

Capacitance Checker Introduction

AEK-3750F

Newly Released



Improved Measurement Accuracy

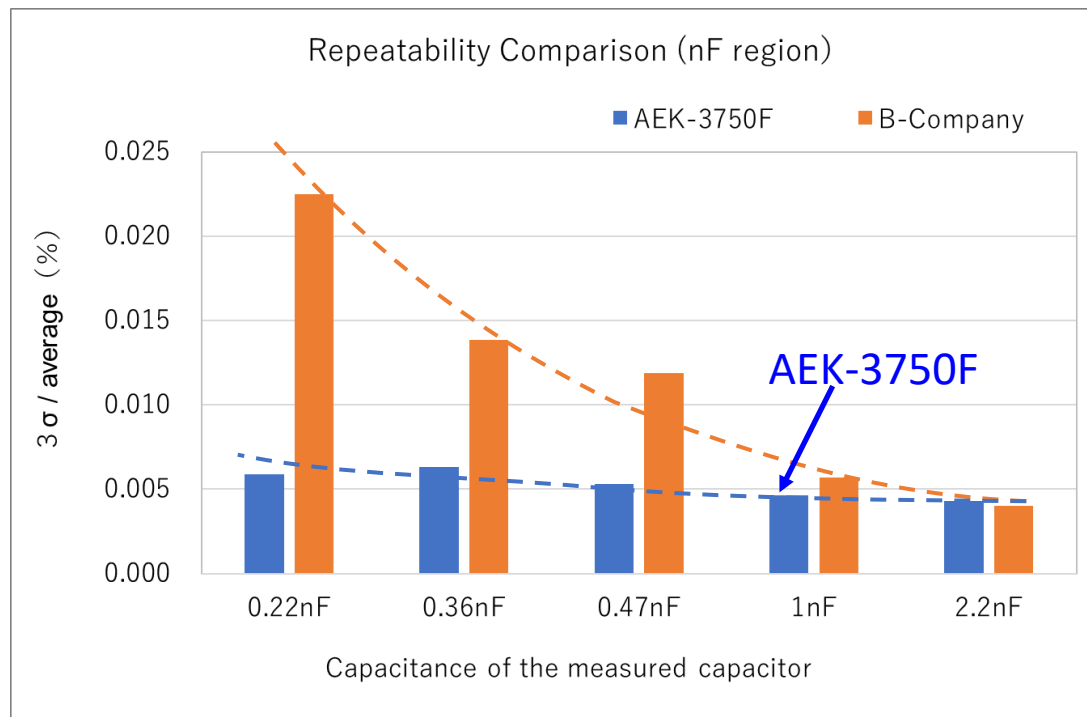
Higher Measurement Speed

Enhanced Functionality

Repeatability Comparison with Competitor Measuring Instruments

Test conditions

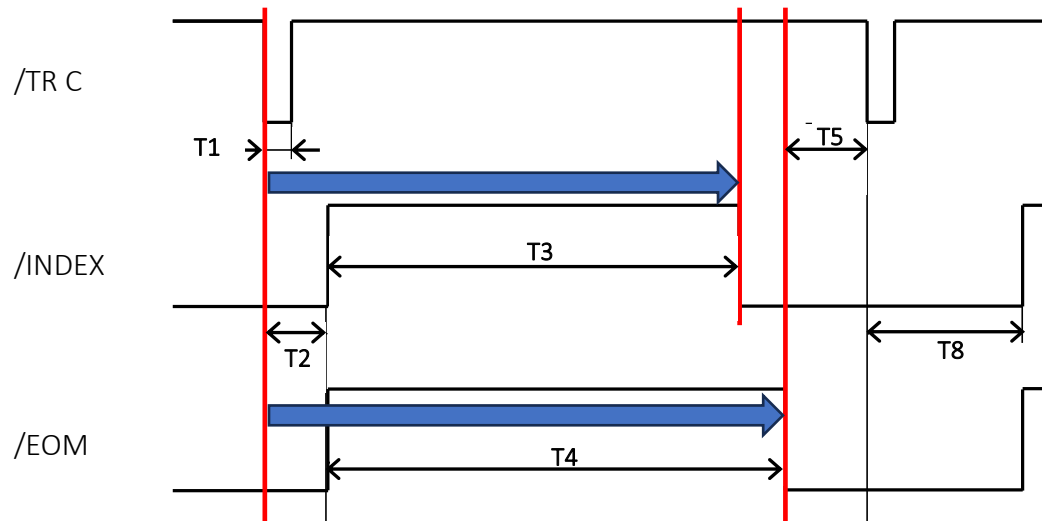
- 100 repeated measurements of the same capacitor
- 1kHz 1V Asynchronous (Measurement speed setting :FAST)



Excellent measurement accuracy is obtained.

