

Circuit protection elements

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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~+125	-55~+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			
ICP-S1.8	1.8	Fig.5	0.032			
ICP-S2.3	2.3	Fig.6	0.026			

Transistors

●Cutoff characteristics

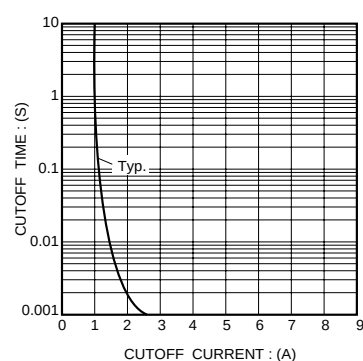


Fig.1 ICP-S0.5

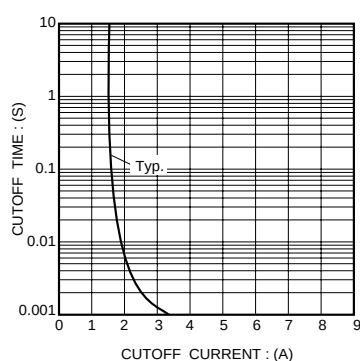


Fig.2 ICP-S0.7

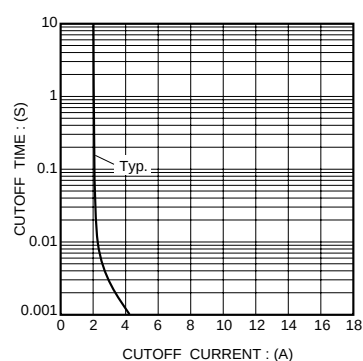


Fig.3 ICP-S1.0

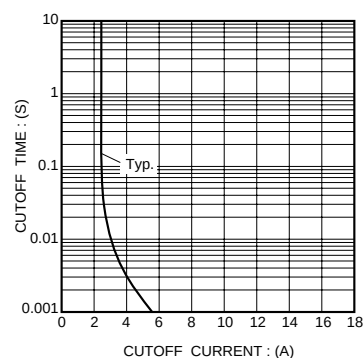


Fig.4 ICP-S1.2

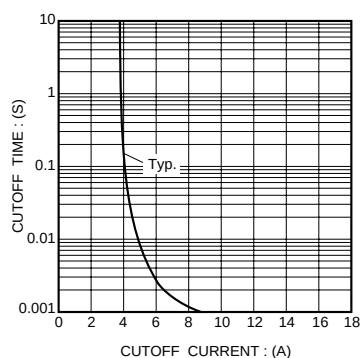


Fig.5 ICP-S1.8

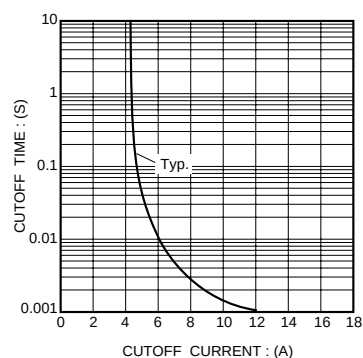
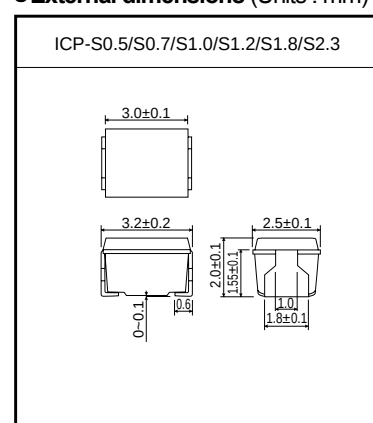


Fig.6 ICP-S2.3

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 (Units : mm)

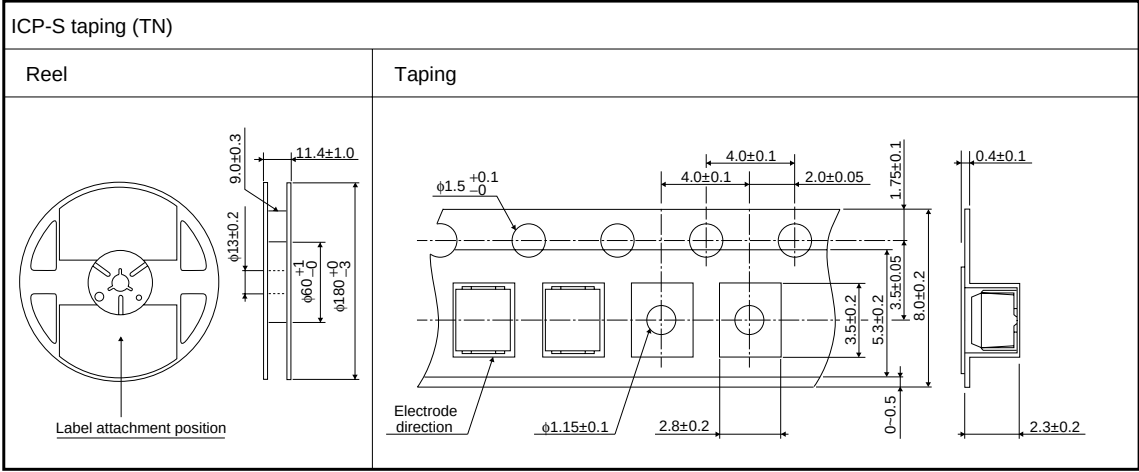


Transistors

●Packaging specifications

ICP-S	Package type	Taping
	Symbol	TN
	Basic ordering unit (pieces)	2000
Type		
ICP-S0.5		○
ICP-S0.7		○
ICP-S1.0		○
ICP-S1.2		○
ICP-S1.8		○
ICP-S2.3		○

