



Performance Comparison of CQ330x Series Current Sensors (for industrial inverters)

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Magnetic Sensors, Sensing Products Division

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1. Performance Comparison

	CQ330x (AKM)	Competitor's Coreless Current Sensor
Withstand Voltage*	>3.0kV, 60sec	~2.1kV, 60sec
Working Voltage** (for Reinforced Isolation)	240VDC (IEC/UL 60950-1)	184VDC (UL 60950-1)
Total Accuracy*	1.3%	3.8%
Sensitivity Drift* (by Reflow)	0.5%	3.6%
Output Noise**	1.1mVrms (@CQ3302: 100mV/A)	4.9mVrms (@100mV/A)
Response Time*	0.4μs	7.2μs

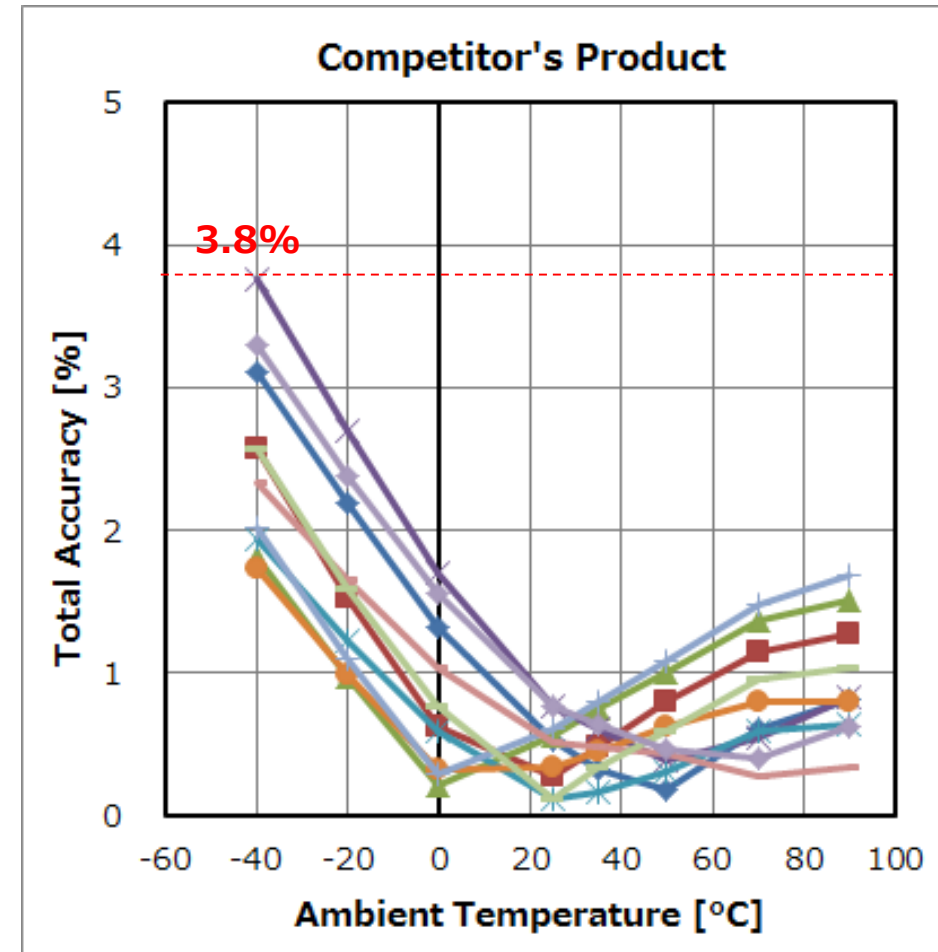
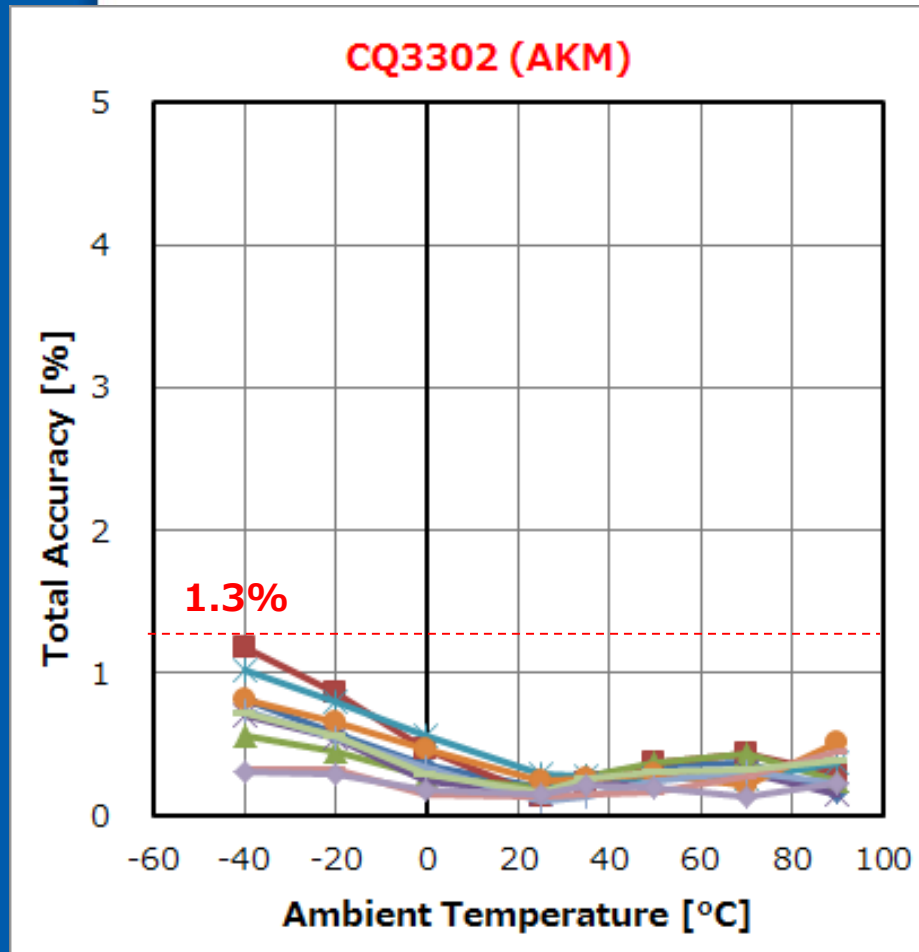
*Measured in AKM laboratory

