	C	1000pF	P	10A	100VDC	X7R
L8-32UNC-2A-003	5	8-32UNC-2A	1	28.3	5.1	1.52	12.5	C	2000pF	Z	10A	100VDC	Y5U
L8-32UNC-2A-004	5	8-32UNC-2A	1	28.3	5.1	1.52	12.5	C	1500pF	Z	10A	100VDC	X7R
L8-32UNC-2A-005	5	8-32UNC-2A	0.8	30.3	9.2	2.4	6	PI	1500pF*2	z	7A	200VDC	X7R
L1/4-28UNF-2A-001	9.77	1/4-28UNF-2A	1	15.6	7.9	3.2	3.9	L	1.4uF	M	10A	50VDC	X7R
L1/4-28UNF-2A-002	9.77	1/4-28UNF-2A	1	35	19	14.3	10	PI	0.6uF*2	M	10A	50VDC	X7R
L1/4-28UNF-2A-003	10	1/4-28UNF-2A	1.5	38.4	29.8	25	4.83	6F	1uF*3	Z	3A	50VDC	X7R
L1/4-28UNF-2A-004	9.77	1/4-28UNF-2A	1	35	19	14.3	10	PI	1uF*2	M	10A	50VDC	X7R
L12-28UNF-2A-001	6	12-28UNF-2A	1.2	25.4	12	4	6.35	C	0.01uF	Z	15A	250VDC	X7R
L6-32UNC-2A-001	4	6-32UNC-2A	0.8	30.3	9.1	3.2	8	LC	330pF	Z	10A	200VDC	X7R

1. Please feel free to contact us if you have your own request.
2. Please only show us the Part No. and order quantity if you need to order.

The products listed in this catalog are only a few of the thousands of variations that **XIANGWEI** produces. For Custom Component design, please contact us directly.

Xiang Wei



- ① LEAD
- ② CASE / SHELL
- ③ EPOXY
- ④ SOLDER
- ⑤ CAPACITOR

Capacitance(Cap): measured @ 1KHz and .1 to 1 VRMS, 25 °C

Dissipation Factor(D.F.): 3% max.

Insulation Resistance: 10,000 Mohms min. @ 25 °C, WVDC; 1000 Mohms min. @ 125 °C WVDC

Dielectric Withstanding Voltage(D.W.V.): 200% of WVDC min.

Glossary of Commonly Used Terms

1. Capacitance(Cap):

Capacitance, expressed in “FARADS”, is the capability of two or more parallel conductive plates to store electrical energy in an electrostatic field between them. Capacitance is dependent on the properties of the dielectric material and the geometry of the capacitor. (See table below)

2. Dissipation Factor (D.F.):

Dissipation Factor is defined as the ratio of energy dissipated to energy stored in a dielectric. It is frequency sensitive and must be specified at a specific frequency.

3. Dielectric Withstand Voltage(D.W.V.):

The peak voltage that a component is designed to withstand, without damage for short periods of time.

4. Insertion Loss (IL):

The loss in load power due to the insertion of a component or device at some point in a transmission system.

5. Insulation Resistance (I.R.):

I.R. is the DC resistance between the terminal and ground of the a capacitor. It is generally measured at the rated voltage of the capacitor, and must be specified in terms of voltage, temperature, time and relative humidity.

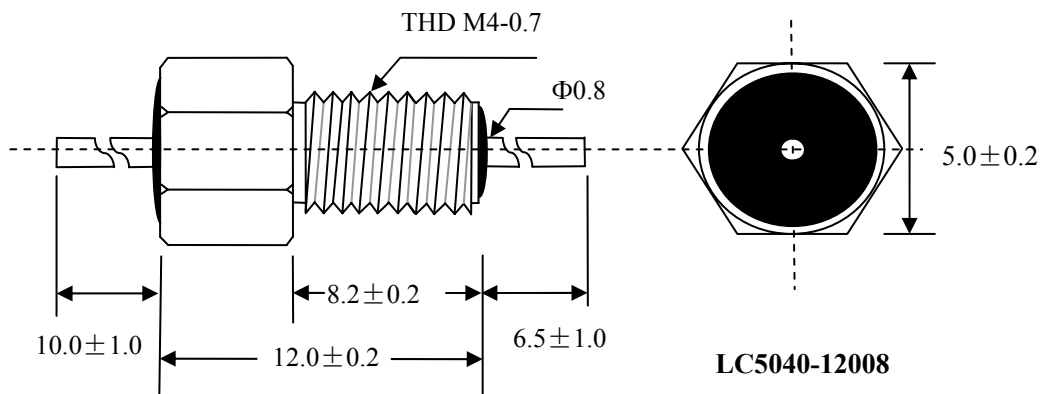
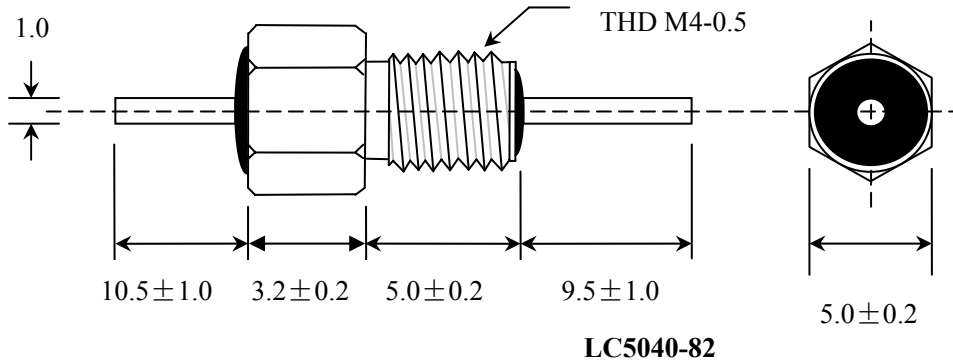
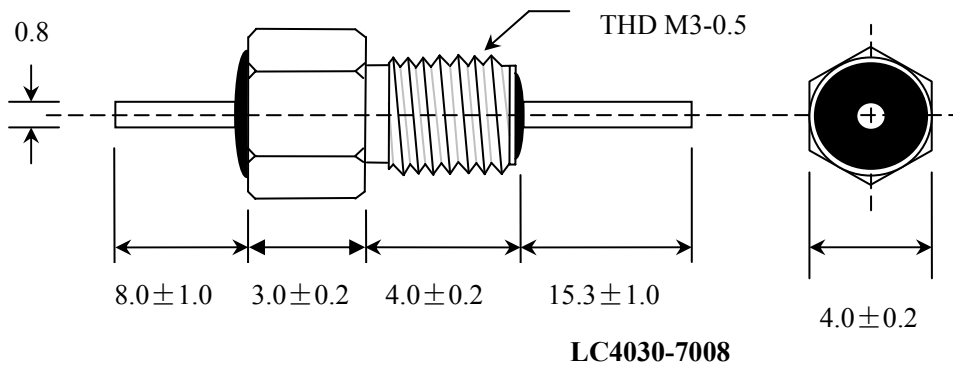
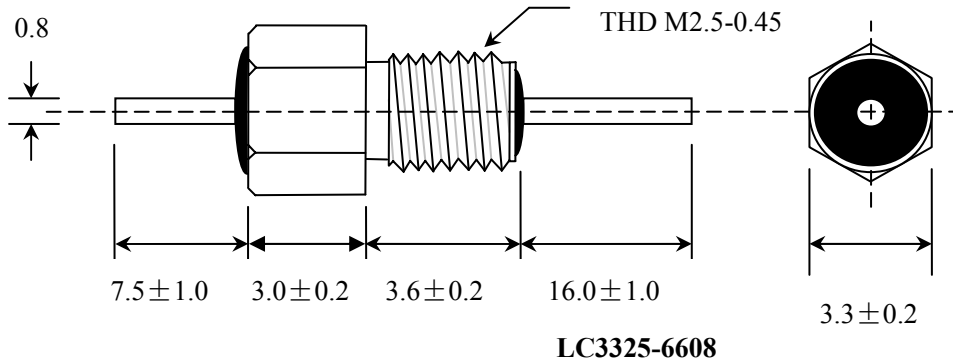
6. Hermetic:

Permanently sealed by glass fusion, soldering, or other means, to prevent the transmission of air, moisture vapor, or other gases.

