File E214100
Project 03ME16137

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REPORT

on

COMPONENT - NON-OPTICAL ISOLATORS

Analog Devices Inc
Wilmington, MA

DESCRIPTION

PRODUCT COVERED:

* USR – Single protection Non-Optical Isolators, Cat. Nos. ADM followed by 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2490, 2491, **3052, 3054**. All Models may be followed by additional letters and/or numbers.

GENERAL CHARACTERISTIC AND USE (Not for UL Representative Use):

These are magnetically coupled devices consisting of three physically separated die in the same package. They are intended to provide electrical isolation between input and output terminals.

ELECTRICAL RATINGS:

Model	Current (mA)		Power (mW)		Isolation Voltage **(Vac)**	Max Operating Temp (°C)	Max Junction Temp (°C)	Max Storage Temp (°C)	Max Data Transmission Rate (Mbps)
	Side 1	Side 2	Side 1	Side 2					
ADM2481	2.5	3.5	12.5	18.5	2500	85	100	150	500 Kbps
ADM2482	6.5	70	120	215	2500	105	125	150	16 Mbps
ADM2483	2.5	3.5	12.5	18.5	2500	85	100	150	500 Kbps
ADM2484	6.0	60	30	230	5000	105	125	150	500 Kbps
ADM2485	6.5	70	60	230	2500	85	125	150	16 Mbps
ADM2486	5.4	6.6	24	31	2500	85	100	150	20 Mbps
ADM2487	6.5	70	120	215	2500	105	125	150	500 Kbps
ADM2490	6.0	60	30	230	5000	105	125	150	16 Mbps
ADM2491	6.0	60	30	230	5000	105	125	150	16 Mbps
ADM3052	**3**	**75**	**15**	**500**	**5000**	**85**	**130**	**150**	**1 Mbps**
ADM3054	**3**	**75**	**15**	**375**	**5000**	**125**	**150**	**150**	**1 Mbps**

ENGINEERING CONSIDERATIONS (Not for UL Representative 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 temperature on the case should not exceed the maximum operating temperature rating specified in the ratings table.

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:

The product shall be constructed in accordance with the following description.

Tolerances - Unless specified otherwise, all indicated dimensions are nominal.

Corrosion Protection - All parts of corrosive material shall be protected against corrosion by dipping, plating or painting.

Marking - These devices shall be marked on the body, or may be marked on the smallest shipping carton to included the company’s name or trademark and catalog number.

The terminal shall be identified to indicate their function. This marking shall appear on the device or the marking shall be provided as part of the manufacturer’s specifications.

Electrical ratings including the ON-state or forward current versus case temperature curve, and installation instructions shall appear in the manufacturer’s specification for the product.

CAT. NO. ADM2486 ILL. 1
(REPRESENTS MODEL ADM2483) ILL. 2
ILL. 3

* General – These Models are similar in construction to Model Series ADuM140x, Report dated 04-04-2001. (For engineering use only - see ILLs. 1**-5** for construction details.**)** **Model ADM2486 represents models ADM2481, ADM2482, ADM2483, ADM2484, ADM2485, ADM2487, ADM2490 and ADM2491 except as noted below.**

1. Insulation Encapsulant - R/C (QMFZ2), “Sumikon” Type EME-6600H manufactured by Sumitomo Bakelite Co., Ltd.

2. Insulation Compound Coupling – Medium, Type I-8124C, Polyamidic Acid Ester, manufactured by Asahi Kasei Corporation, minimum 0.017 mm thick.

   Alternate – Type I-8124ER, manufactured by Asahi Kasei Corporation, minimum 0.017 mm thick.

3. Lead Pins - **Metal employed for current-carrying parts shall be of stainless steel, plated steel, copper, silver, gold, nickel, aluminum, an alloy of the same, or an equivalent material.**

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***4. Side 1 – FET.**

***5. Side 2 – FET.**

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Model ADM3054

General – Model ADM3054 represents models ADM3052, except as noted below.

1. Insulation Encapsulant - R/C (QMFZ2), “Sumikon” Type EME-6600H manufactured by Sumitomo Bakelite Co., Ltd.

2. Insulation Compound Coupling – Medium, Type I-8124ER, Polyamidic Acid Ester, manufactured by Asahi Kasei Corporation, minimum 0.017 mm thick.

3. Lead Frame - Metal employed for current-carrying parts shall be of stainless steel, plated steel, copper, silver, gold, nickel, aluminum, an alloy of the same, or an equivalent material.

4. Side 1 – FET.

5. Side 2 – FET.

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