

CERTIFICATE OF COMPLIANCE

Certificate Number 20151002-E214100
Report Reference E214100-20100205
Issue Date 2015-OCTOBER-02

Issued to: ANALOG DEVICES INC
804 WOBURN ST
WILMINGTON MA 01887-3494

**This is to certify that
representative samples of**

COMPONENT - NONOPTICAL ISOLATING DEVICES
See Addendum Page

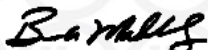
Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 1577, Standard for Optical Isolators.
Additional Information: See the UL Online Certifications Directory at
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Only those products bearing the UL Certification Mark should be considered as being covered by UL's
Certification and Follow-Up Service.

Recognized components are incomplete in certain constructional features or restricted in performance
capabilities and are intended for use as components of complete equipment submitted for investigation rather
than for direct separate installation in the field. The final acceptance of the component is dependent upon its
installation and use in complete equipment submitted to UL LLC.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

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This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Single Protection Non-Optical Isolator, Models ADuM2200xRIZ, ADuM2201xRIZ, ADuM2210xRIZ, ADuM2210xRWZ, ADuM2211xRIZ, ADuM2211xRWZ, ADuM2250AWIZ, ADuM2251ARIZ, ADuM2400xRIZ, ADuM2401xRIZ, ADuM2402xRIZ, ADuM3160BRWZ, ADuM3211xRZ, ADuM4160BRIZ, ADuM4160BRWZ, ADuM440xARWZ, ADuM440xBRWZ, ADuM440xCRWZ, ADuM4400xRIZ, ADuM4401xRIZ, ADuM4402xRIZ, ADuM6000, ADuM6000ARIZ, ADuM6132xARWZ, ADuM620x, ADuM620xARWZ, ADuM620xCRWZ, ADuM6200xRIZ, ADuM6201xRIZ, ADuM6202xRIZ, ADuM640x, ADuM640xARQZ, ADuM640xARWZ, ADuM640xCRQZ, ADuM640xCRWZ, ADuM6400xRIZ, ADuM6400xRWZ, ADuM6401xRIZ, ADuM6401xRWZ, ADuM6402xRIZ, ADuM6402xRWZ, ADuM6403xRIZ, ADuM6403xRWZ, ADuM6404xRIZ, ADuM6404xRWZ, ADuM7234BRQZ, ADuM724x, ADuM7410BRWZ, ADuM7410BRQZ, ADuM744xARQZ, ADuM744xBRQZ, ADuM744xCRQZ, ADuM7510BRWZ, ADuM7510BRQZ, ADW80035, where "x" in the model number may be any alpha/numeric designation. All models may have additional suffixes.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

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File E214100
Project 09CA17097

February 5, 2010

REPORT

on

COMPONENT - Non-Optical Isolating Devices - Component

Analog Devices Inc
WILMINGTON , MA 01887

Recognized Company: Analog Devices Inc

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DESCRIPTION

PRODUCT COVERED:

USR - Single Protection Non-Optical Isolator, Models ADuM2200xRIZ, ADuM2201xRIZ, ADuM2210xRIZ, ADuM2210xRWZ, ADuM2211xRIZ, ADuM2211xRWZ, ADuM2250AWIZ, ADuM2251ARIZ, ADuM2400xRIZ, ADuM2401xRIZ, ADuM2402xRIZ, ADuM3160BRWZ, ADuM3211xRZ, **ADuM4160BRIZ**, ADuM4160BRWZ, ADuM440xARWZ, ADuM440xBRWZ, ADuM440xCRWZ, ADuM4400xRIZ, ADuM4401xRIZ, ADuM4402xRIZ, ADuM6000, ADuM6000ARIZ, ADuM6132xARWZ, ADuM620x, ADuM620xARWZ, ADuM620xCRWZ, ADuM6200xRIZ, ADuM6201xRIZ, ADuM6202xRIZ, ADuM640x, ADuM640xARQZ, ADuM640xARWZ, ADuM640xCRQZ, ADuM640xCRWZ, ADuM6400xRIZ, ADuM6400xRWZ, ADuM6401xRIZ, ADuM6401xRWZ, ADuM6402xRIZ, ADuM6402xRWZ, ADuM6403xRIZ, ADuM6403xRWZ, ADuM6404xRIZ, ADuM6404xRWZ, ADuM7234BRQZ, ADuM724x, ADuM7410BRWZ, ADuM7410BRQZ, ADuM744xARQZ, ADuM744xBRQZ, ADuM744xCRQZ, ADuM7510BRWZ, ADuM7510BRQZ, **ADW80035**, where "x" in the model number may be any alpha/numeric designation. All models may have additional suffixes.

