

New Product

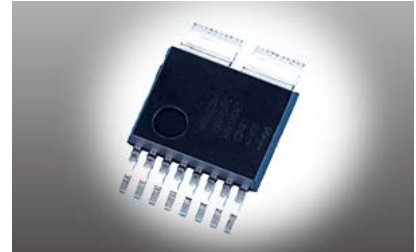
2016/04/20 (updated 2016/04/26)

CZ-380x: Ultra-high Accuracy and CQ-320x: 3.3V Operating Ultra-small Coreless Current Sensors are getting into the Lineup.

Product Name CZ-3803, CZ-3804, CZ-3805
(Product: Sensor ICs > Current Sensors)

Title Ultra-high Accuracy Coreless Current Sensor

Applications Industrial/ commercial inverter, Motor controller, Power conditioner, UPS

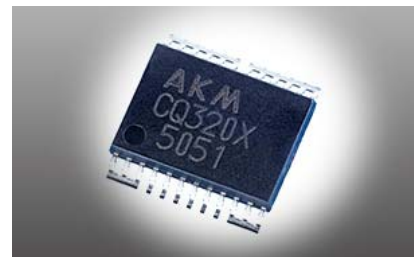


CZ-380x

Product Name CQ-3201, CQ-3202, CQ-320A, CQ-3203, CQ-320B
(Product: Sensor ICs > Current Sensors)

Title Ultra-small Coreless Current Sensor

Applications Industrial/ commercial inverter, Motor controller, Power conditioner, UPS



CQ-320x

Description

Even in a coreless architecture, CZ-380x series has a disturbing magnetic field suppression function on chip. This sensor measures the magnetic flux created by the current, but it will not sense the magnetic flux which wraps the whole sensor such as the disturbing magnetic field. It is a current sensor that can take a more accurate measurement under large disturbing magnetic field. Because of the small package, it is very suitable for applications that have many current paths in a limited area such as the distribution board and the three-phase inverter circuit. AKM can provide three types of different current sensing range products.

CQ-320x series is a coreless current sensor in small size package with high galvanic isolation, especially designed for sensing the current range from 10.1 to 35A in 3.3V operation. This low-voltage operating current sensor is suitable for air conditioning and solar power conditioner applications. Five types of different current sensing range products are available. Furthermore, these products are planned to obtain certification from IEC/UL, so they can be used for industrial application.

Features

CZ-380x		CQ-320x	
Ultra-high Accuracy Coreless Current Sensor		Ultra-small Coreless Current Sensor	
Primary conductor built in coreless current sensor		Coreless open type current sensor	
Galvanic isolation between primary conductor and sensor IC		Galvanic isolation between primary conductor and sensor IC	
Size (D/W/H)	8.1×11.5×2mm	Size (D/W/H)	7.9×7.6×1.15mm
Power Supply	5V	Power Supply	3.3V
Current consumption	12.5mA	Current consumption	6.2mA
Isolation voltage	3kV, 50/60Hz, 60s	Isolation voltage	> 3.0kV
Fast response time	2μs (typ.)	Ultra-fast response time	0.5μs (typ.)
Temperature characteristic	Total accuracy: typ±0.9%F.S.	Temperature characteristic	Total accuracy: typ±1.3%F.S.
Disturbing magnetic field suppression function		Selectable sensitivity	37 to 130mV/A
Operating temperature	-40 to 125°C	Operating temperature	-40 to 90°C
Maximum effective current	40A	Compliant to safety standards of IEC (preliminary)	
Primary conductor resistance	0.3mΩ	Sensitivity and offset values are adjusted before shipment	
Status	Under development 2017 Spring	Status	Under development Aug. 2016

Line-up




● CZ-380x series: Ultra-high Accuracy Coreless Current Sensor

Product Name	Sensitivity	Linear Sensing Range	Maximum Effective Current	Zero Current Voltage	
NEW CZ-3803	60mV/A	±33A	±40A	2.5V	2017 Spring Plan to release
NEW CZ-3804	40mV/A	±50A			
NEW CZ-3805	33mV/A	±60A			

● CQ-320x series: Ultra-small Coreless Current Sensor (3.3V operation)

Product Name	Sensitivity	Linear Sensing Range	Maximum Effective Current	Zero Current Voltage	
NEW CQ-3201	130mV/A	±10.1A	±20A	1.65V	Aug. 2016 Plan to release
NEW CQ-3202	62.5mV/A	±21A			
NEW CQ-320A	45mV/A	±29.3A			
NEW CQ-3203	37mV/A	±35A		0.45V	
NEW CQ-320B	120mV/A	-1 to 20.9A			

● CQ-330x series: Ultra-small Coreless Current Sensor (Bidirectional Sensing)

Product Name	Sensitivity	Linear Sensing Range	Maximum Effective Current	Zero Current Voltage		Samples
CQ-330G	450mV/A	±4.5A	±20A	2.5V	Now Available	
CQ-3300	325mV/A	±6.4A				
CQ-3301	195mV/A	±10.7A				
CQ-3302	100mV/A	±21A				
CQ-330A	66mV/A	±31.8A				
CQ-3303	60mV/A	±35A				
CQ-330H	50mV/A	±42A				

● CQ-330x series: Ultra-small Coreless Current Sensor (Unidirectional Sensing)

Product Name	Sensitivity	Linear Sensing Range	Maximum Effective Current	Zero Current Voltage	
CQ-330E	200mV/A	0 to 20.5A	±20A	0.5V	Now Available
CQ-330B	195mV/A	0 to 21A		0.45V	
CQ-330F	80mV/A	-2 to 42A		0.5V	