**Calculated from the specifications of datasheet (using typ. value)

CQ330x has better isolation properties, a higher accuracy, a lower output noise and a faster response time than the competitor's coreless current sensor.

2. Features of AKM: High Accuracy

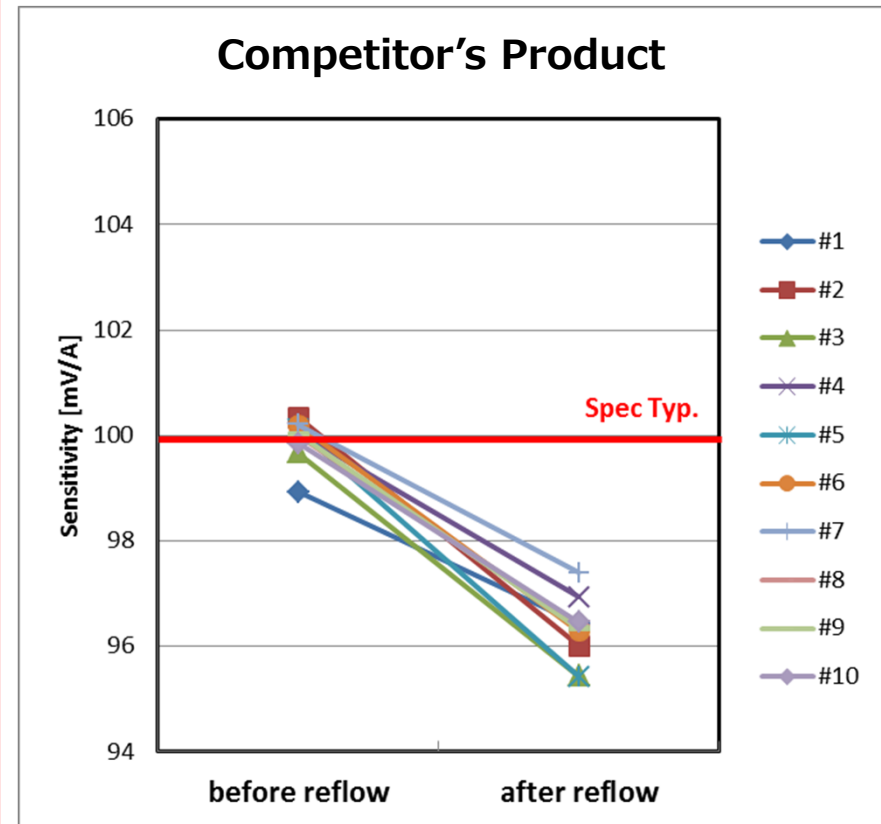
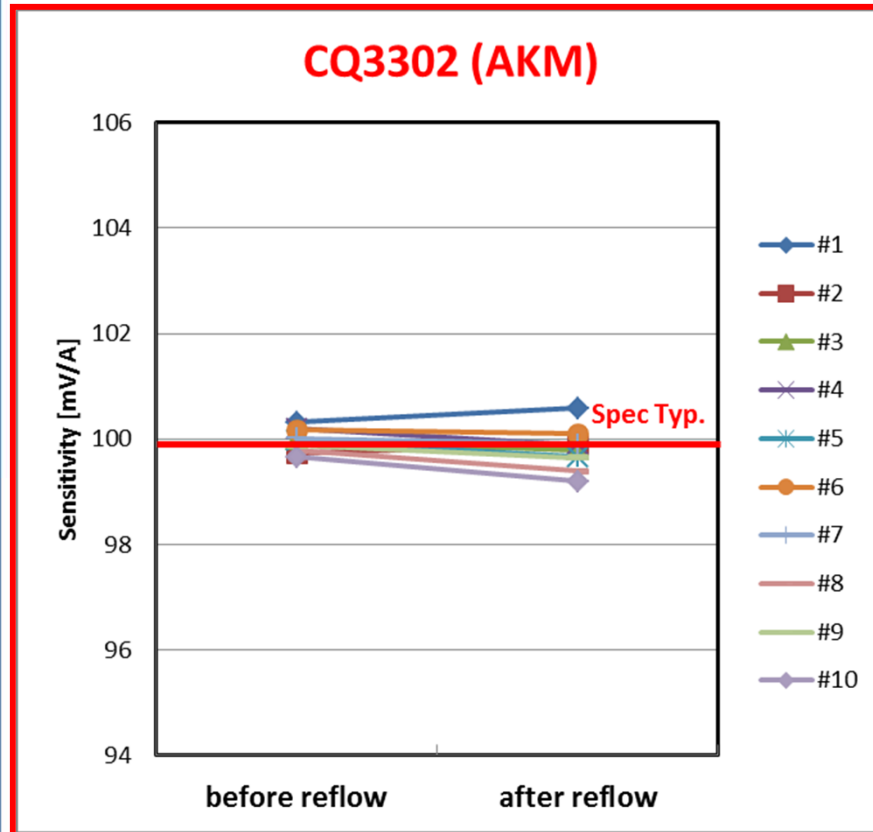
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AKM's current sensor has the higher accuracy than other coreless current sensors. This will improve the inverter efficiency.