●Taping specifications (Units : mm)



Leaded type

ICP-N series

Product name	Rated current (A)	Cutoff characteristics	Internal resistance Typ.(Ω)	Rated voltage (V)	Operating temperature ($^{\circ}\text{C}$)	Storage temperature($^{\circ}\text{C}$)
ICP-N10	0.4	Fig.1	0.220	50	-55~+125	-55~+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

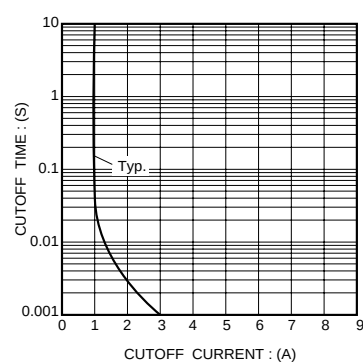


Fig.1 ICP-N10

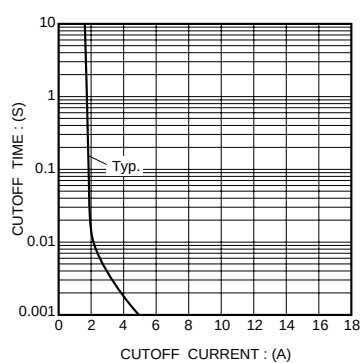


Fig.2 ICP-N15

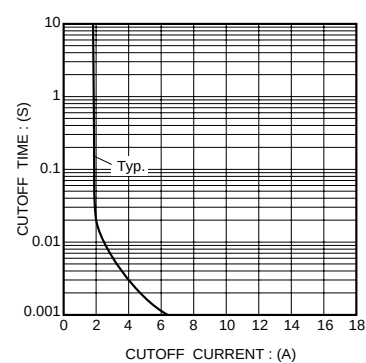


Fig.3 ICP-N20

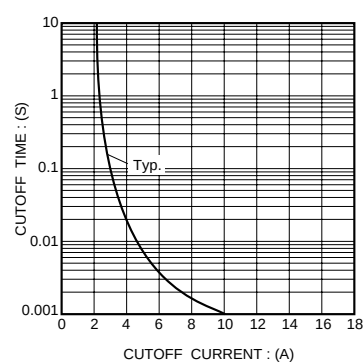


Fig.4 ICP-N25

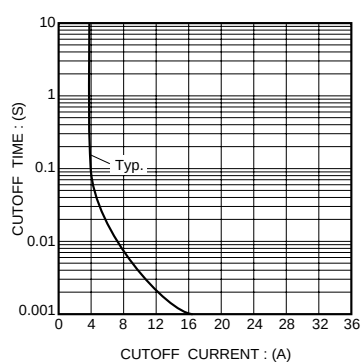


Fig.5 ICP-N38

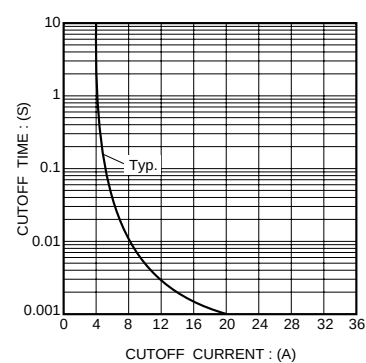
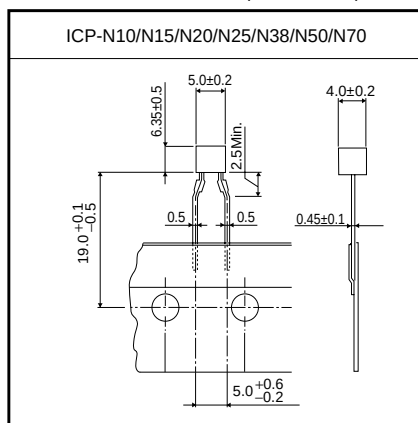


Fig.6 ICP-N50



●External dimensions (Units : mm)



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

ICP-N taping (T104) Technical drawing of ICP-N taping (T104) showing top, side, and detail views with dimensions. The top view shows a rectangular component with four circular mounting holes. Dimensions include: overall width 18.0^{+0.5}_{-0.5}, overall height 19.0^{+0.1}_{-0.1}, mounting hole diameter $\phi 4.0 \pm 0.2$, and mounting hole pitch 12.7± 0.2. The side view shows a height of 4.2Max. The detail view shows a cross-section of the component with dimensions: 6.35± 0.5, 12.7± 0.5, 0± 0.5, 5.2Max., 2.5Min., 3.85± 0.5, 5.2Max., 16.0± 0.5, 11.0Max., 2.5Min., 6.0± 0.5, 0.5± 0.1, 9.0± 0.5, 18.0^{+0.5}_{-0.5}, 0.4^{+0.2}_{-0.1}, 0.7± 0.2, 5.0^{+0.6}_{-0.2}, and 6.35± 0.5.	ICP-N zigzag fold taping 3D perspective drawing of ICP-N zigzag fold taping showing dimensions: 330, 275, and 40.
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