●Unit Conversion (Ex: 10,000pF=10.0nF=0.01uF)

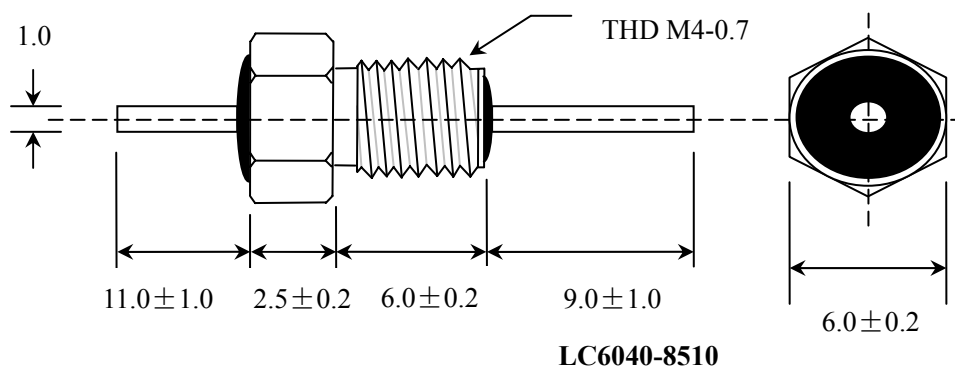
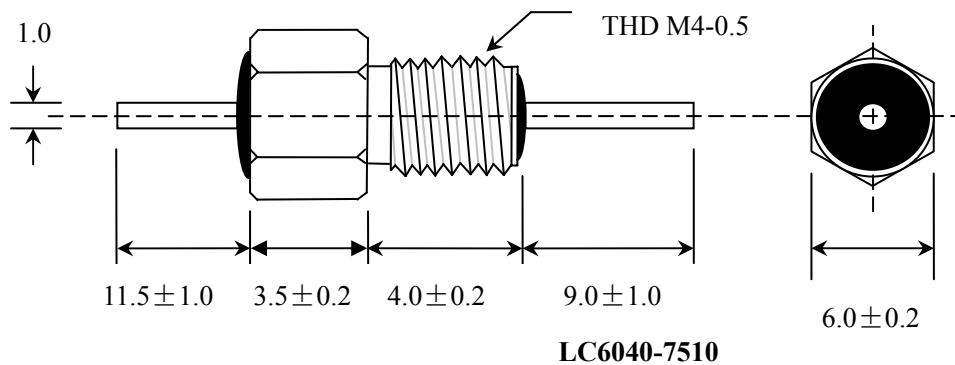
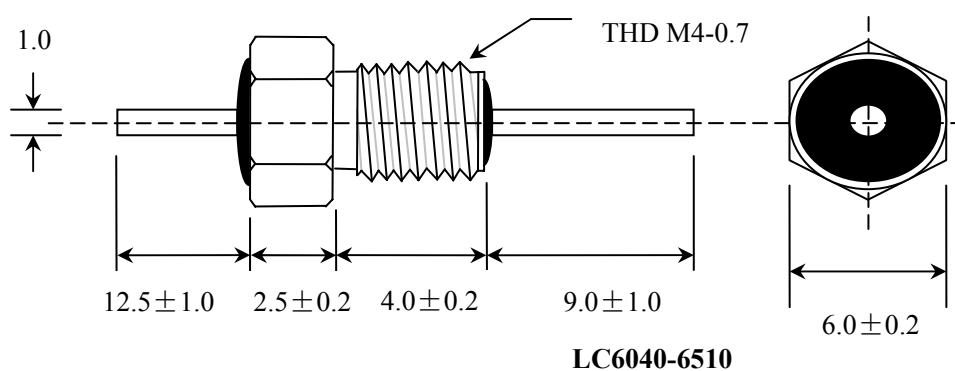
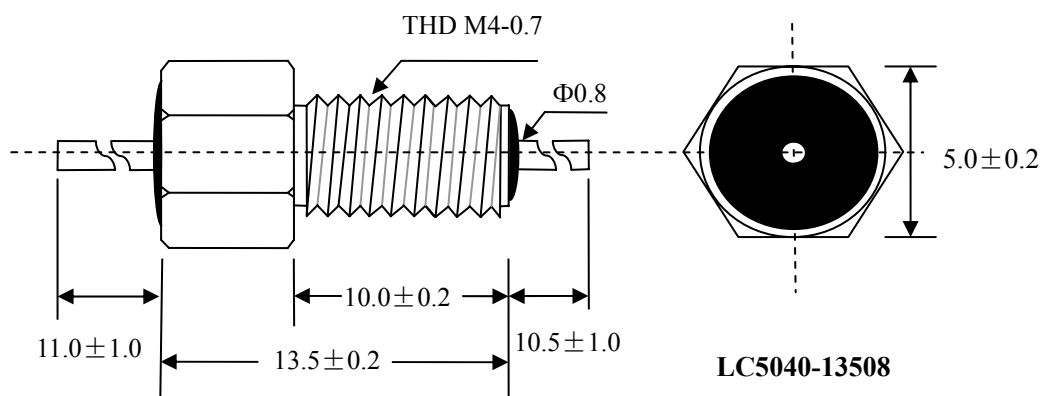
pF(pico Farads)	nF(nano Farads)	uF(micro Farads)
1	0.001	0.000001
1,000	1.0	0.001
10,000	10.0	0.01
100,000	100.0	0.1
1,000,000	1,000.0	1.0

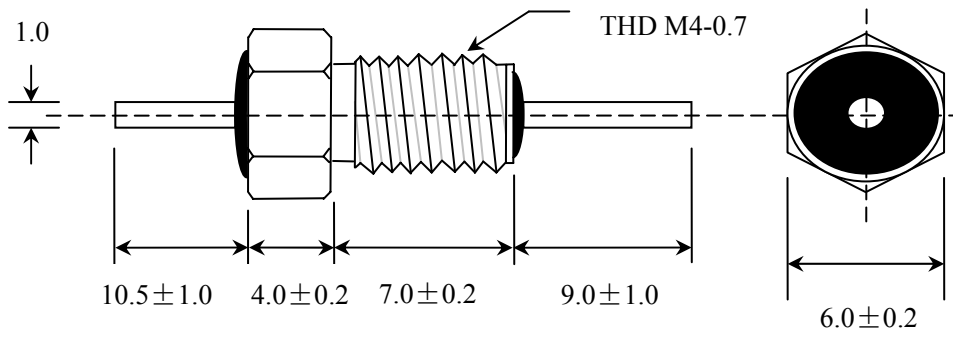
Some Thread Style Dimension Chart (Unit: MM)



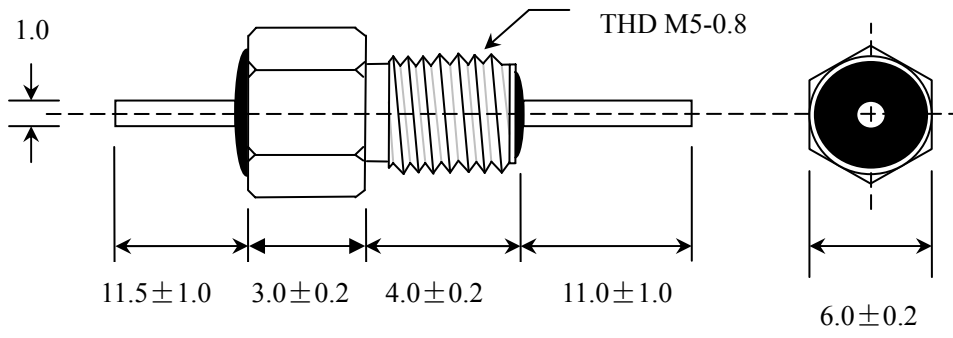
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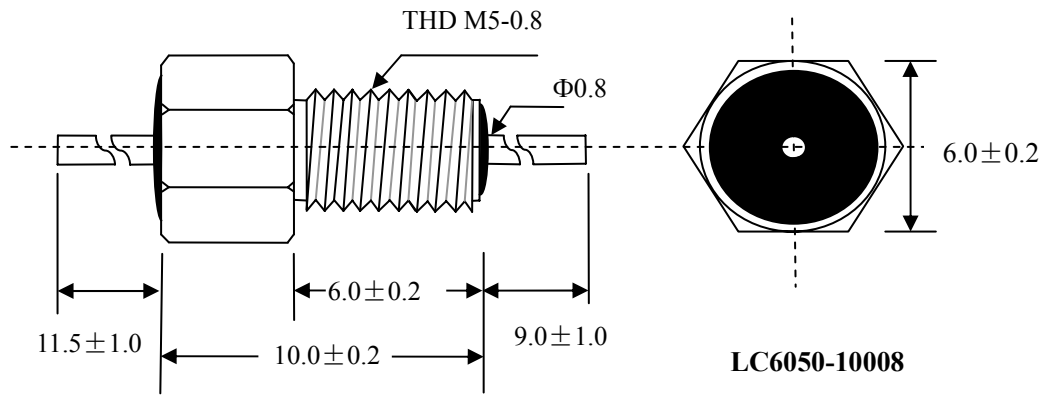