2. Features of AKM: Low Drift by Reflow

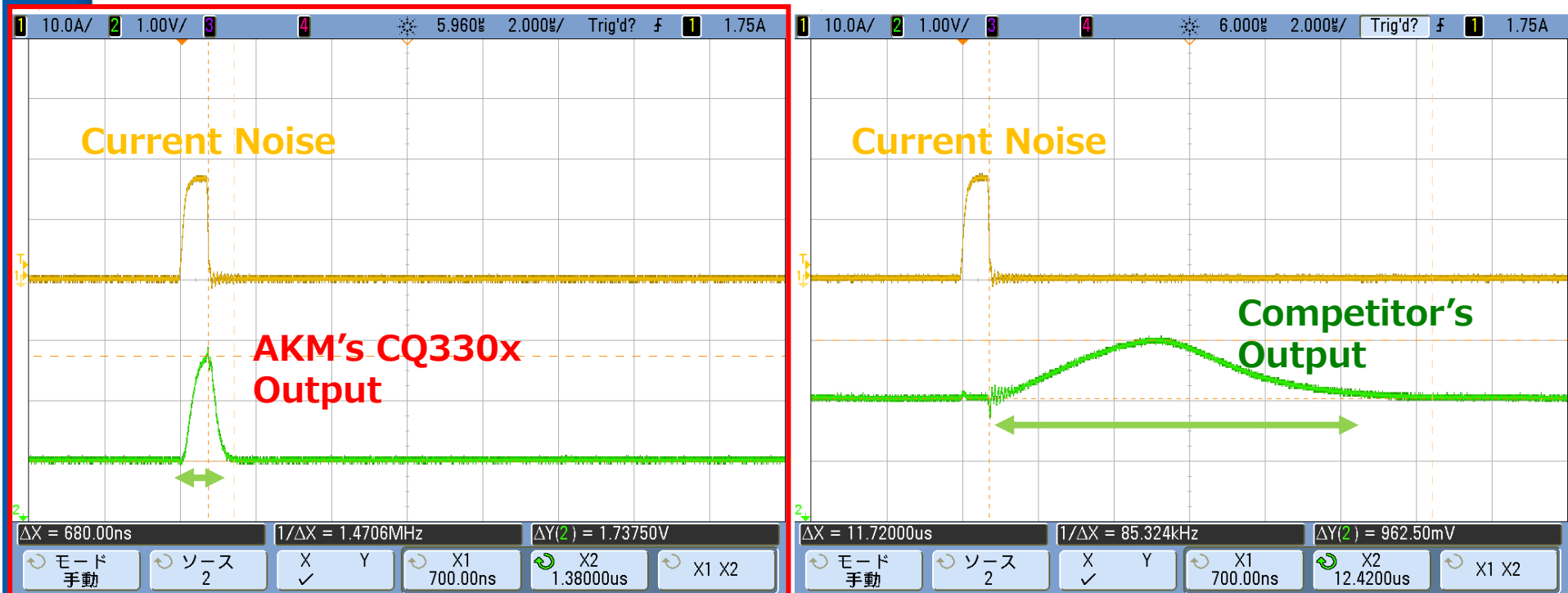
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Output of competitor's coreless current sensor is not stable so that the reflow in mounting on PCB will change the sensitivity. **AKM's CQ330x has the more stable output.**

2. Features of AKM: Fast Response Time

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When the inverter switching noise comes to a primary conductor, other current sensors generate the delayed and expanded output noise. This causes unexpected errors and loses the inverter controllability.

AKM's current sensor has the fastest response time, and causes less problems.