

Matched loads

Description and purpose

NS3 precision loads are designed for use in laboratory measurements as wave impedance standards. The loads may be applied as reflection coefficient standards. NS3 loads designed for 7.0/3.04 mm path are used at operating frequencies between 0 and 18 GHz. NS3 loads designed for 3.5/1.52 mm path are used at operating frequencies between 0 and 20 GHz. NS3 loads designed for 2.4/1.042 mm path are used at operating frequencies between 0 and 50 GHz. Load bodies and nuts are made of stainless steel. Central conductors are made of tempered beryllium bronze and plated with wear-proof gold. Low dielectric permeability and high strength insulation is applied. Used materials and load design provide high stability of parameters for a great number of connect/disconnect cycles at operating temperatures between -60 °C and +85 °C. Minimum screen attenuation is 100 dB. Tabulated description of load parameters and loads matched with maximum operating temperature up to +110 °C are available for ordering on your request. NS3 loads are manufactured in accordance with ZHNKU.468548.020 TU specification.



Specifications

NS3-18 matched loads

Model	Connector	Frequency range, GHz	VSWR, max. (typ.)	Pin*, W, max.	Fig.
NS3-18-01	Type III (male)	0 ... 18	1.08 (1.06)	2 **	1
NS3-18-11	Type N (male)				
NS3-18-01R	Type III (female)				2
NS3-18-11R	Type N (female)				

NS3-20 matched loads

Model	Connector	Frequency range, GHz	VSWR, max. (typ.)	P _{in} *, W, max.	Fig.
NS3-20-03	Type IX, ver. 3 (male)	0 ... 20 ***	1.08 (1.06)	1**	3
NS3-20-13	3.5 mm (male)				
NS3-20-03R	Type IX, ver. 3 (female)				4
NS3-20-13R	3.5 mm (female)				

NS3-50 matched loads

Model	Connector	Frequency range, GHz	VSWR, max. (typ.)	P _{in} *, W, max.	Fig.
NS3-50-05	2.4 mm (male)	0 ... 50	1.15 (1.12)	0.5 **	5
NS3-50-05R	2.4 mm (female)				6

* Maximum long-term dissipated power for direct current.

** The value is given for normal climatic conditions. For increased ambient temperature, reduction of input power is recommended.

*** Custom loads with operating frequencies up to 32 GHz are available for ordering.

Dimensions

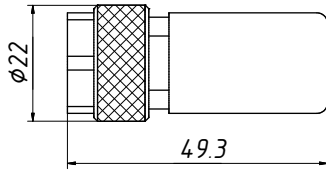


Fig. 1

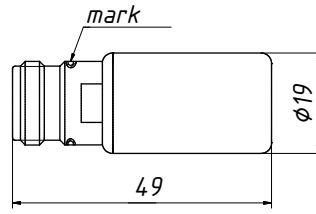


Fig. 2

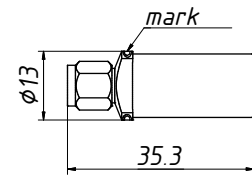


Fig. 3

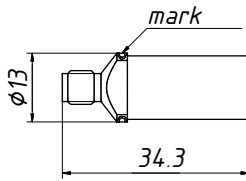


Fig. 4

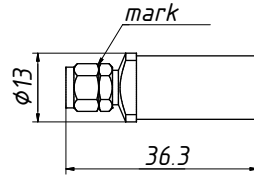


Fig. 5

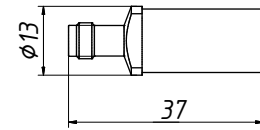


Fig. 6

Ordering example

- NS3-18-01R Matched load, type III (female).