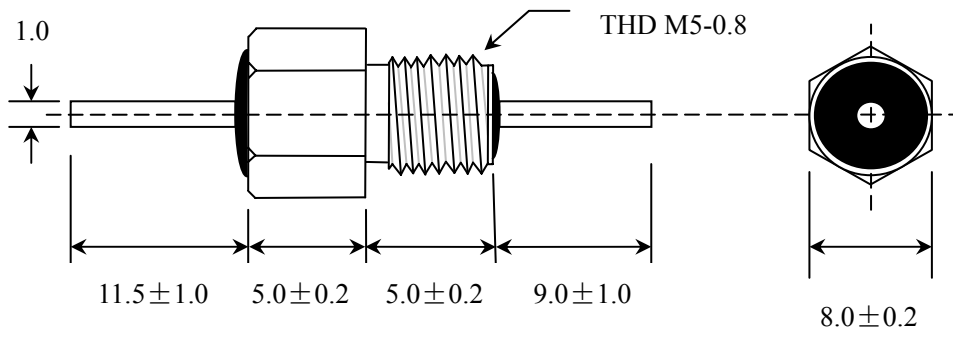
LC6040-110



LC6050-70



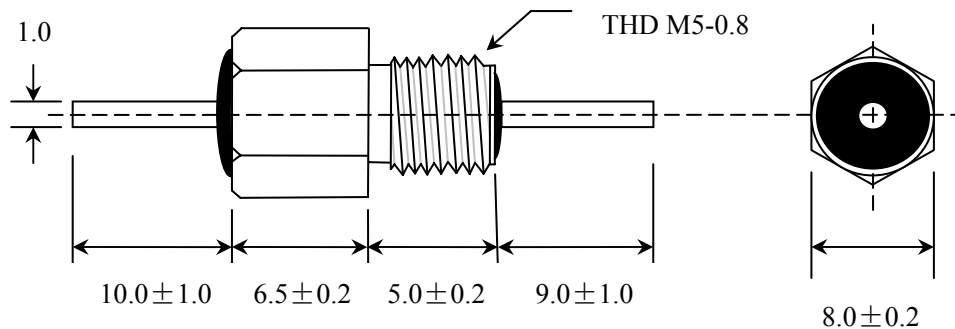
LC6050-10008



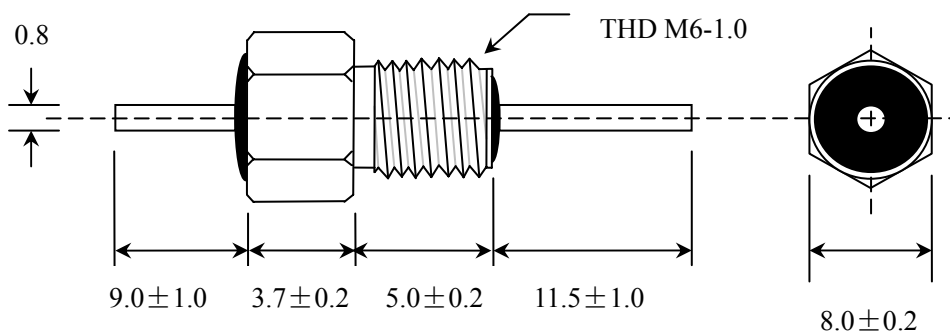
LC8050-10010

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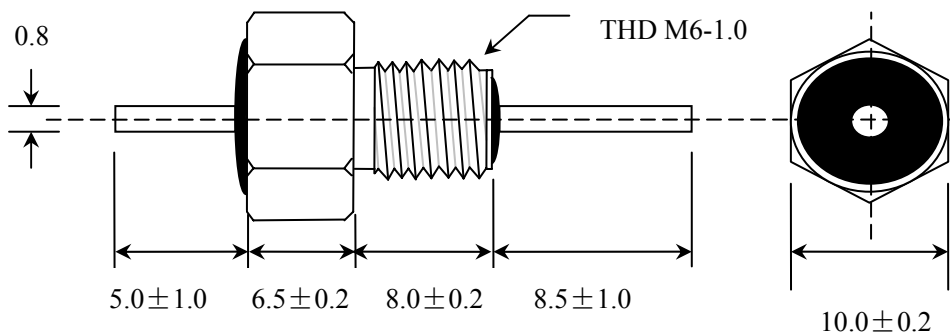
Xiang Wei



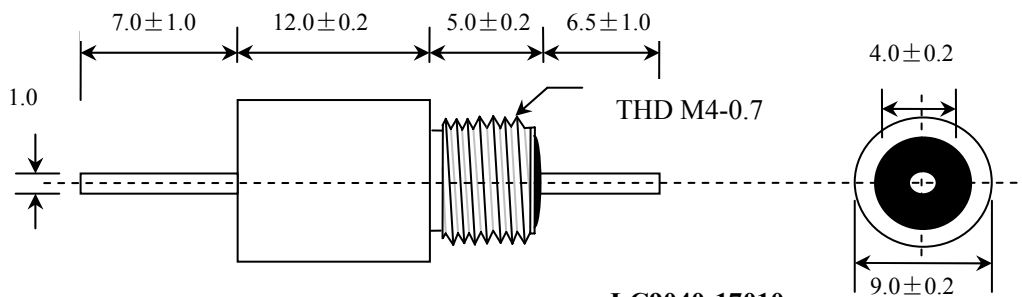
LC8050-11510



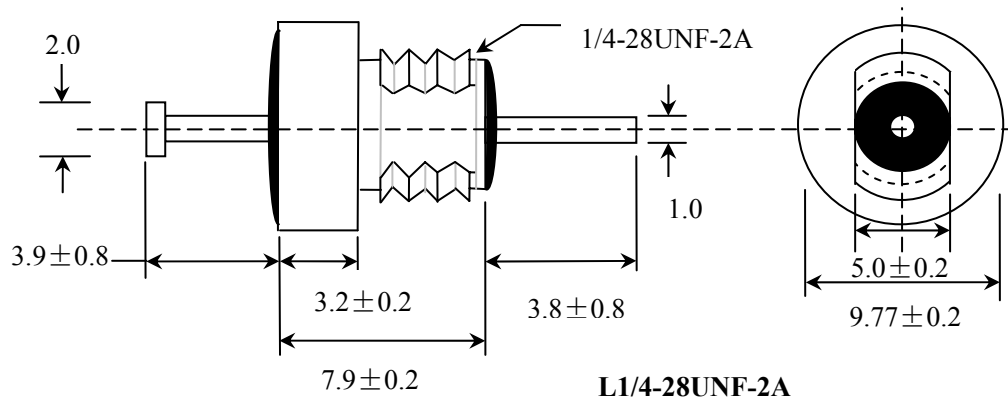
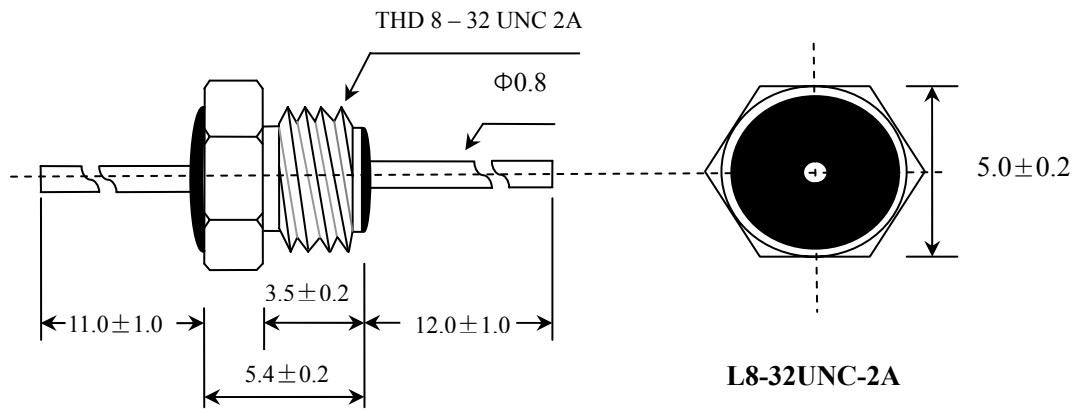
LC8060-8515



LC10080-14515



LC9040-17010



Solder Mount EMI Filter(Solder-in Filter)



Solder Mount EMI Filter is intended for use as a high reliability alternative a commonly available commercial filter type. Due to its smaller body diameter, capacitance is limited. It does provide effective filtering in the MICROWAVE frequency spectrum from 100MHz through 10GHz. Designed to be soldered into a package, bracket or bulkhead (and maintain hermeticity), it is ideal for high impedance circuits where large capacitance values are not practical.

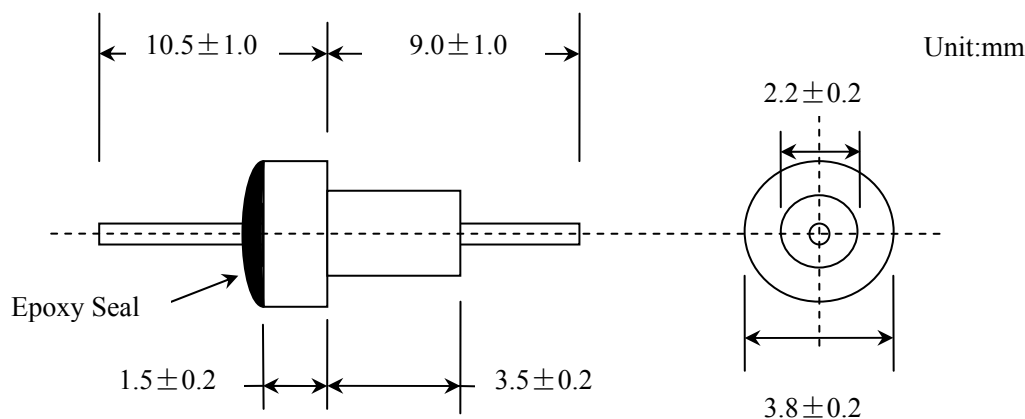
Alternate lead lengths or special capacitance values are

available upon request.

Custom package to bracket assemblies utilizing this feedthru can be furnished to your specifications.

Note:

1. Epoxy seal on both ends.



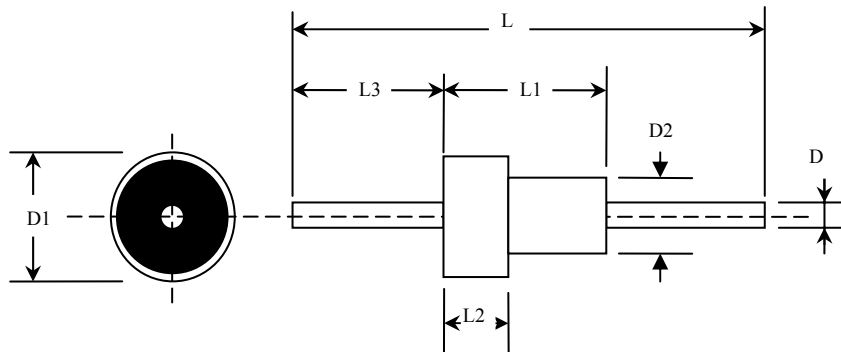
Example:

XWHC3822-5008X-100VDC -102Z

Technical parameter:

1. Rated Voltage: 100VDC
2. Rated Current: 7A
3. Capacitance and Tolerance: 1000PF +80%, -20%
4. Insulation Resistor: >3000M Ohms
5. Dissipation Factor: <3%
6. Withstand Voltage: 200VDC, one minute No Short Circuit, No Failure.
7. Temperature Feature: -55 °C to +125 °C
8. Circuit Type: C Type
9. Dimension Tolerance: L±0.5mm, D±0.2mm, d±0.1mm

Solder-in stocks we have as follows:



Note: Ci: Circuit; Tol: Tolerance; Cu: Current; W.V: Working Voltage; Diel: Dielectric

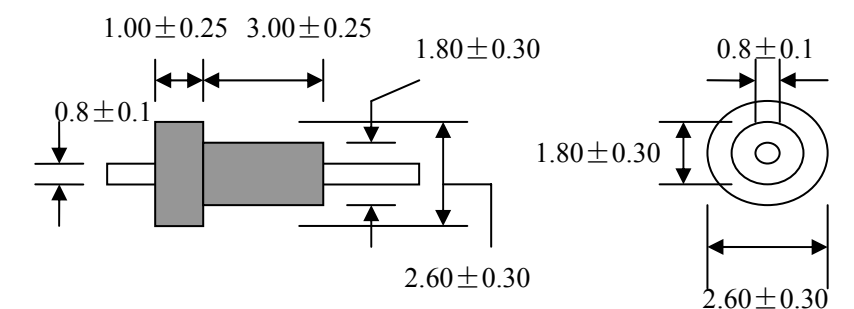
Part No.	Specification	Dimension							Ci	Cap	Tol	Cu	W.V	Diel
		D	D1	D2	L	L1	L2	L3						
H1915-001	HC1915-3508X-100V-102Z	1.9	1.5	0.8	8.7	3.5	1	3	C	1000pF	Z	7A	100VDC	X7R
H1915-002	HC1915-3508X-100V-102Z	1.9	1.5	0.8	22	3.5	1	10	C	1000pF	Z	7A	100VDC	X7R
H1915-003	HC1915-3508X-100V-102P	1.9	1.5	0.8	28.3	3.5	1	10	C	1000pF	P	7A	100VDC	X7R
H1915-004	HC1915-3508N-100V-100Z	1.9	1.5	0.7	24	3.5	1	10	C	10pF	z	7A	100VDC	NPO
H2416-001	HC2416-4508X-50V-102Z	2.4	1.6	0.8	30.3	4.5	1.5	9	C	1000pF	Z	7A	50VDC	X7R
H2416-002	HC2416-4508S-100V-101M	2.4	1.6	0.8	30.3	4.5	1.5	9	C	100pF	M	7A	100VDC	SL
H2416-003	HC2416-4508Y-100V-561Z	2.4	1.6	0.8	30.3	4.5	1.5	9	C	560pF	Z	7A	100VDC	Y5P
H2416-004	HC2416-4508Y-100V-222Z	2.4	1.6	0.8	30.3	4.5	1.5	9	C	2200pF	Z	7A	100VDC	Y5U
H2416-005	HC2416-4508Y-50V-332Z	2.4	1.6	0.8	30.3	4.5	1.5	9	C	3300pF	Z	7A	50VDC	Y5V
H2416-006	HC2416-4508N-50V-150Z	2.4	1.6	0.8	30.3	4.5	1.5	9	C	15pF	Z	7A	50VDC	NPO
H2416-007	HC2416-4508X-100V-152Z	2.4	1.6	0.8	30.3	4.5	1.5	9	C	1500pF	Z	7A	100VDC	X7R
H2618-001	HC2618-4008X-100V-102Z	2.6	1.8	0.8	30.3	4	1	9.5	C	1000pF	Z	7A	100VDC	X7R
H2618-002	HC2618-4008S-50V-800Z	2.6	1.8	0.8	30.3	4	1	9.5	C	80pF	Z	7A	50VDC	SL
H2618-003	HC2618-4008Y-100V-471Z	2.6	1.8	0.8	30.3	4	1	9.5	C	470pF	Z	7A	100VDC	Y5P
H2618-004	HC2618-4008Y-100V-222Z	2.6	1.8	0.8	22	4	1	10	C	2200pF	Z	7A	100VDC	Y5U
H2618-005	HC2618-4008Y-100V-332Z	2.6	1.8	0.8	22	4	1	10	C	3300pF	Z	7A	100VDC	Y5V
H2618-006	HC2618-4008N-100V-100Z	2.6	1.8	0.8	22	4	1	10	C	10pF	Z	7A	100VDC	NPO
H2618-007	HC2618-4008X-100V-102Z	2.6	1.8	0.8	22	4	1	10	C	1000pF	Z	7A	100VDC	X7R
H2618-008	HC2618-4008Y-100V-471Z	2.6	1.8	0.8	6	4	1	1	C	470pF	Z	7A	100VDC	Y5P
H2618-009	HC2618-4008S-100V-470P	2.6	1.8	0.8	30.3	4	1	9.5	C	47pF	Z	7A	100VDC	SL
H3822-001	HC3822-5008X-100V-102Z	3.8	2.2	0.8	19	5	1.5	9.5	C	1000pF	Z	7A	100VDC	X7R
H3822-002	HC3822-5008S-100V-800Z	3.8	2.2	0.8	19	5	1.5	9.5	C	80pF	Z	7A	100VDC	SL
H3822-003	HC3822-5008Y-100V-471Z	3.8	2.2	0.8	19	5	1.5	9.5	C	470pF	Z	7A	100VDC	Y5P
H3822-004	HC3822-5008Y-50V-202Z	3.8	2.2	0.8	30.3	5	1.5	9.5	C	2000pF	Z	7A	50VDC	Y5U
H3822-005	HC3822-5008Y-100V-332Z	3.8	2.2	0.8	19	5	1.5	9.5	C	3300pF	Z	7A	100VDC	Y5V
H3822-006	HC3822-5008N-100V-100Z	3.8	2.2	0.8	19	5	1.5	9.5	C	10pF	Z	7A	100VDC	NPO
H3822-007	HC3824-0605B	3.8	2.2	0.8	57	6.5	2	23	C	2000pF	Z	7A	63VDC	Y5U
H3822-008	HC3822-5008X-100V-102Z	3.8	2.2	0.8	22	5	1.5	9.5	C	1000pF	Z	7A	100VDC	X7R
H3822-009	HC3822-5008X-100V-102Z	3.8	2.2	0.8	30.3	5	1.5	9.5	C	1000pF	Z	7A	100VDC	X7R