ELECTRICAL RATINGS (at 25°C ambient) (\$)::

Model	Current (mA)		Power (mW)		Isolation Voltage	Max Operating Temp (T _{moa}) (°C)	Max Junction Temp (T _j) (°C)	Max Storage Temp (T _s) (°C)
	Encoder	Decoder	Encoder	Decoder				
ADuM2200xRIZ	4.6	2.8	25.3 @ 10 Mbps	15.4 @ 10 Mbps	5000	105	150	150
ADuM2201xRIZ	3.4	4.0	18.7 @ 10 Mbps	15.4 @ 10 Mbps	5000	105	150	150
ADuM2210xRIZ					5000	105	150	150
ADuM2210xRWZ	4.6	2.8	25.3 @ 10 Mbps	15.4 @ 10 Mbps	5000	105	150	150
ADuM2211xRIZ					5000	105	150	150
ADuM2211xRWZ	3.4	4.0	18.7 @ 10 Mbps	15.4 @ 10 Mbps	5000	105	150	150
ADuM2250AWIZ	8.7	35	30.2 @ 800 kbps	39.5 @ 800 kbps	5000	105	150	150
ADuM2251ARIZ	2.8	36	15.4 @ 800 kbps	45 @ 800 kbps	5000	105	150	150
ADuM2400xRIZ	100	25	550 @ 90 Mbps	137 @ 90 Mbps	5000	105	150	150
ADuM2401xRIZ	82	43	451 @ 90 Mbps	236 @ 90 Mbps	5000	105	150	150
ADuM2402xRIZ	62	62	341 @ 90 Mbps	341 @ 90 Mbps	5000	105	150	150
ADuM3160BRWZ	8	8	40	40 @ 12Mbps	2500	105	150	150
ADuM3211xRZ	3.4	4	18.7 @ 10 Mbps	15.4 @ 10 Mbps	2500	125	150	150
ADuM4160BRIZ	8	8	40	40 @ 12Mbps	5000	105	150	150
ADuM4160BRWZ	8	8	40	40 @ 12Mbps	5000	105	150	150

(\$) - For ambient temperatures higher than 25°C and up to T_{moa}, refer to manufacturer's specifications and/or thermal derating curve data for complete electrical ratings.

*MAXIMUM RATINGS (at 25°C) (Ⓢ):

Model	Current (mA)		Power (mW)		Isolation Voltage	Max Operating (Ambient) Temp (°C)	Max Junction Temp (°C)	Max Storage Temp (°C)
ADuM440xARWZ	0.9	20	5	30 @ 90 Mbps	5000	105	150	150
ADuM440xBRWZ	2.9	21	15	35 @ 90 Mbps	5000	105	150	150
ADuM440xCRWZ	25	29	125	73 @ 90 Mbps	5000	105	150	150
ADuM4400xRIZ	100	36	550 @	198 @ 90 Mbps	5000	105	150	150
ADuM4401xRIZ	82	46	451 @	253 @ 90 Mbps	5000	105	150	150
ADuM4402xRIZ	62	62	341 @	341 @ 90 Mbps	5000	105	150	150
ADuM6000 (Power)	290	100	1450	500 @ 25Mbps	5000	105	150	150
ADuM6000ARIZ	290	-80	1305	-400	5000	105	150	150
ADuM6132xARWZ	350	22	2	275@ 1 Mbps	3750	85	150	150
ADuM620x (Power)	290	100	1450	500 @ 25Mbps	5000	105	150	150
ADuM620xARWZ	0.45	6	2.5	4.5 @ 1Mbps	5000	105	150	150
ADuM620xCRWZ	3	6	15	7	5000	105	150	150
ADuM6200xRIZ	300	-74	1350 @	-370 @ 25 Mbps	5000	105	150	150
ADuM6201xRIZ	298	-72	1341 @	-360 @ 25 Mbps	5000	105	150	150
ADuM6202xRIZ	296	-70	1332 @	-35 @ 25 Mbps	5000	105	150	150
ADuM640x (Power)	290	100	1450	500 @ 25 Mbps	5000	105	150	150
ADuM640xARQZ (data)	0.9	11	5	9 @ 1Mbps	5000	105	150	150
ADuM640xARWZ	0.9	11	5	9 @ 1Mbps	5000	105	150	150
ADuM640xCRQZ (data)	6	12	30	16 @ 25Mbps	5000	105	150	150
ADuM640xCRWZ	6	12	30	16 @ 25Mbps	5000	105	150	150
ADuM6400xRIZ	309	-69	1390 @	-345 @ 25 Mbps	5000	105	150	150
ADuM6400xRWZ	309	-69	1390 @	-345 @ 2 Mbps	5000	105	150	150
ADuM6401xRIZ	307	-67	1382 @	-335 @ 25 Mbps	5000	105	150	150
ADuM6401xRWZ	307	-67	1382 @	-335 @ 25 Mbps	5000	105	150	150

