File E151738
Project 98SC18138

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REPORT

ON

COMPONENT - NON-OPTICAL ISOLATING DEVICES

Linear Technology Corp.
Milpitas, California

D E S C R I P T I O N

PRODUCT COVERED:

*USR Component – Single Protection, Isolated, R5485 Receiver/Driver, Model LTC1535, **may follow by additional suffixes.**

Obsolete Product (Retained for reference only): USR Component – Single Protection, Isolated, Self-Powered Comparator, Model LTC1531 suffixed with CSW. USR Component – Single Protection, Isolated MOSFET Driver, Model LTC1177 suffixed with CSW-5, ISW-5, CSW-12, or ISW-12.

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

The solid state portion of these devices is encapsulated in an epoxy compound. Only the insulating function for the rated isolation voltage between the input and output of the devices has been investigated.

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

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.

ELECTRICAL RATINGS:

Model No.	Volts dc	Maximum Input Current mA	Isolation Voltage	Maximum Operating Temperature °C
LTC1177	12	3.4	2500 ac	85
LTC1531	5	14.0	2500 ac	70

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Model	Current (mA)		Power (mW)		Isolation Voltage (AC)	Max Operating Temp (°C)	Max Junction Temp(°C)	Max Storage Temp(°C)
	Encoder	Decoder	Encoder	Decoder				
LTC1535	**28**	**12**	**154 @ 125kBd**	**66 @ 125kBd**	**2500**	**85**	**125**	**150**

CONSTRUCTION DETAILS:

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

Model Differences - All LTC1177 Models are the same, except for Commercial and Industrial operating temperature ranges and lead Frame Model LTC1531 has different devices, but the same lead frame and construction as the LTC1177CS-12.

In the part number:

"C" stands for Commercial operating temperature range.
"I" stands for Industrial operating temperature range.
"N" stands for modified, 18-lead style, plastic DIP package.
"S" stands for modified, 28-lead style, plastic wide surface mount package (SOL)

* Connection Diagram - See ILLs. 5, and 7.