

File E211395
Project 12CA50199

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REPORT

On

Component - Protectors, Low-voltage Solid-state Overcurrent

MAXIM INTEGRATED PRODUCTS
AUSTIN, TX 78729

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DESCRIPTION

PRODUCT COVERED:

USR: Component - Low voltage solid-state overcurrent protectors, Models MAX4772EUT+T and MAX4773EUT+T.

GENERAL:

These devices are current-limit switches which limit the output current to a safe level when the output lead exceeds the current-limit threshold or a short is present. These devices are designed for special-purpose applications. These devices provide overcurrent and short-circuit protection when supplied by an electrical source.

ELECTRICAL RATINGS:

ModelS	Number of Outputs	Input Voltage Range, V dc	Continuous Output Current Rating		Protective Current Rating	
			SEL=low	SEL=high	SEL=low	SEL=high
MAX4772EUT+T MAX4773EUT+T	1	2.0 Vdc to 4.5 Vdc	200 mA	500 mA	320 mA	800 mA
Current-Limit Threshold Selection pin (SEL) connects to logic-low level or floating to select 200 mA current limit threshold or connects to logic-high level to select 500 mA current limit threshold.						

Environmental Ratings

Model	Operating Temperature (°C)	Shipping and Storage Temp (°C)
MAX4772EUT+T MAX4773EUT+T	-40 to 85°C	-30 to 70°C

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

Models MAX4772EUT+T and MAX4773EU+T have additionally been evaluated to IEC 60950-1, Ed 2, Am1, Annex CC, Test Program 2.

Conditions of Acceptability -

For use only in (or with) complete equipment where the acceptability of the combination is determined by UL LLC.

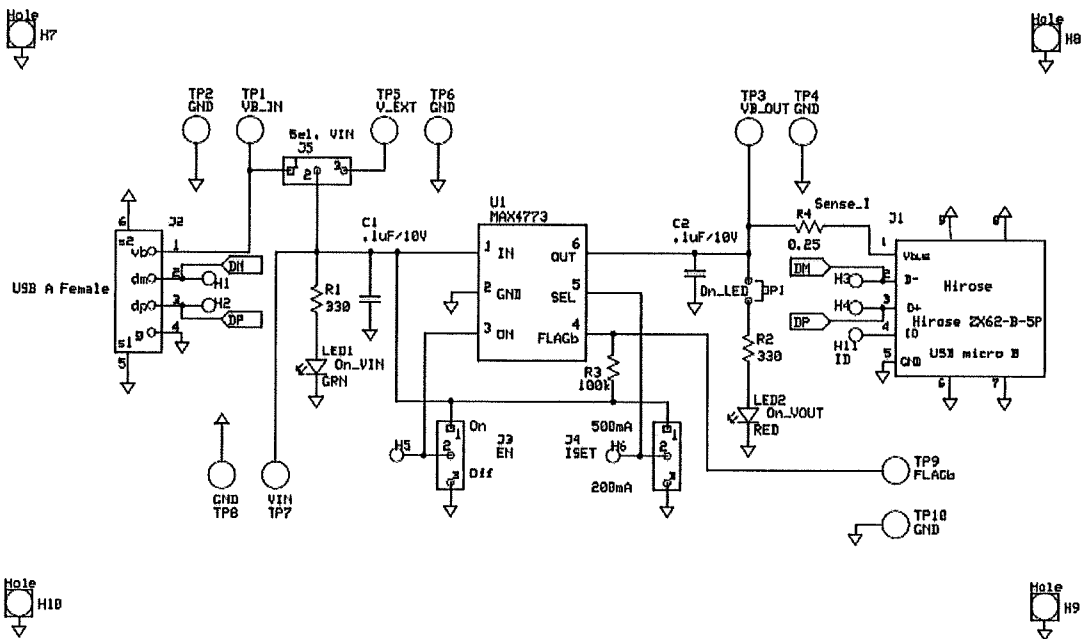
1. These devices are integrated circuits and electrical spacings within the device are not specified.
2. These devices are entirely electronic in nature and have no means for manual operation or reset.
3. The terminals of these devices are for factory wiring only and are intended to be mounted on printed wiring board.
4. These devices have only been evaluated for supplementary overcurrent protection of secondary circuits supplied by the load side of a transformer or battery, and have not been evaluated for branch-circuit protection.
5. These devices have been subjected to environmental conditionings with respect to the following conditions (per UL 2367):
 - Shipping and Storage: -30 to 70°C
 - Thermal Cycling: 0 - +49°C
 - Endurance
 - Abnormal
6. These devices limit currents to values less than the overcurrent protection rating of 5 amperes.
7. These devices have been investigated as electronic overcurrent protective devices in accordance with the requirements contained in UL 2367 - Standard for Solid State Overcurrent Protectors. As a result, use is permitted only on the load-side of an isolating transformer, power supply or battery with maximum levels limited as follows:

Output Voltage (V_{oc})		Output Current (I_{sc})	VA
V_{ac}	V_{dc}	A	($V \times A$)
≤ 20	≤ 20	$\leq 1000 / V_{oc}$	≤ 250
$20 < V_{oc} \leq 30$	$20 < V_{oc} \leq 30$	$\leq 1000 / V_{oc}$	≤ 250
-	$30 < V_{oc} \leq 60$	$\leq 1000 / V_{oc}$	≤ 250

Use on secondary supply circuits with a higher power capability requires additional evaluation for reliability, such as are contained in the Standard for Safety-Related Controls Employing Solid-State Controls, UL 991.

8. These devices have not been subjected Tests for Telecom applications and their suitability for connection to telecommunication networks with outside plant connections should be determined in the end-use.
9. These devices were evaluated with respect to continuous current operation at the current levels shown in the electrical ratings section of this report.
10. These devices were tested in the circuit shown below.

Model MAX4773EUT+T



Malfunction, such as oscillation may occur causing unacceptable results and/or performance if different or no such capacitors are used. If smaller capacitors are used in the end product application, the end product engineer should determine suitability of different capacitance values or the need for re-test.

CONSTRUCTION DETAILS:

MARKING:

The Recognized Company, trade name, or trademark, catalog number, and Recognized Component Mark **RU** on the smallest package or reel.

Electrical ratings, including voltage range, maximum continuous current, protective current and operating temperatures shall be provided on the manufacturer's device specific datasheet. The datasheet may be web-based provided it is publicly accessible on the internet.

Spacings - No spacing requirements are specified.

Tolerance - Unless otherwise specified, all dimensions are nominal.

Corrosion Protection - All parts are of corrosion resistant material or are suitably plated to resist corrosion.

Current Carrying Parts - Stainless steel, silver, gold, nickel, aluminum, copper or copper alloy. May be plated with tin, lead, silver or gold.

Insulated Housing - Epoxy - R/C (QMFZ2), a high pressure, high temperature molding process, rated 130 °C.

Model differences - Both models are similar except MAX4774EUT+T has an auto-retry feature.

ADDITIONAL CONSTRUCTION DETAILS:

Refer to the following Ills. For overall view and dimensional information:

Model Nos.	Ill. No.	Comments
MAX4772EUT+T and MAX4773EUT+T	1	Pin Layout and Package