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Project 4786360873

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REPORT

On

COMPONENT - Nonoptical Isolating Devices

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TUCSON AZ 85711-4493

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DESCRIPTION

PRODUCTS COVERED:

USR, CNR - Single Protection, Non-Optical Isolator, Models AMC1304M05, AMC1304M25, AMC1304L05, AMC1304L25, AMC1305M05, AMC1305M25, AMC1305L05, AMC1305L25.

MAXIMUM RATINGS PER CHANNEL (at 25°C ambient) (\$):

Model	Current (mA)		Power (mW)		Isolation Voltage at 60 sec [Vrms] [Vdc]	Max Operating Ambient Temp (°C)	Max Junction Temp (°C)	Max Storage Temp (°C)	Max Data Rate, Mbps
	Transmitter	Receiver	Transmitter	Receiver					
AMC1304M05	5.5	10	99	55	5000vac/ 7000Vdc	125	150	150	20Mhz
AMC1304M25	5.5	10	99	55	5000vac/ 7000Vdc	125	150	150	20Mhz
AMC1304L05	5.5	5	99	27.5	5000vac/ 7000Vdc	125	150	150	20Mhz
AMC1304L25	5.5	5	99	27.5	5000vac/ 7000Vdc	125	150	150	20Mhz
AMC1305M05	6	10	33	55	5000vac/ 7000Vdc	125	150	150	20Mhz
AMC1305M25	6	10	33	55	5000vac/ 7000Vdc	125	150	150	20Mhz
AMC1305L05	6	5	33	27.5	5000vac/ 7000Vdc	125	150	150	20Mhz
AMC1305L25	6	5	33	27.5	5000vac/ 7000Vdc	125	150	150	20Mhz

(\$) - 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.

GENERAL:

These non-optical isolator devices consist of a transmitter coupled to a receiver. The transmitter and receiver are separated by an insulating barrier of Silicone oxide. Internal chips are connected to lead frames that are molded into the enclosure.

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

Use - For use only in products where the acceptability of the combination is determined by UL LLC.

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

CNR indicates this product was investigated under the Canadian Certification Notice, CSA Component Acceptance Service No. 5A.

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 junction temperature 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.

CONSTRUCTION DETAILS:

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

Markings - As specified in the Section General.

MODEL AMC1304M25

General - Model AMC1304M25 represents models AMC1304M05, AMC1304L05, AMC1304L25, AMC1305M05, AMC1305M25, AMC1305L05, AMC1305L25, except as noted below.

1. Encoder - **FET** Circuit.
2. Decoder - FET circuit. Isolation is provided within this chip.

Non-optical isolator model	Chip model
AMC1304M05	AMC1304SB
AMC1304M25	AMC1304SB
AMC1304L05	AMC1304SB
AMC1304L25	AMC1304SB
AMC1305M05	AMC1304SB
AMC1305M25	AMC1304SB
AMC1305L05	AMC1304SB
AMC1305L25	AMC1304SB

Above chips may be followed by additional letters and/or numbers.

3. Isolation Capacitor - **The** isolation barrier is provided through 0.027 mm of silicone dioxide between the capacitor plates. 2 isolation capacitors in series, each with 0.0135 mm. This device is located within the Decoder chip, item 2.
4. Lead Frame and Bond Wire - Metal employed for current carrying parts shall be of stainless steel, plated steel, silver, gold, copper, nickel, aluminum, an alloy of the same, or an equivalent material.
5. Casing (Outer Mold) - Epoxy Resin, R/C (QMFZ2), type 8240 by HITACHI CHEMICAL CO LTD (E42956). Molded using a high temperature and high-pressure process.

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