

Full Range of Audio Capacitors Customer Testimonials

Introduction:

After spending some months investigating a wide range of capacitor suppliers and OEM manufacturers, we were fortunate to encounter WEE Technology. The wide product range and excellent specifications inspired us to obtain a selection to test, and we would now like to forward our findings to you.

We would first like to thank WEET for their excellent communication and speedy delivery. All capacitors arrived in perfect condition, and the physical quality is excellent, with neat soldering, tape-wraps and well-crafted materials.

Capacitor types obtained:

- **WMM** Bi-polar electrolytics
- **WMC** yellow axial metallised polypropylene
- **WME** Premium Music Cap metallised polypropylene
- **WMH** Luxury Aluminium Film & Foil

The capacitors were measured, and listening tests performed in a passive 2-way loudspeaker crossover. The speaker is a unique test-bed designed by ourselves and a famous international audio company, using custom 5 ¾-inch woofers and a custom 3-inch mid-tweeter.

NO.	WEET DESCRIPTION	QUANTITY(PC)
	WMM 100V BP AXIAL Bi-polar 1KHZ DF 5% Aluminum Electrolytic Capacitors	
1	WMM- Bi-polar DF 5% Alum.Elec.Capacitor 4.7uF 100V Axial RoHS	4
2	WMM- Bi-polar DF 5% Alum.Elec.Capacitor 10uF 100V Axial RoHS	4
	WMC MKP Axial Metallized Polypropylene Film Capacitor	
3	WMC Metallized Polypropylene Film Capacitors MKP 0.1uF 400V Axial RoHS	4
4	WMC Metallized Polypropylene Film Capacitors MKP 4.7uF 400V Axial RoHS	2
5	WMC Metallized Polypropylene Film Capacitors MKP 10uF 400V Axial RoHS	2
6	WMC Metallized Polypropylene Film Capacitors MKP 12uF 400V Axial RoHS	2
	WME 400V Premium Metallized Polypropylene Film Capacitors MKP Axial	
7	WME Metallized Polypropylene Film Capacitors MKP 0.1uF 400V Axial RoHS	4
8	WME Metallized Polypropylene Film Capacitors MKP 4.7uF 400V Axial RoHS	2
9	WME Metallized Polypropylene Film Capacitors MKP 10uF 400V Axial RoHS	2
10	WME Metallized Polypropylene Film Capacitors MKP 12uF 400V Axial RoHS	2
	WMH 100V Pure Aluminum Foil and Film Capacitors Axial	
11	WMH Aluminum Foil Film Met PP 4.7uF 100V Axial RoHS	2

Measurements:

All 30 of the capacitors we obtained from WEET were measured with a calibrated Dayton Audio DATS setup. All capacitors were well within the specified manufacturing tolerances. The WMM bipolar electrolytic capacitors showed a maximum deviation of 6%, the WMC and WME metallised polypropylene capacitors were within 3% and the WMH aluminium foil capacitors within 2% of the target value.

We measured the average ESR, damping factor, Q and delta (loss angle) of the different types of capacitors in a 4.7uF value, at 1KHz as follows:

	ESR (Ω)	DF(%)	Q	Delta°
WMM	1.62	5.05	19.81	2.89
WMC	0.296	0.92	108	0.53
WME	0.29	0.91	109	0.52
WMH	0.27	0.9	110	0.51

These are very good values, and we were particularly impressed with the close tolerances and excellent consistency of the components.



Listening:

WMM:

These very compact capacitors are ideal when large values are needed in a small space. Due to the higher ESR, a bipolar electrolytic capacitor is not usually an exact 'drop in' for a film capacitor in an existing crossover design, but are useful if the resistance can be accounted for in the design.

We tried the WMM in the shunt position of our 2-way test speaker's low-pass filter. Performance, as expected, was slightly 'softer' around the knee frequency, partly due to the altered resistance, but consistency was good. Bypassing the WMM with a 0.1uF metallised polypropylene appeared subjectively to reduce this effect. As they are very compact, made to a good tolerance and excellent value, we would recommend the WMM for situations where large capacitance values are needed, such as the bass leg of 3 / 4 / 5 way speakers, or low-frequency impedance-compensation networks. They will also make excellent replacements for old bipolar electrolytic components which have dried out and are no longer of the correct capacitance value.

WMC:

The WMC is a compact, inexpensive metallised polypropylene (MKP) type capacitor, and have slightly better performance than metallised polyester types.

Compared to the WMM bipolar electrolytic capacitors, the WMC subjectively appear to have a slightly 'cleaner' and more neutral sound with improved transients around the knee of the crossover frequency, probably due to the lower ESR and improved damping characteristics. Thanks to the compact size and modest price, these will be an ideal option for many inexpensive and modestly priced loudspeakers, and as shunt elements in the networks of more expensive loudspeaker designs.

WME:

The WME, like the WMC, is very compact, with an attractive white tape wrap. Performance and character are quite similar, but subjectively it appears to make further gains in transients through the crossover range where the capacitor has its greatest influence on the sound.

The WME is basically a very neutral capacitor thanks to the good basic design and excellent manufacturing consistency. It does not cause any significant colouration, unlike some poorly made capacitors where this can be an issue. It is ideally suited to midrange and high frequency crossover networks alike, and for the shunt elements in the networks of pricier loudspeakers. This is an excellent quality and very good value MKP capacitor that will work well in a wide range of systems, especially when an uncoloured sound is preferred.

WMH

A lengthy axial film and aluminium foil capacitor, the WMH is aimed at the high frequency network of expensive loudspeaker designs. The size, weight and appearance are all impressive and give an excellent 'static value' impression.

Like the WME, the WMH aluminium film & foil capacitor has a neutral character, with further gains in transient behaviour around the knee of the crossover frequency. ESR is fractionally lower than the MKP capacitors, so output is higher in the passband, increasing subjective transparency in direct comparisons. The WMH has very little colouration, unlike some expensive components where poor construction, loose winding and similar issues can cause resonances and subtly alter the sound. It will be an excellent option for high end systems where accuracy is the primary goal. Although expensive, it is good value for a high-priced system, and can be mixed well with the WME: making ½ of a desired value a WME and ½ the WMH provides almost all the neutrality and transparency of the film and foil for lower cost: this may be especially useful in midrange networks where component values are high and the cost of using pure film and foil capacitors would be excessive.

ABOUT WEET AUDIO CAPACITORS:

WEE Technology Company Limited is specialized in manufacturing MKP film and aluminium/copper foil audio capacitors for more than 20 years history. WEET adopt the key techniques from Taiwan factories and the main material are all imported from Japan and European counties. WEET pursuit the highest level in crossover audio circuit and we believe WEET is ready to compete with overseas brands. You deserve to have the best quality audio capacitors. Check more products about WEET on www.weetcap.com

