

# Circuit protection elements

## ●Circuit protection elements

Rohm's circuit protectors have a very reliable current cut-off capability that protects ICs and their circuits from accidental short circuit loads. Whether operated in AC or DC circuits, these circuit protectors have a very low internal resistance in normal operation, but safely and rapidly break the circuit when the current cutoff level is exceeded.

## ●Features

- 1) Cutoff is sharp and repeatable.
- 2) Low internal resistance and minimal voltage drop.
- 3) Incombustible.
- 4) Compact.
- 5) Rated for continuous use.
- 6) Good temperature characteristics.
- 7) Withstands surges well.
- 8) UL certified (UL certification number E107856).

## ●Application

Current surge protection

## ●Operation notes

Do not use this product on the primary side of commercial power supplies. Arcs that result after cutoff may damage the molding.

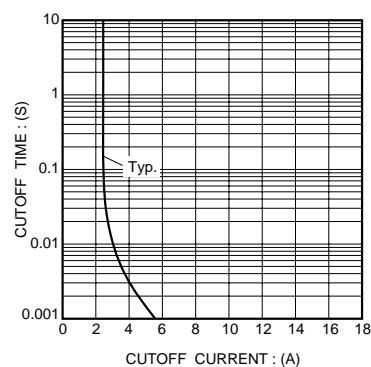
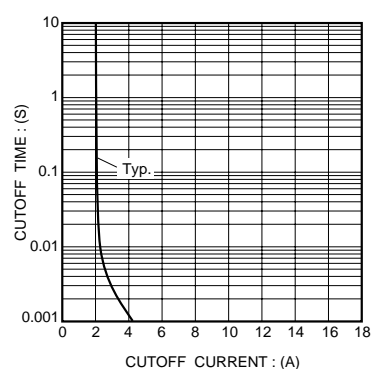
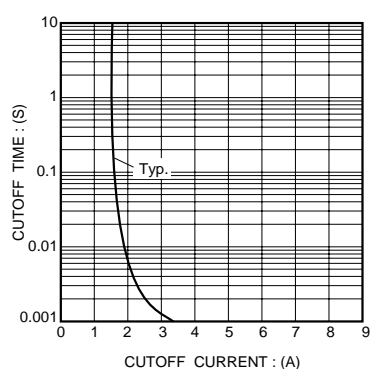
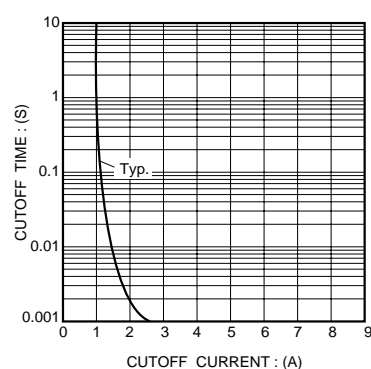
# Surface mounting Type

## ●ICP-S series

Product name	Rated current (A)	Cutoff characteristics	Internal resistance Typ.(Ω)	Rated voltage (V)	Operating temperature (°C)	Storage temperature (°C)
ICP-S0.5	0.5	Fig.1	0.150	50	-55 to +125	-55 to +125
ICP-S0.7	0.7	Fig.2	0.084			
ICP-S1.0	1.0	Fig.3	0.061			
ICP-S1.2	1.2	Fig.4	0.048			

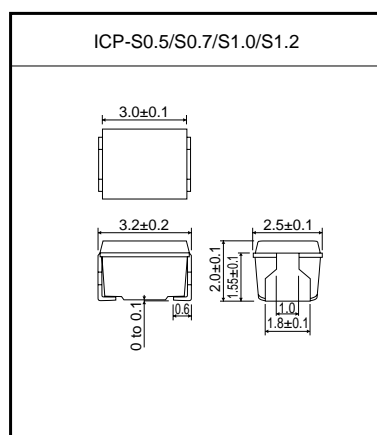
## Overcurrent Protection Elements

### ●Cutoff characteristics



The cutoff characteristics shown are typical. For further details of how to use these protectors, please request the technical documentation from your Rohm representative.

### ●External dimensions (Unit : mm)

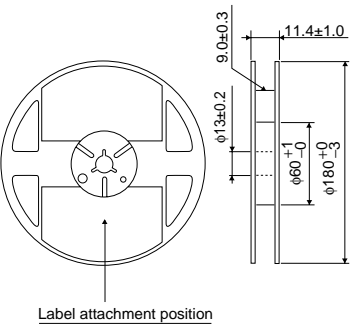
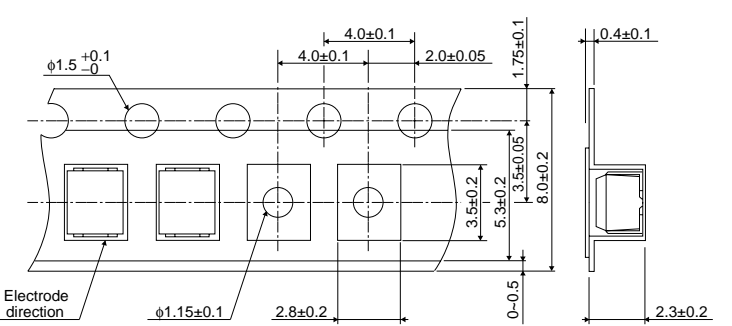


