

Open circuit loads and short circuit loads

Description and purpose

NK series short circuit loads are designed to form complete reflection of signal in coaxial path in wide frequency range with even mode incident and reflected waves. Screened NH series open circuit loads are designed to form complete reflection of signal in coaxial path in wide frequency range with odd mode incident and reflected waves. The loads may be used for calibration of scalar and vector network analyzers in 7.0/3.04 mm path — in 0 to 18 GHz frequency range, in 3.5/1.52 mm path — in 0 to 20 GHz frequency range, in 2.4/1.042 mm path — in 0 to 50 GHz frequency range. Combined KZ and HH loads developed for convenience in a single body design are available. Load bodies and nuts are made of stainless steel. Central conductors are made of tempered beryllium bronze and plated with wear-proof gold. Specific shape insulator of open-circuit load has low dielectric permeability and higher durability, which allows reducing parasitic edge capacitance. Used materials and load design provide high stability of parameters at operating temperatures between $-60\text{ }^{\circ}\text{C}$ and $+110\text{ }^{\circ}\text{C}$. Tabulated description of NK and NH series load parameters is available for ordering on your request.



Specification

NH3 series open circuit (HH) loads

Model	Connector	Frequency range, GHz	Phase error	Min. reflection coefficient	Fig.
NH3-18-01	Type III (male)	0 ... 18	$\pm 2.0^{\circ}$	0.98	1
NH3-18-11	Type N (male)				2
NH3-18-01R	Type III (female)				3
NH3-18-11R	Type N (female)				4
NH3-20-03	Type IX, ver. 3 (male)	0 ... 20	$\pm 1.5^{\circ}$		5
NH3-20-13	3.5 mm (male)				6
NH3-20-03R	Type IX, ver. 3 (female)				
NH3-20-13R	3.5 mm (female)				
NH3-50-05	2.4 mm (male)	0 ... 50	$\pm 5.0^{\circ}$		
NH3-50-05R	2.4 mm (female)				

NK3 series short circuit (KZ) loads

Model	Connector	Frequency range, GHz	Phase error	Min. reflection coefficient	Fig.
NK3-18-01	Type III (male)	0 ... 18	$\pm 2.0^\circ$	0.98	1
NK3-18-11	Type N (male)				2
NK3-18-01R	Type III (female)				3
NK3-18-11R	Type N (female)	4			
NK3-20-03	Type IX, ver. 3 (male)	0 ... 20	$\pm 1.5^\circ$		5
NK3-20-13	3.5 mm (male)				6
NK3-20-03R	Type IX, ver. 3 (female)				
NK3-20-13R	3.5 mm (female)				
NK3-50-05	2.4 mm (male)	0 ... 50	$\pm 5.0^\circ$		
NK3-50-05R	2.4 mm (female)				

NKH series combined KZ and HH loads

Model	Connector	Frequency range, GHz	Phase difference between KZ and HH	Min. reflection coefficient	Fig.
NKH1-18-01	Type III (male)	0 ... 18	$180 \pm 10.0^\circ$	0.98	7
NKH1-18-11	Type N (male)				8
NKH1-18-01R	Type III (female)				9
NKH1-18-11R	Type N (female)	10			
NKH2-20-03	Type IX, ver. 3 (male)	0 ... 20	$180 \pm 8.0^\circ$		
NKH2-20-13	3.5 mm (male)				
NKH2-20-03R	Type IX, ver. 3 (female)				
NKH2-20-13R	3.5 mm (female)				
NKH3-50-05	2.4 mm (male)	0 ... 50	$180 \pm 5.0^\circ$		11

Dimensions

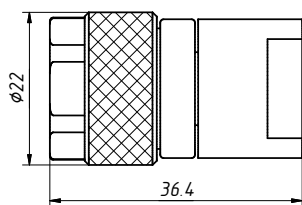


Fig. 1

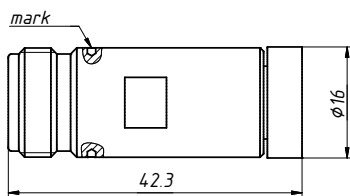


Fig. 2

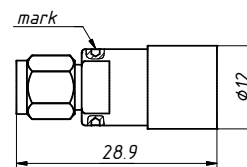


Fig. 3

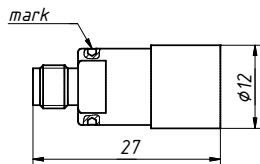


Fig. 4

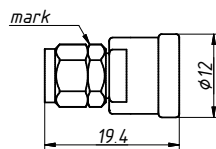


Fig. 5

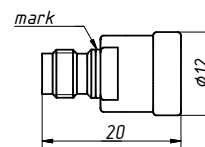


Fig. 6

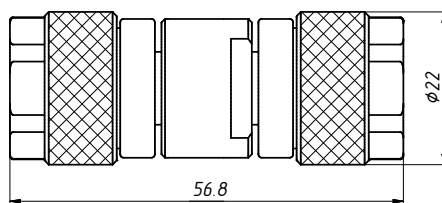


Fig. 7

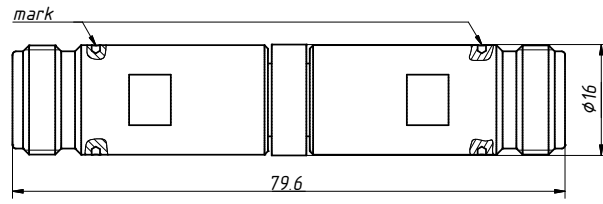


Fig. 8

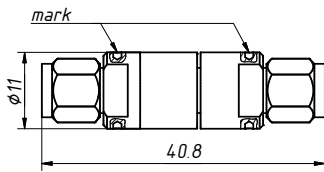


Fig. 9

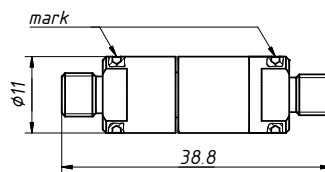


Fig. 10

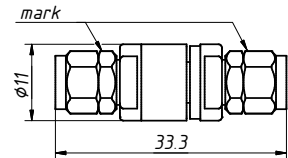


Fig. 11

Ordering example

- NK3-18-11R Short circuit load, type N (female).