【 Higher Measurement Speed 】

Speed Comparison (1kHz Asynchronous)	AEK-3750F	Competitor's instrument	(Ref) AE-365E
From trigger to analog measurement end (INDEX)	1. 1 m s	1. 2 5 m s	1. 1 m s
From trigger to measurement end (EOM)	1. 6 m s	2. 2 5 m s	1. 9 m s



- The time until the analog measurement end signal (INDEX) is 0.15ms faster.
- The time until the measurement end signal (EOM) is 0.65ms faster.

【 Enhanced Functionality】

Function/Feature	AEK-3750F	(Ref) AE-365E
Max Display Digits	6 Digits	4 Digits
4-Terminal Contact Check	○	○
Low-C Reject	○	×
Chatter Detection	○	×
Trigger-Synchronous Mode	○	×
BIN Sorting	○	×
Interfaces (LAN / USB)	○	×

Significantly enhanced functionality compared to previous models

【Features and Specifications】

< Features >

- **High-Speed Measurement:** 1.1ms from start to INDEX signal OFF, approx. 1.6ms until judgment signal is finalized.
- **High Resolution: Capacitance Range:** 0.00000pF to 20.0000mF / $\tan \delta$ Display Range: 0.000% to 100.000%.
- **Sorting Functions:** Selectable between Comparator (HI/GO/LO) and BIN sorting (14 Bins + HI/LO).
- **Reliability:** Equipped with probe contact failure detection and 4-terminal contact check.
- **Trigger Synchronous Mode:**
Prevents inrush current & allows for zero-voltage measurement of residual charges in MLCCs.
- **Correction Functions:** Includes Open, Short, and Load correction, as well as drift amount correction.
- **Versatile Configurations:** Multiple measurement ranges and test voltage options available.

Item	Specification
Measurement Method	4-Terminal Measurement
Measurement Frequency	120Hz ($\pm 0.04\%$) / 1kHz ($\pm 0.01\%$) Sine wave
Output Impedance	Approx. 50 Ω
Correction	Open / Short / Load and Drift correction
Temperature Coefficient	Within $\pm 100\text{ppm}/^\circ\text{C}$ for Full Scale and Zero
Basic Accuracy	C: $\pm 0.09\%$ rdg ± 10 digits / $\tan\delta$: $\pm 0.16\%$ (at 23 $^\circ\text{C} \pm 5^\circ\text{C}$)
1kHz / FAST Speed (With external trigger input)	Asynchronous: INDEX approx. 1.1ms / EOC approx. 1.6ms Synchronous: INDEX approx. 1.9ms / EOC approx. 1.9ms
Comparator	HI/GO/LO mode or BIN 14 classification mode
Standard Interfaces	Handler I/O, RS-232C, USB, LAN
Power Supply	AC 88V – 264V, 50/60Hz, Approx. 175VA
Dimensions / Weight	250(W) x 99(H) x 300(D) mm / Approx. 3kg

【Measuring Range】

Range	120Hz		1kHz			Capacitance Display Range	Recommended Measurement Range
	0.5V	1V	0.5V	1V	5V		
2pF					○	0.00000pF ~ 2.00000pF	0pF ~ 2.00000pF
4pF					○	0.00000pF ~ 4.00000pF	2.00001pF ~ 4.00000pF
20pF			○	○	○	0.0000pF ~ 20.0000pF	4.00001pF ~ 20.0000pF
40pF			○	○	○	0.0000pF ~ 40.0000pF	20.0001pF ~ 40.0000pF
200pF	○	○	○	○	○	0.000pF ~ 200.000pF	40.0001pF ~ 200.000pF
400pF	○	○	○	○	○	0.000pF ~ 400.000pF	200.001pF ~ 400.000pF
2nF	○	○	○	○	○	0.00000nF ~ 2.00000nF	400.001pF ~ 2.00000nF
4nF	○	○	○	○	○	0.00000nF ~ 4.00000nF	2.00001nF ~ 4.00000nF
20nF	○	○	○	○	○	0.0000nF ~ 20.0000nF	4.00001nF ~ 20.0000nF
40nF	○	○	○	○		0.0000nF ~ 40.0000nF	20.0001nF ~ 40.0000nF
200nF	○	○	○	○		0.000nF ~ 200.000nF	40.0001nF ~ 200.000nF
400nF	○	○	○	○		0.000nF ~ 400.000nF	200.001nF ~ 400.000nF
2μF	○	○	○	○		0.00000μF ~ 2.00000μF	400.001nF ~ 2.00000μF
4μF	○	○	○	○		0.00000μF ~ 4.00000μF	2.00001μF ~ 4.00000μF
20μF	○	○	○	○		0.0000μF ~ 20.0000μF	4.00001μF ~ 20.0000μF
40μF	○	○	○			0.0000μF ~ 40.0000μF	20.0001μF ~ 40.0000μF
60μF				○		0.0000μF ~ 60.0000μF	40.0001μF ~ 60.0000μF
120μF			○			0.000μF ~ 120.000μF	60.0001μF ~ 120.000μF
200μF	○	○	●	●		0.000μF ~ 200.000μF	120.001μF ~ 200.000μF

* ○ : Constant Voltage Mode / ● : Open-Circuit Voltage Mode

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