## Overcurrent Protection Elements

## ●Packaging specifications

ICP-S Type	Package type	Taping
	Symbol	TN
	Basic ordering unit (pieces)	2000
ICP-S0.5		○
ICP-S0.7		○
ICP-S1.0		○
ICP-S1.2		○

## ●Taping specifications (Unit : mm)

ICP-S taping (TN)	
Reel	Taping
 <p>Label attachment position</p>	 <p>Electrode direction</p>

## Overcurrent Protection Elements

## Leaded type

ICP-N series

Product name	Rated current (A)	Cutoff characteristics	Internal resistance Typ.( $\Omega$ )	Rated voltage (V)	Operating temperature ( $^{\circ}\text{C}$ )	Storage temperature( $^{\circ}\text{C}$ )
ICP-N10	0.4	Fig.1	0.220	50	-55 to +125	-55 to +125
ICP-N15	0.6	Fig.2	0.135			
ICP-N20	0.8	Fig.3	0.100			
ICP-N25	1.0	Fig.4	0.070			
ICP-N38	1.5	Fig.5	0.042			
ICP-N50	2.0	Fig.6	0.035			
ICP-N70	2.5	Fig.7	0.023			

## ●Cutoff characteristics

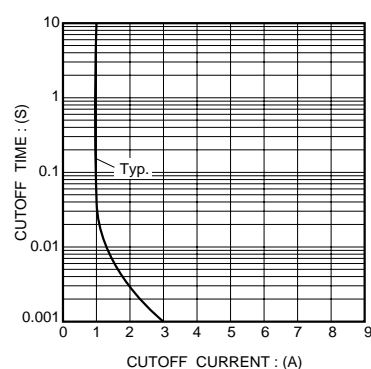


Fig.1 ICP-N10

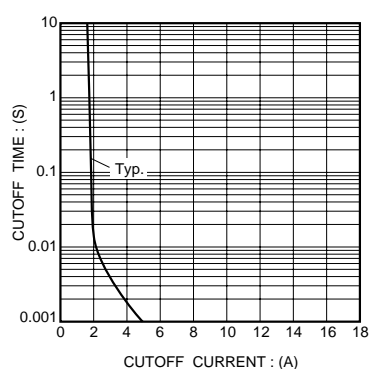


Fig.2 ICP-N15

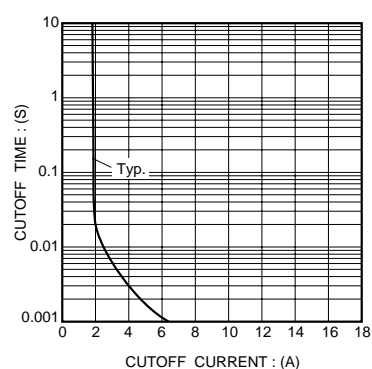


Fig.3 ICP-N20

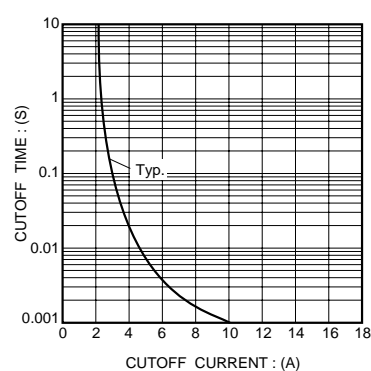


Fig.4 ICP-N25

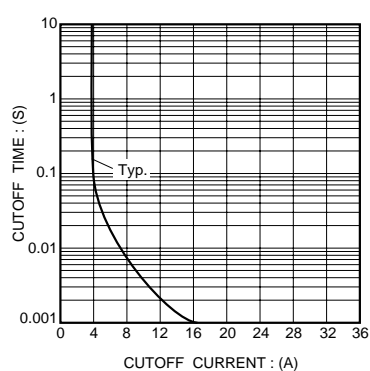


Fig.5 ICP-N38

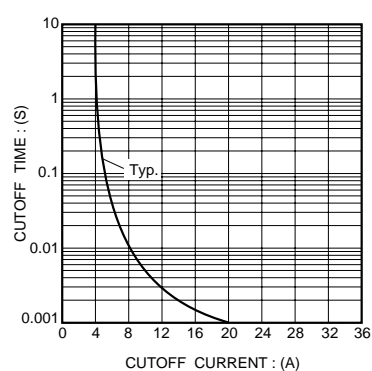


Fig.6 ICP-N50

Overcurrent Protection Elements

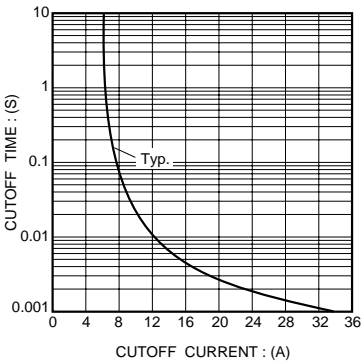
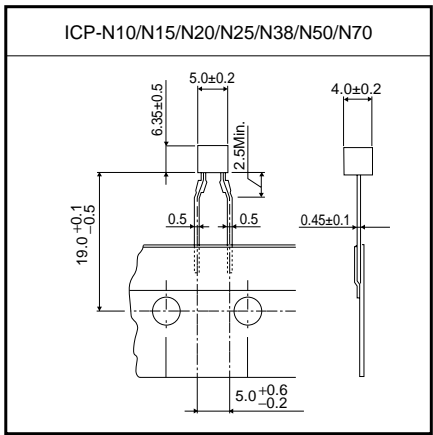


Fig.7 ICP-N70

The cutoff characteristics given represent typical values. Technical documentation regarding ways of using circuit protectors is available from your Rohm representative.

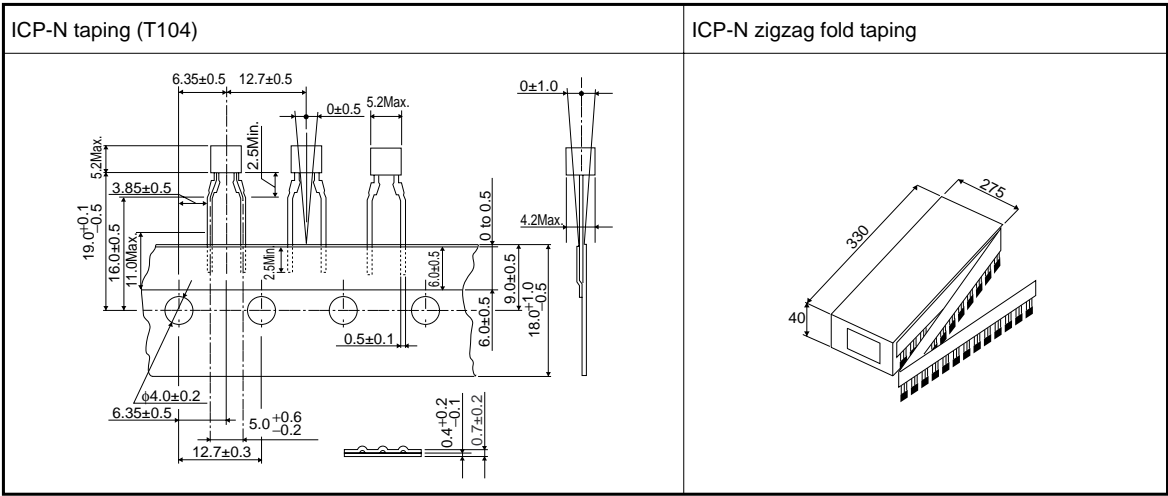
●External dimensions (Unit : mm)



●Packaging specifications

ICP-N Type	Packaging type	Taping
	Symbol	T104
	Basic ordering unit (pieces)	3000
ICP-N10/N15/N20/N25/N38/N50/N70		○

●Taping specifications (Unit : mm)



### Notes

- No technical content pages of this document may be reproduced in any form or transmitted by any means without prior permission of ROHM CO.,LTD.
