

Thermal printhead

Operation precautions

1. Power on and off sequence must be in the following order to prevent the heat element damage;
 - Turn on - Apply the logic supply voltage (VDD) first and the printhead supply voltage (VH).
 - Turn off - Switch off the printhead supply voltage (VH) first and turn the logic supply voltage (VDD) off.
2. When the printhead operation is finished, print supply voltage (including the charged voltage with capacitor) should be reduced to the ground level and remained until next printhead operation.
3. Condensation should be avoided. If condensation occurred, do not switch on the printhead power until condensation disappeared.
4. Heat elements and IC's shall be anti-electrostatic in order to prevent the electrostatic destruction. Do not touch the connector pins by naked hands.
5. The printhead substrate surface is coated with glass. Mechanical stress or shock (including dust or scratch or damage) should be avoided to prevent damage.
6. Please design the component in such a way that the printing media (while in printing) and the paper guide do not contact the IC protective coating and the pin protective coating, in order to keep the printing quality.
7. Please make designing in such a way to avoid the contact with conductive components like thermal head support plate, because there is an area where the electrode are exposed on the surface and the side of thermal printhead.
8. Printing without paper (Thermal paper etc.) should not be done. It may cause destruction on heat due to overload.
9. External force shall not be applied to the connector when it is plugged in or out.
10. Print quality would be degraded if paper or ink residue were stuck on the heat element area. For such a case, please use applicator with alcohol to clean up. Do not use any material or equipment, which destroy the heat elements.
11. Please ensure that the paper used does not include bad element factor to affect the printhead life.
12. Thermal printhead is heat-generating device, so that it may cause heat element damage or smoke / fire on its components by over heating if there occurs mechanical or electrical abnormalities. So please be sure to perform temperature control by thermistor and also to design the power (VH, VDD) shutdown system when abnormalities take place to protect the printhead.
13. If dusts/foreign particles stuck on the surface of thermal head substrate or printed circuit board, it may cause stained print, faded print and also damage of heat element, smoking and combustion. In this case, the head should be cleaned by ethyl-alcohol after power source for head is shut down and please check if the dusts/foreign articles are completely removed. Yet, make sure that ethyl alcohol is dried up before restarting the operation.
14. Please design power source for head (VH, VDD) to be shutdown when the thermal head surpasses the maximum rated wattage while STB is On, or the printing media does not move like paper jam. Otherwise, heated printing media bums and sticks to the head and may lead to combustion.

Notes

- 1) The information contained herein is subject to change without notice.
- 2) Before you use our Products, please contact our sales representative and verify the latest specifications :
- 3) Although ROHM is continuously working to improve product reliability and quality, semiconductors can break down and malfunction due to various factors.
Therefore, in order to prevent personal injury or fire arising from failure, please take safety measures such as complying with the derating characteristics, implementing redundant and fire prevention designs, and utilizing backups and fail-safe procedures. ROHM shall have no responsibility for any damages arising out of the use of our Products beyond the rating specified by ROHM.
- 4) Examples of application circuits, circuit constants and any other information contained herein are provided only to illustrate the standard usage and operations of the Products. The peripheral conditions must be taken into account when designing circuits for mass production.
- 5) The technical information specified herein is intended only to show the typical functions of and examples of application circuits for the Products. ROHM does not grant you, explicitly or implicitly, any license to use or exercise intellectual property or other rights held by ROHM or any other parties. ROHM shall have no responsibility whatsoever for any dispute arising out of the use of such technical information.
- 6) The Products specified in this document are not designed to be radiation tolerant.
- 7) For use of our Products in applications requiring a high degree of reliability (as exemplified below), please contact and consult with a ROHM representative : transportation equipment (i.e. cars, ships, trains), primary communication equipment, traffic lights, fire/crime prevention, safety equipment, medical systems, servers, solar cells, and power transmission systems.
- 8) Do not use our Products in applications requiring extremely high reliability, such as aerospace equipment, nuclear power control systems, and submarine repeaters.
- 9) ROHM shall have no responsibility for any damages or injury arising from non-compliance with the recommended usage conditions and specifications contained herein.
- 10) ROHM has used reasonable care to ensure the accuracy of the information contained in this document. However, ROHM does not warrants that such information is error-free, and ROHM shall have no responsibility for any damages arising from any inaccuracy or misprint of such information.
- 11) Please use the Products in accordance with any applicable environmental laws and regulations, such as the RoHS Directive. For more details, including RoHS compatibility, please contact a ROHM sales office. ROHM shall have no responsibility for any damages or losses resulting non-compliance with any applicable laws or regulations.
- 12) When providing our Products and technologies contained in this document to other countries, you must abide by the procedures and provisions stipulated in all applicable export laws and regulations, including without limitation the US Export Administration Regulations and the Foreign Exchange and Foreign Trade Act.
- 13) This document, in part or in whole, may not be reprinted or reproduced without prior consent of ROHM.



Thank you for your accessing to ROHM product informations.
More detail product informations and catalogs are available, please contact us.

ROHM Customer Support System

<http://www.rohm.com/contact/>