# mail

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



### Contact us

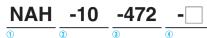
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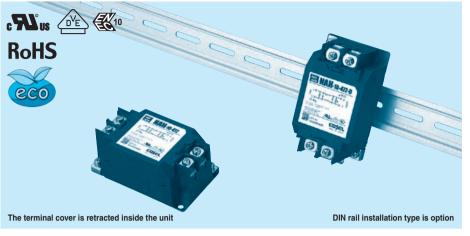


**COSEL** Ultra high-attenuation type of common mode noise from 10kHz to 1MHz

Ordering information

## series





①Model Name ②Rated Current ③Line to ground capacitor code:See table 1.1.

table1.1 Line to ground capacitor code

Code	Leakage Current (Input 125/250V 60Hz)	Line to ground capacitor (nominal value)	
000	5 μA/ 10μA max	Not Provided	
101	12.5 µA/ 25µA max	100pF	
221	25 μA/ 50μA max	220pF	
331	37.5 µA/ 75µA max	330pF	
471	50 μA/100μA max	470pF	
681	75.5 µA/150µA max	680pF	
102	0.13mA/0.25mA max	1000pF	
222	0.25mA/0.5 mA max	2200pF	
332	0.38mA/0.75mA max	3300pF	
472	0.5 mA/1.0 mA max	4700pF	

When the line to ground capacitor code is different, the attenuation characteristic is different.

④ Options

D:DIN rail installation type

\* The dimensions change when the option is set. Refer to External view.

#### **Features of NAH series**

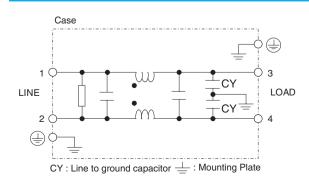
#### Ultra high-attenuation type of common mode noise from 10kHz to 1MHz

