

File E211395
Project 08SC05045

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REPORT

On

COMPONENT - PROTECTORS, LOW VOLTAGE SOLID-STATE OVERCURRENT

Maxim Integrated Products
Sunnyvale, Ca

Recognized Company: Maxim Integrated Products

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DESCRIPTION

PRODUCT COVERED:

Component - Low voltage solid-state overcurrent protector Model DS4560, **which may be followed by a combination of symbols, letters and/or numbers.**

GENERAL:

These devices are solid-state overcurrent protectors. They are solid-state switches that limit output current when the output load exceeds the current-limit threshold or when a load-side short-circuit is present. Solid-state overcurrent protectors are intended to be used on the load-side of an isolating transformer, power supply or battery to provide a means of supplementary protection.

ELECTRICAL RATINGS:

Model No.	Input Voltage Range, V dc	Number of Outputs	Operational Current Rating per Output, A	Overcurrent Protection Current Rating per Output, A peak
DS4560	9-13.2 V DC	1	3.15 A	5.9 A

Environmental Ratings

Maximum Ambient Temperature Rating: 25 °C

Storage Temperature Rating: -55 °C to 130 °C

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

For use only in complete equipment where the acceptability of the combination is 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 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 investigated as electronic overcurrent protective devices in accordance with the requirements contained in **UL 2367, the 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	(VxA)
≤ 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.

6. These devices limit currents to values less than the overcurrent protection rating of 5 amperes.

7. 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.
8. These devices were evaluated with respect to continuous current operation at the current levels shown in the electrical ratings section of this report.
9. Model DS4560 was provided with a Capacitor, rated 33 μF , 25 V, across the input for all tests. The capacitor shall be considered in the end product.
10. Model DS4560 is additionally provided with Capacitor (C1 and C2), rated 100 nF, 50V at Pins 2 and 3.
10. This device was tested in a 25°C ambient only.
11. These devices were tested in the circuit shown below:

