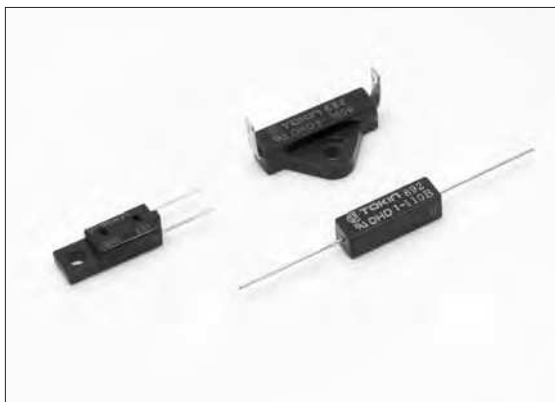


# Thermal Guard OHD®



## Outline

The thermal guard “OHD®” is developed for thermal problem countermeasures and safety standard conformity that are becoming increasingly important for electronic devices in recent years.

## Features

- Extremely simple circuit design (as no adjustment needed).
- Reliable ON-OFF operation (special temperature-sensitive materials and highly-reliable switches give reproducible, reliable ON-OFF action).
- Usable with extremely low (0.1 mW or lower) signals to high power (6 W) levels, making them ideal as built-in overheating detectors in electronic circuits. (OHD5R-OOB have a maximum rating of 1 W.)
- High-speed response (three times higher than previous NEC TOKIN products).
- Compact, light and easy to handle.
- Dust-proof, explosion-proof, and corrosion-proof.
- Wide range of operating temperatures available (in 5 °C increments from 30 to 130 °C)







## Applications

- Monitoring overheating of power transistors and power modules in power supplies, OA equipment and other electronic appliances.
- Atmospheric temperature detection and overheating monitoring in room heaters, gas hot water heaters, PPCs, amplifiers, motors, HDDs, FDDs and other general appliances.



- All specifications in this catalog and production status of products are subject to change without notice. Prior to the purchase, please contact NEC TOKIN for updated product data.
- Please request for a specification sheet for detailed product data prior to the purchase.
- Before using the product in this catalog, please read "Precautions" and other safety precautions listed in the printed version catalog.

**Specifications**

Product name	Features	Contact shape	Electrical Characteristics	Set operating temperature range*2	Operating temperature precision	Differential temperature
OHD1-  	General-purpose	B:Break M:Make	Maximum opening/closing voltage 110 V AC/DC Maximum opening/closing current 0.3 A AC/DC Maximum opening/closing power 6 W AC/DC Minimum opening/closing current 0.1mA/1V,DC	Fixed in 5°C increments from 30°C to 130°C	±5°C	10°C max.
OHD3-  						
OHD5R-  	Compact radial type	B:Break	Maximum opening/closing voltage 30 V,DC Maximum opening/closing current 0.1 A,DC Maximum opening/closing power 1 W DC Minimum opening/closing current 0.1mA/1V,DC			

UL : E67648  
 CSA : LR50414  
 TÜV : OHD1-3 R 9750955  
           OHD5R R 9750944

\*1,2 Please consult us before you determine specifications.

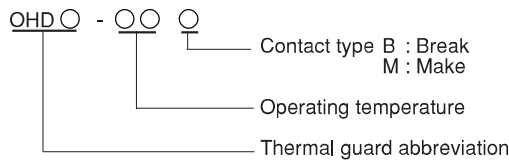
Product name	Contact Resistance	Insulation Withstand Voltage	Insulation Resistance	Remarks
OHD1-3	150mΩ max.	2500VAC/1min. or 3000VAC/1sec (Between terminals and mounting resin surface)	DC500V-100MΩ min. (Between terminals and mounting resin surface)	Compliance to RoHS directive
OHD5R	300mΩ max.	1500VAC/1min. or 1800VAC/1sec (Between terminals and mounting resin surface)	DC500V-100MΩ min. (Between terminals and mounting resin surface)	Compliance to RoHS directive

**Standard Temperature Specifications**

Product name	Standard temperature specification
OHD1-B	60, 80, 90, 100°C
OHD1-M	70°C
OHD3-B	60, 70, 80, 85, 90, 100, 105, 110, 120°C
OHD3-M	80, 85, 90, 95, 100, 105, 110, 115, 120°C
OHD5R-B	80, 85, 90, 95, 100, 105, 110°C

\* Please ask separately except standard temperature specification

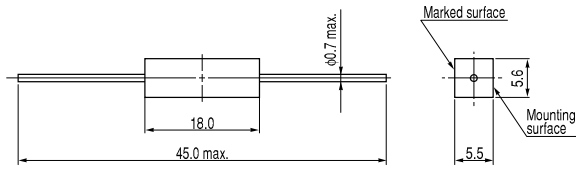
**Markings**



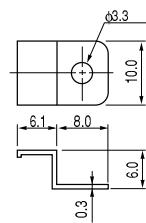
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Shape and Dimensions

● OHD1

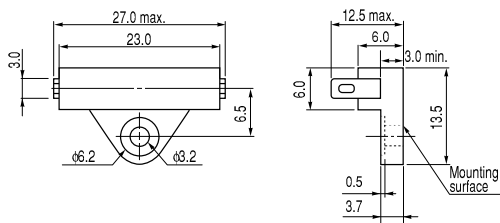


● OHD1 mounting bracket

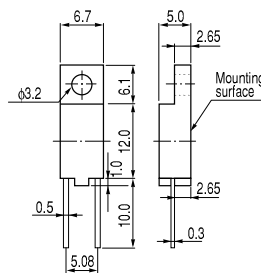


\*Mounting brackets exclusively for the OHD1 type are provided optionally (at separate cost).

● OHD3



● OHD5R



(mm)

**Before Using Thermal Guard OHD®**

- Please ask for a copy of specification and check the contents thoroughly before the actual use.
- Do not use OHD® under mechanical weight load.
- Do NOT use with greater load than specified.
- Do not affix in close proximity to strongly magnetized parts and avoid using in a magnetic field.
- Do not use if dropped or strongly shocked.
- The OHD1 is designed to be inserted into printed circuit boards. OHD3 type is reed wire soldered type.



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