- · Single Phase 250 VAC
- · Push down type terminal block

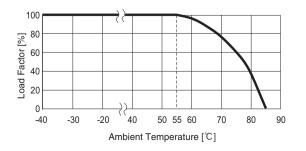
#### **Specifications**

Items	NAH-06-472	NAH-10-472	NAH-16-472	NAH-20-472	NAH-30-472	
Rated Voltage[V]	AC 1 ¢ 250 / DC250					
Rated Current[A]	6	10	16	20	30	
Test Voltage (Terminal-Mounting Plate)	2,500 VAC (Cutoff Current = 20mA), 1minute at room temperature and humidity					
Isolation Resistance (Terminal-Mounting Plate)	500 VDC 100M $\Omega$ min at room temperature and humidity					
Leakage current 125/250V 60Hz	0.5mA/1.0mA max					
Voltage drop	1.0V max					
Safety agency approval temperatures	-25 to +85℃ (Refer to Derating Curve)					
Operating temperature   -40 to +85℃ (Refer to Derating Curve)						
Operating humidity 20 to 95%RH (Non condensing)						
Storage temperature/humidity   -40 to +85 °C/20 to 95%RH (Non condensing)						
Vibration	10 to 55Hz, 19.6m/s <sup>2</sup> (2G), 3min. Period, 1hour each X, Y and Z axis					
Impact	196.1m/s <sup>2</sup> (20G), 11ms Once each X, Y and Z axis					
Safety agency approvals	UL1283, CSA C22.2 No.8 (C-UL), DIN EN60939 VDE0565 Teil3-1, ENEC (At only AC input)					
Case size (without projection) /Weight 53×41×92 mm [2.09×1.61×3.62 inches] (W×H×D) /300g max (Option : -D refer to external view)						
	Rated Voltage[V]   Rated Current[A]   Test Voltage (Terminal-Mounting Plate)   Isolation Resistance (Terminal-Mounting Plate)   Leakage current 125/250V 60Hz   Voltage drop   Safety agency approval temperatures   Operating temperature   Operating humidity   Storage temperature/humidity   Vibration   Impact   Safety agency approvals	Rated Voltage[V]   AC 1 φ 250 / DC2     Rated Current[A]   6     Test Voltage (Terminal-Mounting Plate)   2,500 VAC (Cutoff     Isolation Resistance (Terminal-Mounting Plate)   500 VDC 100MΩ     Leakage current 125/250V 60Hz   0.5mA/1.0mA max     Voltage drop   1.0V max     Safety agency approval temperatures   -25 to +85°C (Refe     Operating temperature   -40 to +85°C / 20 to     Storage temperature/humidity   -40 to +85°C / 20 to     Vibration   10 to 55Hz, 19.6m     Impact   196.1m/s² (20G),     Safety agency approvals   UL1283, CSA C22	Rated Voltage[V]AC 1 $\phi$ 250 / DC250Rated Current[A]610Test Voltage (Terminal-Mounting Plate)2,500 VAC (Cutoff Current = 20mA), 1Isolation Resistance (Terminal-Mounting Plate)500 VDC 100M $\Omega$ min at room temperLeakage current 125/250V 60Hz0.5mA/1.0mA maxVoltage drop1.0V maxSafety agency approval temperatures-25 to +85°C (Refer to Derating CurveOperating temperature-40 to +85°C (Refer to Derating CurveOperating humidity20 to 95%RH (Non condensing)Storage temperature/humidity-40 to +85°C/20 to 95%RH (Non condVibration10 to 55Hz, 19.6m/s² (2G), 3min. PeriodImpact196.1m/s² (2OG), 11ms Once each X,Safety agency approvalsUL1283, CSA C22.2 No.8 (C-UL), DIM	Rated Voltage[V] AC 1 φ 250 / DC250   Rated Current[A] 6 10 16   Test Voltage (Terminal-Mounting Plate) 2,500 VAC (Cutoff Current = 20mA), 1minute at room temp Isolation Resistance (Terminal-Mounting Plate) 500 VDC 100MΩ min at room temperature and humidity   Leakage current 125/250V 60Hz 0.5mA/1.0mA max    Voltage drop 1.0V max    Safety agency approval temperatures -25 to +85°C (Refer to Derating Curve)   Operating temperature -40 to +85°C (Refer to Derating Curve)   Operating humidity 20 to 95%RH (Non condensing)   Storage temperature/humidity -40 to +85°C/20 to 95%RH (Non condensing)   Vibration 10 to 55Hz, 19.6m/s² (2G), 3min. Period, 1hour each X, Y   Impact 196.1m/s² (20G), 11ms Once each X, Y and Z axis   Safety agency approvals UL1283, CSA C22.2 No.8 (C-UL), DIN EN60939 VDE056	Rated Voltage[V]AC 1 $\phi$ 250 / DC250Rated Current[A]6101620Test Voltage (Terminal-Mounting Plate)2,500 VAC (Cutoff Current = 20mA), 1minute at room temperature and humiditIsolation Resistance (Terminal-Mounting Plate)500 VDC 100M $\Omega$ min at room temperature and humidityLeakage current 125/250V 60Hz0.5mA/1.0mA maxVoltage drop1.0V maxSafety agency approval temperatures-25 to +85°C (Refer to Derating Curve)Operating temperature-40 to +85°C (Refer to Derating Curve)Operating humidity20 to 95%RH (Non condensing)Storage temperature/humidity-40 to +85°C/20 to 95%RH (Non condensing)Vibration10 to 55Hz, 19.6m/s² (2G), 3min. Period, 1hour each X, Y and Z axisImpact196.1m/s² (20G), 11ms Once each X, Y and Z axisSafety agency approvalsUL1283, CSA C22.2 No.8 (C-UL), DIN EN60939 VDE0565 Teil3-1, ENEC (A	

#### **Circuit Diagram**



#### **Derating Curve**



### **COŞEL** | NAH,NAC,NAM,NAP series

#### **External view**

As this product is adopted push-down type terminal block, this appearance is as follows.

 $\ensuremath{\widehat{2}}\xspace$  The screws for connecting the terminals are held in the up right position.