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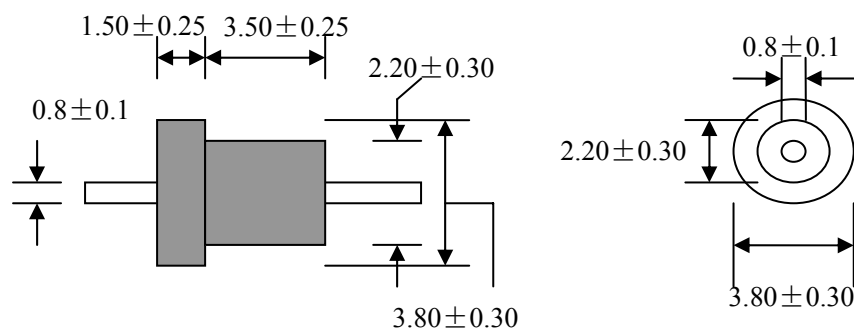
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H3822-010	HC3822-5008X-100V-102Z	3.8	2.2	0.8	57	5	1.5	9.5	C	1000pF	Z	7A	100VDC	X7R
H4224-001	HC4224-3510X-100V-102Z	4.2	2.4	1	28.3	3.5	1	13	C	1000pF	Z	10A	100VDC	X7R
H4224-002	HC4224-3510S-100V-101Z	4.2	2.4	1	28.3	3.5	1	13	C	100pF	Z	10A	100VDC	SL
H4224-003	HC4224-3510Y-100V-471Z	4.2	2.4	1	28.3	3.5	1	13	C	470pF	Z	10A	100VDC	Y5P
H4224-004	HC4224-3510Y-100V-222Z	4.2	2.4	1	28.3	3.5	1	13	C	2200pF	Z	10A	100VDC	Y5U
H4224-005	HC4224-3510Y-100V-332Z	4.2	2.4	1	28.3	3.5	1	13	C	3300pF	Z	10A	100VDC	Y5V
H4224-006	HC4224-3510N-100V-100Z	4.2	2.4	1	28.3	3.5	1	13	C	10pF	Z	10A	100VDC	NPO
H4330-001	HC4330-2710X-100V-102Z	4.3	3	1	28.3	2.7	1.2	13	C	1000pF	Z	10A	100VDC	X7R
H4532-001	HC4532-6007X-400V-102Z	4.5	3.2	0.7	24	6	2.5	10	C	1000pF	Z	6A	400VDC	X7R
H4532-002	HC4532-6007X-100V-102Z	4.5	3.2	0.7	24	6	2.5	10	C	1000pF	Z	6A	100VDC	X7R
H4532-003	HC4532-6007X-100VAC-102Z	4.5	3.2	0.7	24	6	2.5	10	C	1000pF	Z	6A	100VAC	X7R
H4532-004	HC4532-6010X-100VAC-102Z	4.5	3.2	1	28.3	6	2.1	12	C	1000pF	Z	10A	100VAC	X7R
H4532-005	HC4532-6010X-220VAC-102Z	4.5	3.2	1	28.3	6	2.1	12	C	1000pF	Z	10A	220VAC	X7R
H4722-001	HC5025-0302B	4.7	2.2	0.8	22	3.2	1	12	C	1000pF	Z	7A	63VDC	X7R
H4722-002	HC4722-3208X-100V-102Z	4.7	2.2	0.8	22	3.2	1	12	C	1000pF	Z	7A	100VDC	X7R
H4722-003	HC4722-3208X-100V-332Z	4.7	2.2	0.8	22	3.2	1	12	C	3300pF	Z	7A	100VDC	Y5V
H4722-004	HC4722-4010X-100V-222Z	4.7	2.2	1	28.3	4	1.5	13	C	2200pF	Z	10A	100VDC	X7R
H5122-001	HC5122-5008X-50V-202Z	5.1	2.2	0.8	28.3	4.5	1.5	12.5	C	2000pF	Z	7A	50VDC	X7R
H5122-002	HC5122-6508X-200V-332Z	5.1	2.2	0.8	28.3	6.5	2.5	11.5	C	3300pF	Z	7A	200VDC	X7R
H5122-003	HC5122-5010X-50V-202Z	5.1	2.2	0.8	28.3	4.5	1.5	12.5	C	2000pF	Z	10A	50VDC	X7R
H5124-001	HC5124-6010X-100V-332Z	5.1	2.4	1	28.3	6	1.5	12.5	C	3300pF	Z	10A	100VDC	X7R
H4737-001	HC4737-6515X-100VAC-102Z	4.7	3.7	1.5	35	6.5	2.5	12	C	1000pF	Z	20A	100VAC	X7R

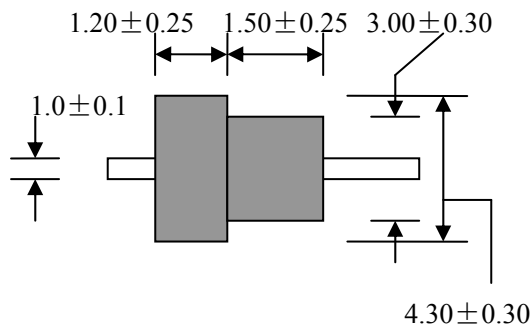
Some Solder-in Filter Drawing(Unit:mm):



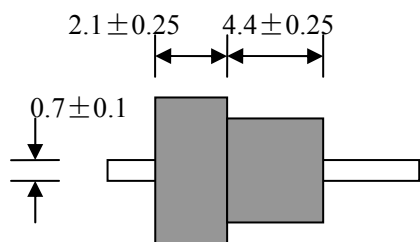
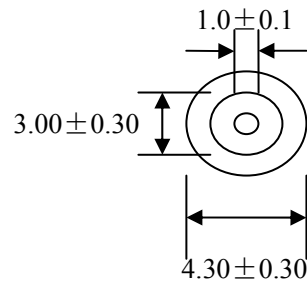
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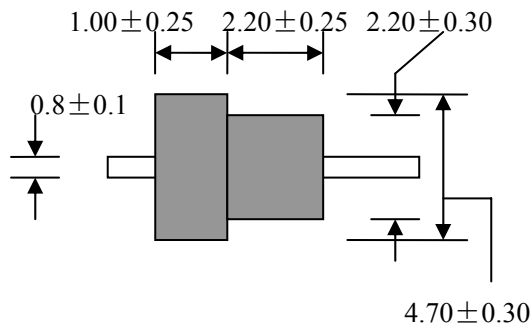
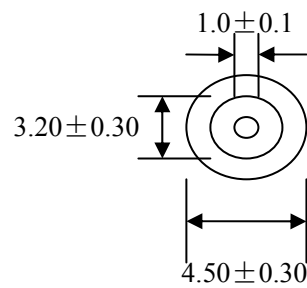
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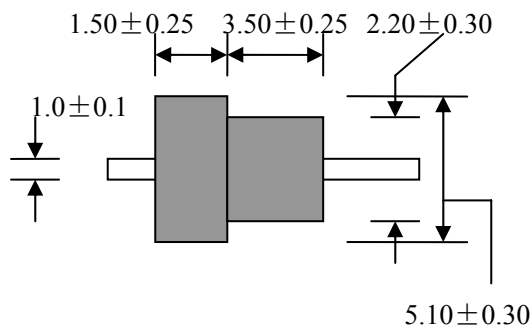
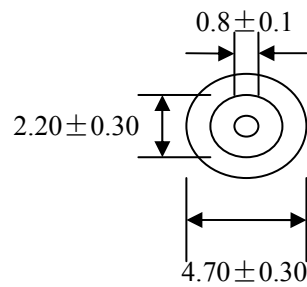
HC4330-2711



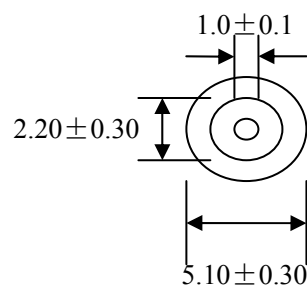
HC4532-6507



HC4722-3208



HC5122-5010

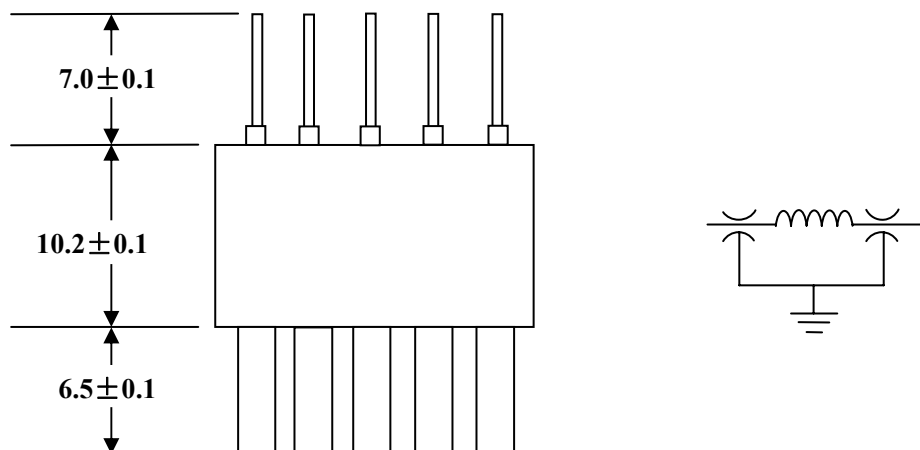


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Filter Array

XWZL300V-502*2*10-1

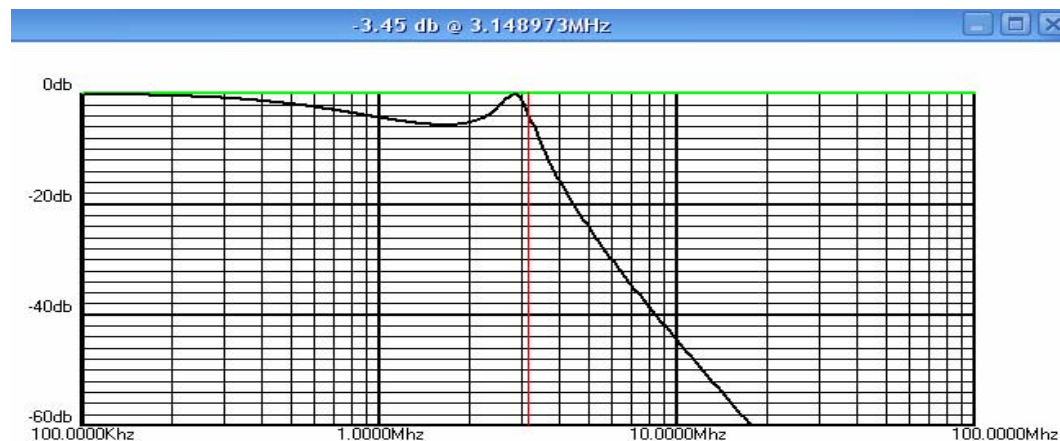
Unit:mm



Technical Parameter:

Capacitance	Rated Voltage	Temperature	Dissipation Factor	Rated Current
10000pF	300VDC	-25°C-+85°C	< 3%	7A
Inductance	Testing Voltage	Tolerance	Insulation Resistor	
1uH--3uH	500VDC	+80,-20%	> 1000MΩ	

Insertion Loss, line Impedance 50 Ω Simulation Figure(Unit:dB)

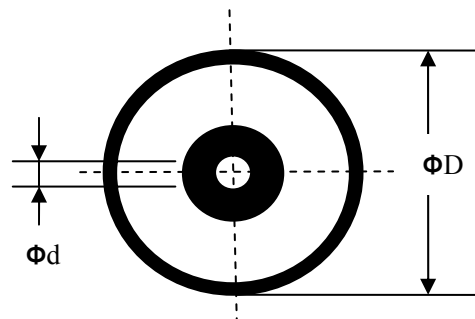


Multilayer EMI Filter Chips

● Feature and Appliance

1. Small volume, large capacitance, small capacitance change;
2. Used to manufacture kinds of EMI Filter and related components;
3. Used to prevent RF interference of by pass and filter, have some features of different rated voltage, kinds of temperature feature and outdrawing dimensions, so it fit for aerospace equipment, consumer electronic devices;
4. Temperature Feature: -55°C to $+125^{\circ}\text{C}$.

