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TESTED®
DEVICE

KUKA Deutschland GmbH
KMR iiwa omniMove CR UL
Report No. KU 2206-1325

Statement of
Qualification

Single product
Electrostatic
Charge Behavior

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Statement of Qualification · Single product

Customer

KUKA Deutschland GmbH
Zugspitzstrasse 140
86165 Augsburg
Germany

Component tested

Category: Automation Components

Subcategory: Robotics

Product name: KMR iiwa omniMove CR UL
(manufacturing date: 7/2019; article number: 338483; serial number: 1040513; weight: 434 kg; E-Doc.: 336518;
Mounted Manipulator : LBR iiwa 14 R820 CR; manufacturing date: 5/2017; article number: 291253; serial number: 982697; weight: 33 kg)

Measurement of the electrostatic charging behavior

Standards/Guidelines: SEMI E78-0222
The norms stated generally refer to the version valid at the time of the tests.

Test devices:
- Data capture: ..... Influence-E-Fieldmeter, type EMF58
  ..... Eltex-Elektrostatik-GmbH

Test environment parameters:
- Cleanroom Air Cleanliness Class (according to ISO 14644-1): ..... ISO 1
- Airflow velocity: ..... 0.45 m/s
- Airflow pattern: ..... vertical laminar flow
- Temperature: ..... 22 °C ± 0.5 °C
- Relative humidity: ..... 45 % ± 5 %

Test procedure parameters:
- Tool weight: ..... no tool mounted
- Movement sequence: ..... representative operation
- Capacity: ..... 70 % of maximum capacity

Test result / Classification

The autonomous robot KMR iiwa omniMove CR UL fulfills the permissible limit values for the sensitivity threshold 2010/45 nm according to SEMI E78-0222.

Electrostatic field			
Electrostatic level		**Test result**	
Year Node	Limit value [V/cm]	Mean value [V/cm]	Max. single value measured [V/cm]
2010 45 nm	50	23	62
Limit value:		**fulfilled**	

The measuring devices used for the qualification tests are calibrated at regular intervals; their results can be traced back to national and international standards. In cases where no national standards exist, the test procedure implemented complies with the technical regulations and norms applicable at the time of the test. The relevant documentation can be viewed on request at any time.

Detailed information and parameters of the test environment can be found in the Fraunhofer IPA test report.

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on behalf of
Dr.-Ing. Frank Bürger, Project Manager Fraunhofer IPA

This document only applies to the named product in its original state and is valid for a period of 5 years from the date the first document was issued. The document can be verified under **www.tested-device.com**.