ADuM6402xRIZ	305	-65	1373 @ 25 Mbps	-325 @ 25 Mbps	5000	105	150	150
ADuM6402xRWZ	305	-65	1373 @ 25 Mbps	-325 @ 25 Mbps	5000	105	150	150
ADuM6403xRIZ	302	-63	1359 @ 25 Mbps	-315 @ 25 Mbps	5000	105	150	150
ADuM6403xRWZ	302	-63	1359 @ 25 Mbps	-315 @ 25 Mbps	5000	105	150	150
ADuM6404xRIZ	301	-61	1354 @ 25 Mbps	-305 @ 25 Mbps	5000	105	150	150
ADuM6404xRWZ	301	-61	1354 @ 25 Mbps	-305 @ 25 Mbps	5000	105	150	150
ADuM7234BRZ	1.1	130	6	585@2Mb ps	1000	105	150	150
ADuM724x	28.6	28.6	200 @ 25 Mbps	200 @ 25 Mbps	1000	125	150	150
ADuM7410BRWZ	2	21	10	32@10Mb ps	1000	105	150	150
ADuM7410BRQZ	2	21	10	32@10Mb ps	1000	105	150	150
ADuM744xARQZ	1.2	21	6	32@1Mbps s	1000	105	150	150
ADuM744xBRQZ	4.5	21	23	34@10Mb ps	1000	105	150	150
ADuM744xCRQZ	10	22.5	50	41@25Mb ps	1000	105	150	150
ADuM7510BRWZ	2	21	10	32@10Mb ps	1000	105	150	150
ADuM7510BRQZ	2	21	10	32@10Mb ps	1000	105	150	150
ADW80035	82	46	451 @ 90 Mbps	253 @ 90 Mbps	5000	105	150	150

(\$) - For ambient temperatures higher than 25°C and up to Tmoa, refer to manufacturer's specifications and/or thermal derating curve data for complete electrical ratings for the model.

GENERAL:

These devices are non-optical isolators consisting of an encoder and decoder. The encoder and decoder are separated by a transformer. Internal "chips" are connected to lead frames that are molded into the enclosure.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Use - For use only in products where the acceptability of the combination is determined by Underwriters Laboratories Inc.

USR indicates this product was investigated under the UL Standard for Safety for Optical Isolators, UL 1577, Fourth Edition.

Conditions of Acceptability - Each device shall be reviewed with respect to the following conditions of acceptability:

1. The capability of the device to control a load has not been investigated.
2. These devices should be installed in a suitable end product enclosure.
3. The maximum operating (ambient) temperature, as noted in the ratings table, shall not be exceeded.
4. For single protection devices, the insulation to the case has not been evaluated. For double protection devices, the insulation to the case has been evaluated to the isolation voltage specified in the ratings table.
5. In addition to meeting single protection requirements, double protection optical isolators have also been investigated for use in up to 250 V, 50/60 Hz circuits in audio, video, and similar equipment in applications in which breakdown of the optical isolator may result in a risk of fire, electrical shock, or injury to persons.

CONSTRUCTION DETAILS:

General - The product shall be constructed in accordance with the following description. All dimensions are approximate, unless specified as "max" or "min".