● Shape and Dimension



● Electrical Properties

Item	Dimension		W.V.Cap Range	Cap.Tol	I.R.	D.F.	Temp Coef/Feat
	ΦD	Φd	100VDC				
CC52-Φ2.5	2.5±0.2	0.9±0.10	3R3~103	M	$R_j \geq 10^4 \text{M}\Omega$	$\leq 15 * 10^{-4}$	BC Feature: (0±30) $* 10^{-6}/^{\circ}\text{C}$
CC52-Φ4.3	4.3±0.2	1.2±0.15	4R7~103				
CC52-Φ4.8	4.8±0.2	1.2±0.15	4R7~103				
CT52-Φ2.5	2.5±0.2	0.9±0.10	102~223	M	$C_R \leq 25\text{nF}$: $R_i \geq 5 * 10^4 \text{M}\Omega$ $C_R \geq 25\text{nF}$: $R_i * C_R \geq 100\text{s}$	≤ 0.035	2X1 Feature: $\leq \pm 15\%$
CT52-Φ4.3	4.3±0.2	1.2±0.15	102~513				
CT52-Φ4.8	4.8±0.2	1.2±0.15	102~753				
CT52-Φ6.5	6.5±0.2	1.9±0.20	103~184				
CT52-Φ8.2	8.2±0.2	1.6±0.20	104~684				
CT52-Φ9.0	9.0±0.2	1.9±0.20	104~824				

a.W.V.Cap Range: Working Voltage Capacitacne Range;

b.Cap.Tol: Capacitance Tolerance(M= $\pm 20\%$);

c.I.R.: Insulation Resistance;

d.D.F.: Dissipation Factor;

e.Temp Coef/Feat: Temperature Coefficient/Feature.

● Order samples:

CT52-Φ2.5-2X1-100VDC-223-M

① ② ③ ④ ⑤ ⑥

①Item ②Dimension Part ③Temperature Coefficient/Feature

④Rated Voltage(W.V.: Working Voltage) ⑤Capacitance ⑥Cap Tolerance

Attension:

1. Chips' Thickness, up to the clients request.
2. We can accept the custom design.

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● Shape and Dimension



Item	Cap.(pF)	Cap.Tol	Test Withstand Vol	Dimensions			
				D	d1	d2	H
CT85-1	4700	Z	AC2KV	20	5.0	7.0	5.2
CT85-2	6800	Z	AC2KV	20	5.0	7.0	4.3
CT85-3	4700	Z	AC2KV	17	5.0	7.0	3.9
CT85-4	4700	Z	AC2KV	14.5	5.0	7.0	3.9

- a. Cap(pF):Capacitance(Unit:pF)
- b. Cap.Tol:Capacitance Tolerance(Z:+80%,-20%;P:+100%,-0%;M:+20%,-20%,and so on)
- c. Test Withstand Vol: Test Withstand Voltage.

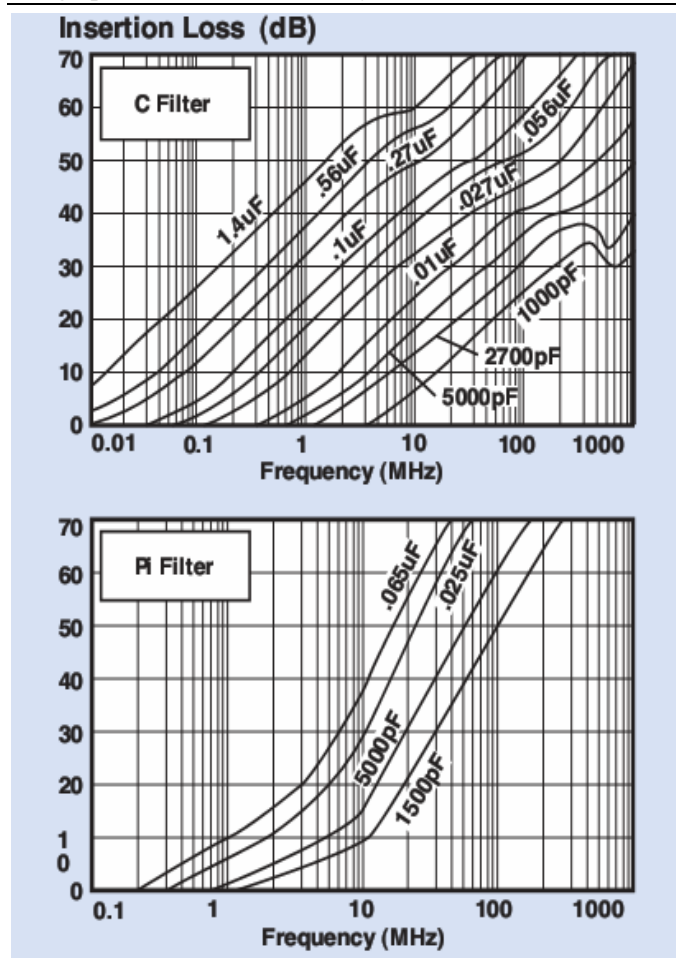
Attention:

We can accept the custom design if you request the special dimensions.

Insertion Loss Chart:

Circuit	Capacitance	Insertion Loss: dB Frequency: MHz At 25 °C Per MIL-STD-220							
		0.01	0.1	1	10	100	300	1G	10G
C	10	—	—	—	—	—	3	6	20
	100	—	—	—	—	3	10	20	28
	470	—	—	—	3	15	18	35	40
	1000	—	—	—	6	25	30	36	45
	2000	—	—	—	8	26	32	44	51
	3300	—	—	—	13	28	34	43	52
	4700	—	—	5	15	30	38	47	52
	6800	—	—	7	17	33	40	50	55
	0.01uF	—	—	10	21	35	45	52	60
	0.047uF	—	3	18	35	45	50	60	60
	0.1uF	—	5	20	40	70	70	60	60
	0.2uF	3	7	24	42	50	55	65	68
	0.47uF	5	15	32	40	80	80	70	68
	1uF	10	25	40	50	80	80	70	68
1.5uF	16	25	33	44	60	80	70	68	
L.T	100	—	—	—	—	9	19	27	34
	470	—	—	—	2	21	28	38	45
	1000	—	—	—	7	26	30	42	49
	2000	—	—	—	12	27	34	44	50
	3300	—	—	—	14	30	36	45	52
	4700	—	—	3	15	30	38	45	55
	6800	—	—	3	18	35	40	50	60
	0.1uF	—	10	25	65	90	90	90	80
	0.47uF	6	22	30	70	90	90	90	80
	1uF	15	30	50	70	90	90	90	80
Pi	100x2	—	—	—	—	7	18	29	32
	470x2	—	—	—	5	35	55	70	70
	1000x2	—	—	—	12	50	60	70	70
	3300x2	—	—	2	18	70	75	80	80
	6800x2	—	—	5	21	70	75	80	80
	0.1uFx2	—	10	25	65	90	90	90	80
	0.47uFx2	6	22	30	70	90	90	90	80
	1uFx2	15	30	50	70	90	90	90	80
1.5uFx2	20	40	80	90	90	90	90	80	

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Application Guidelines

Insertion Loss Measurement

Insertion Loss(IL) is a measure of the effectiveness of a filter. It is defined as the ratio of the voltage (E1) across the circuit load without the filter and the voltage (E2) across the load with the filter. Since insertion loss is dependent on the source and load impedance in which the filter is to be used, IL measurements are defined for a matched 50ohms system. The insertion loss is measured in decibels (dB) and defined as follows:

$$IL(dB) = 20 \log [E1 / E2]$$

Circuit Impedance

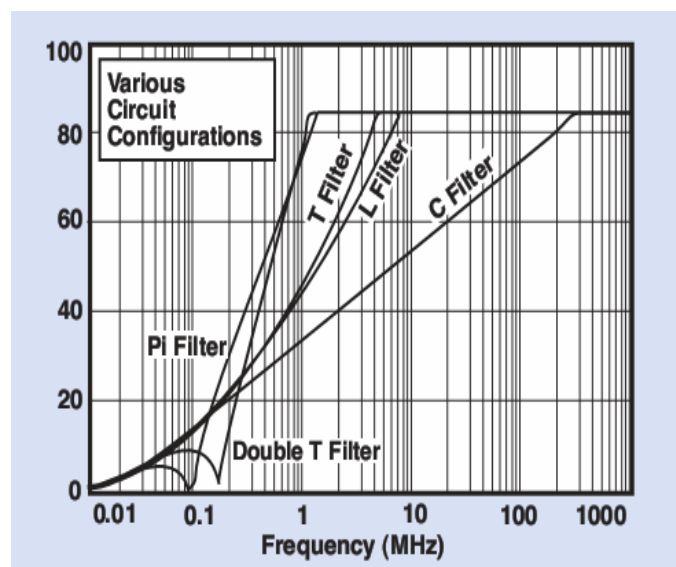
VS.

Insertion loss

In practical circuit applications the source and load impedances may be quite different from 50ohms. If these impedances are known, Xiangwei Engineering can provide information on the expected Insertion Loss or an estimate can be made using the following formula:

$$IL(dB) = 20 \log [1 + Z_s Z_l / Z_t (Z_s + Z_l)]$$

Where Z_s = Source impedance in ohms, Z_l = Load impedance in ohms,



Z_t = Transfer impedance in 50ohms.

Example:

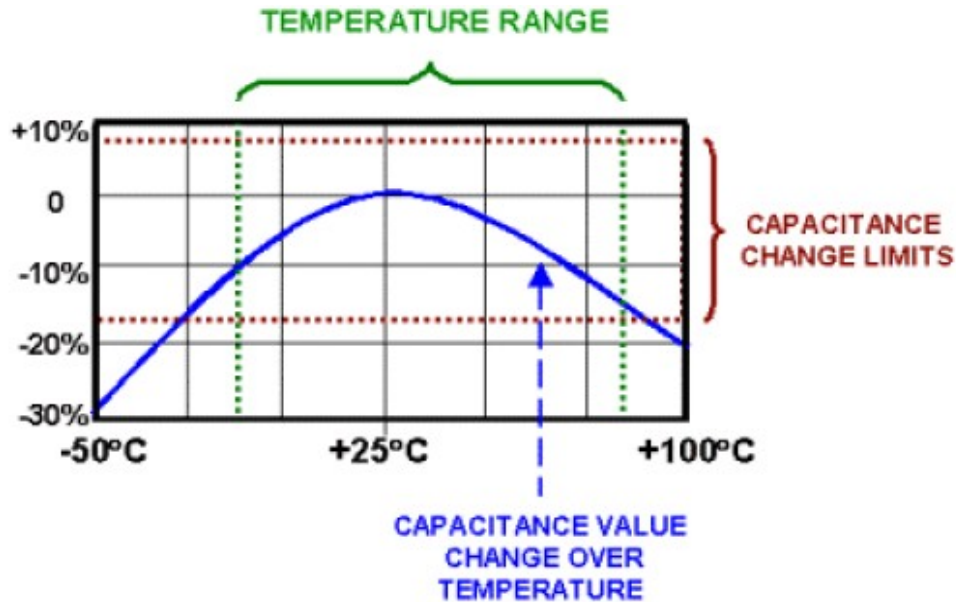
1. System source and load impedance are 100ohms and 600ohms respectively.
2. Selected filter has insertion loss of 50dB at 100 MHz in a 50ohms system.
3. From the IL VS Transfer Impedance curve (right) the transfer impedance is 0.08ohms.
4. $IL = 20 \log [1 + 100 * 600 / 0.08 * (100 + 600)] = 20 \log 1072 = 61dB$

EIA TEMPERATURE COEFFICIENTS: CERAMIC CAPACITORS

All ceramic capacitors are specified (and guaranteed) with regards to their capacitance value and tolerance at 25°C (Room Temperature: 77°F)

All capacitors will change in capacitance value if their temperature departs from room temperature, as normally will occur through heating or cooling within an electronic circuit.

THE GRAPH BELOW, SHOWS AN EXAMPLE OF CAPACITANCE VALUE CHANGE OVER TEMPERATURE



The maximum allowable change in capacitance value over a specified operating temperature range is the Temperature Coefficient (TC) of the capacitor

THE TABLE BELOW, SHOWS THE BREAKDOWN OF THE EIA THREE DIGIT "TC" CODES

Low Temperature Limit	High Temperature Limit	Maximum Allowable Capacitance Change From +25°C (0 VDC)
X = -55°C	5 = +85°C	F = ±7.5%
Y = -30°C	6 = +105°C	P = ±10%
Z = +10°C	7 = +125°C	R = ±15%
	8 = +150°C (SPECIAL)	S = ±22%
		T = +22% / -33%
		U = +22% / -56%
		V = +22% / -82%

X7R = ±15% ΔC over -55°C ~ + 125°C

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Common "TC" designations include:

X5R = ±15% change over -55°C~+85°C Standard Tolerance: K = ±10%

X7R = ±15% change over -55°C~+125°C Standard Tolerance: K = ±10%

Y5V = +22%/-82% change over -30°C~+85°C Standard Tolerance: Z = -20%/+80%

Z5U = +22%/-56% change over -10°C~+85°C Standard Tolerance: M = ± 20%

Exception to the above system is Ultra-Stable "TC": **COG = NPO**

NPO = 0±30PPM/°C over -55°C ~ + 125°C ...Standard Tolerance: J = ±5%

NPO = Negative Positive Zero [Originated from Military Standards]

Component Characteristics Substitution Guide:

"TC" - Temperature Coefficient : (Ceramic Capacitors)

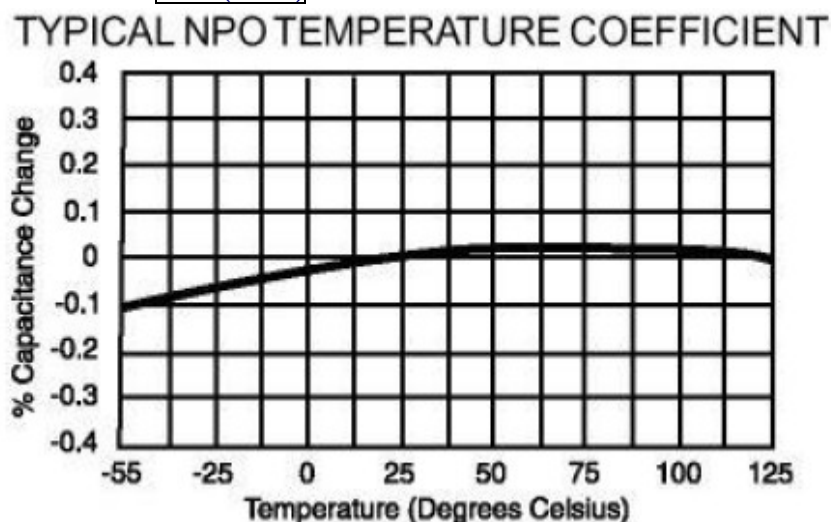
Substitution Rule: A component with a more stable (better) temperature coefficient (**TC**) can replace a less temperature stable **TC** component.

i.e...an **X7R** ceramic can replace **X5R**, **Z5U** or **Y5V** ceramic part

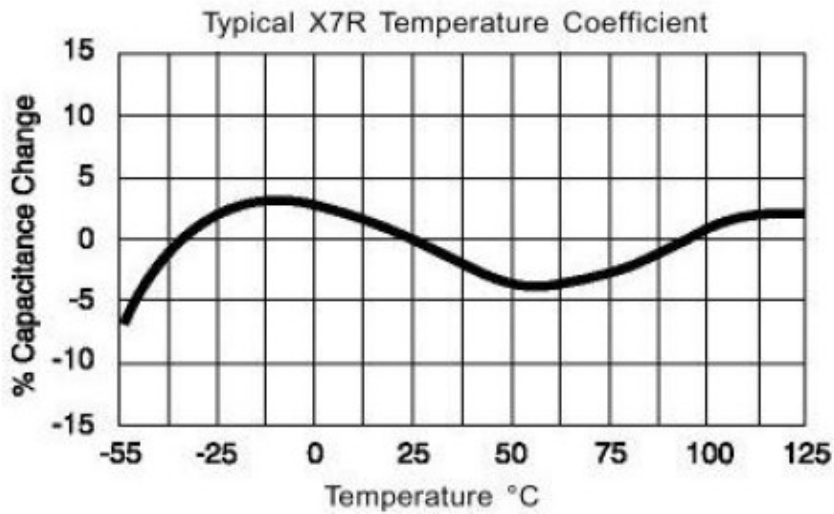
i.e...an **NPO** ceramic can replace a **X5R**, **X7R**, **Z5U** or **Y5V** ceramic

Temperature Characteristic Curves:

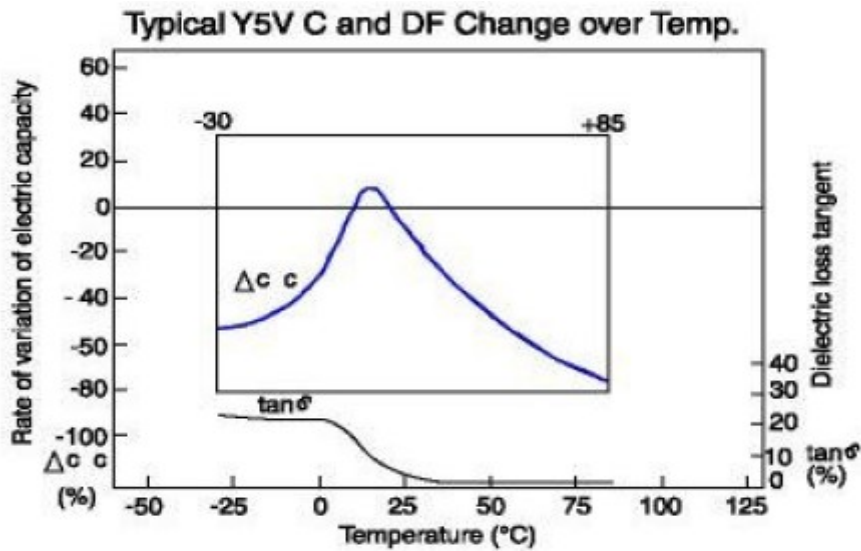
NPO (COG) = 0±30PPM/°C over -55°C ~ +125°C



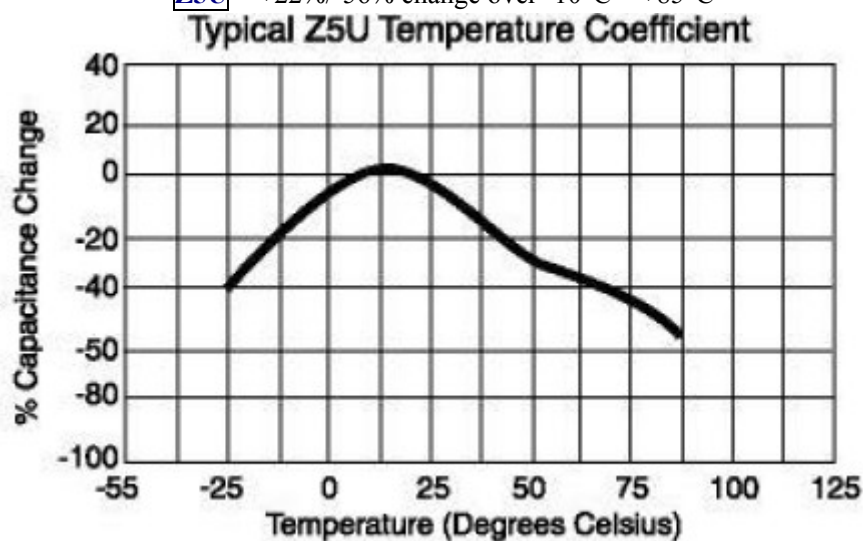
X7R = $\pm 15\%$ over $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$



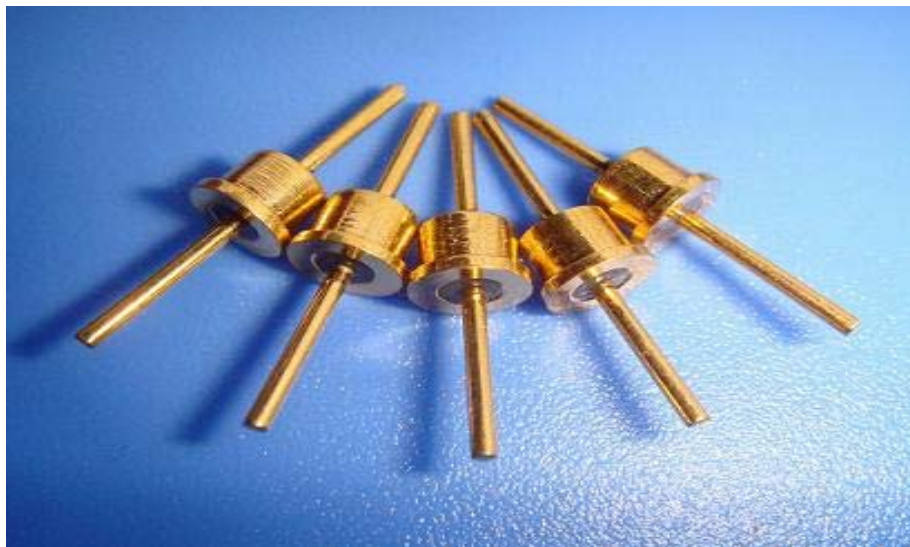
Y5V = $+22\%/-82\%$ change over $-30^{\circ}\text{C} \sim +85^{\circ}\text{C}$



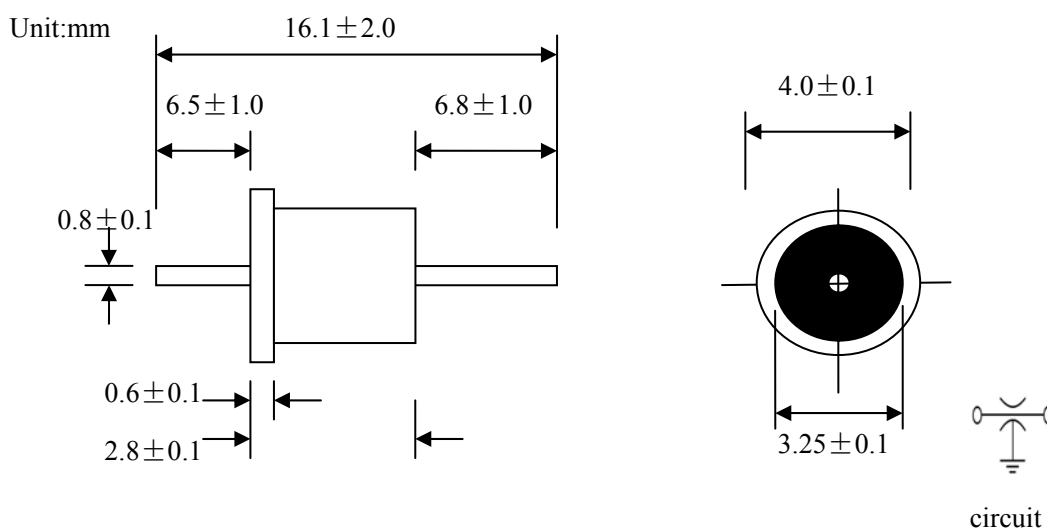
Z5U = $+22\%/-56\%$ change over $-10^{\circ}\text{C} \sim +85^{\circ}\text{C}$



Miniature EMI Filter



XWHC4033-2808S -100VDC -101M



Technical parameter:

1. Rated Voltage: 100VDC
2. Rated Current: 5A
3. Capacitance and Tolerance: 100PF $\pm 20\%$
4. Insulation Resistor: $>3000M$ Ohms
5. Dissipate Factor: $<3\%$
6. Withstand Voltage: 200VDC, one minute No Short Circuit, No Failure.
7. Temperature Feature: $-55\text{ }^{\circ}\text{C}$ to $+125\text{ }^{\circ}\text{C}$
8. Circuit Type: C Type

The capacitance will be arranged from 10PF to 1uF, the high capacitance only has low rated voltage, and the different materials (SL, NPO, X7R Y5U Y5V Y5P...) depend on the capacitors electric feature.

Filter Installation Guide

Solder Mount EMI Filter:

When soldering these devices in place, care should be taken to minimize the thermal shock to the capacitors. Do not plunge the filter directly into a solder pot without preheating. If pretinning the filter in a solder pot, do not put directly into cleaning solutions without allowing it to cool down first.

A controlled temperature profile not exceeding 6°F (3°C) per second is recommended when soldering filters. Although EMI/RFI Filters can withstand temperature extremes, rapid heat-up or cool-down can crack the internal ceramic capacitor. Preheating of the filter prior to soldering should be performed wherever possible at 250/300°F (120/150°C).

When soldering to terminal of the filter, a heat sink should be always be used adjacent to the body of the filter. 60-40 solder is recommended for filter installation into chassis as well as soldering to terminals. When soldering to terminals using an iron, use a temperature controlled soldering iron (15-20 Watts) with tip temperature of 550°F (300°C) maximum. The dwell on the solder joint should be less than 5 seconds.

If a filter style without an eyelet is being soldered into a chassis, iron processes should be avoided and the recommended solder alloy is 60-38-2.

Machine/oven soldering should be at 385-415°F (195-210°C) using a dwell and cycle time fast enough to reflow the solder and ramped to maintain less than 6°F (3°C) per second of rise change.

When iron soldering to filter body, preheat component at 250-300°F (120-150°C), solder iron is recommended to be set at 490-520°F (250-280°C). The dwell on the solder joint should be less than 5 seconds. The time is dependent on the heat sinking provided by the chassis so a longer preheat may be required.

Bolt Mount EMI Filters.

All EMI/RFI Filters are supplied complete with mounting hardware if you request.

Maximum recommended mounting torque must be applied to the nut only and observed as outlined in the table below. Exceeding recommended mounting torque may result in damage of the capacitor within the filter.

Avoid bending or flexing terminals at the same point of exit from the glass or epoxy seal to preserve the integrity of seal and /or ceramic capacitor.

MAX Mounting Torque:

M3	M4	M5	M6	M8
5kgf.cm	6kgf.cm	7kgf.cm	8kgf.cm	9kgf.cm
4 lb.in	5 lb.in	6 lb.in	7 lb.in	8 lb.in