

File E211395
Project 03SC07848

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REPORT

ON

COMPONENT - PROTECTORS, LOW VOLTAGE SOLID-STATE OVERCURRENT

Maxim Integrated Products
Sunnyvale, California

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DESCRIPTION

PRODUCT COVERED:

Component - Protectors, low voltage solid-state over-current, Model MAX 1812 and MAX1823, which may be followed by a combination of symbols, letters and/or numbers.


GENERAL:

These devices are power distribution 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 intended to be used on the secondary side of an isolating transformer or battery (maximum power levels of 250 VA) to provide a means of supplementary protection.

ELECTRICAL RATINGS:

Model No.	Input Voltage Range, V dc	Operational Current Rating, A	Over-current Protection Current Rating, A
MAX1812	2.7-5.5	500 mA	1.2
MAX1823	4.0-5.5	720 mA	1.2

MARKING:

The Recognized Company, trade name, or trademark, catalog number, and Recognized Component Mark  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.

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

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

Conditions Of Acceptability -

- 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 (8 or pin connector intended to be mounted on printed wiring board).

- *4) These devices have been investigated as electronic over-current protective devices in accordance with the requirements in sub-clause 2.5 and Table 2C of UL 60950. As a result, use is permitted only on secondary supply circuits originating from either an isolating transformer or battery with maximum power levels of 250 VA max and 250 A.
- *Use on secondary supply circuits with a higher power capability (Table 2B) requires additional evaluation for reliability, such as requirements in the Standard for Safety-Related Controls Employing Solid-State Controls, UL 991.
- * 5) These devices are intended to operate within the manufacturer's specified ratings and the criteria contained in sub-clause 2.5 of UL 60950. These devices limit currents to values less than the over-current protection rating of 5 amperes.
- 6) These devices have only been evaluated for supplementary over-current protection of secondary circuits supplied by the load side of a transformer or battery, and have not been evaluated for branch-circuit protection.
- 7) These devices have been subjected to environmental conditionings with respect to the following conditions (per Supplement SD of the Standard for Telephone Equipment, UL 1459):
- Shipping and Storage #
 - Thermal Cycling
 - Endurance
 - Abnormal
- # Temperature Range: -30 to +70°C
- 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 following current levels:
- | <u>Model No.</u> | <u>Continuous Current Rating, A</u> |
|------------------|-------------------------------------|
| MAX1812 | 500 mA |
| MAX1823 | 720 mA |
- 10) Suitable Capacitance shall be determined in preventing under-voltage conditions.
- 11) Protector Models MAX1823A and MAX1823B have a reverse current blocking feature when disabled. This feature has not been investigated and consideration should be given to this operation when evaluating the end product.