- The contents described herein are subject to change without notice. The specifications for the product described in this document are for reference only. Upon actual use, therefore, please request that specifications to be separately delivered.
- Application circuit diagrams and circuit constants contained herein are shown as examples of standard use and operation. Please pay careful attention to the peripheral conditions when designing circuits and deciding upon circuit constants in the set.
- Any data, including, but not limited to application circuit diagrams information, described herein are intended only as illustrations of such devices and not as the specifications for such devices. ROHM CO.,LTD. disclaims any warranty that any use of such devices shall be free from infringement of any third party's intellectual property rights or other proprietary rights, and further, assumes no liability of whatsoever nature in the event of any such infringement, or arising from or connected with or related to the use of such devices.
- Upon the sale of any such devices, other than for buyer's right to use such devices itself, resell or otherwise dispose of the same, no express or implied right or license to practice or commercially exploit any intellectual property rights or other proprietary rights owned or controlled by
- ROHM CO., LTD. is granted to any such buyer.
- Products listed in this document are no antiradiation design.

The products listed in this document are designed to be used with ordinary electronic equipment or devices (such as audio visual equipment, office-automation equipment, communications devices, electrical appliances and electronic toys).

Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

#### About Export Control Order in Japan

Products described herein are the objects of controlled goods in Annex 1 (Item 16) of Export Trade Control Order in Japan.

In case of export from Japan, please confirm if it applies to "objective" criteria or an "informed" (by MITI clause) on the basis of "catch all controls for Non-Proliferation of Weapons of Mass Destruction.