

ZN3754 Coupling/Decoupling Network

DATA SHEET | CDNE-M3 | 30–300 MHz

1. Product Overview

The ZN3754 couples asymmetrical (common-mode) disturbance voltages from the equipment under test (EUT), via its cable, to a measuring receiver. It decouples conducted emissions and influences from the test environment. The CDNE-M3 provides a 100 Ω termination for symmetrical (differential-mode) disturbances at the EUT power port.

Design reference: GB/T 6113.102-2018 / CISPR 16-1-2:2014, as stated in the product manual.

2. Technical Specifications

Parameter	Specification
Frequency range	30–300 MHz
Maximum voltage	400 V DC; 277 V AC, 50/60 Hz
Maximum current	16 A
Common-mode impedance	150 Ω (+10 Ω / -20 Ω)
Phase angle	0° ±25°
Differential-mode impedance	100 Ω ±20 Ω
Voltage division factor	20 dB ±1.5 dB
Isolation	>30 dB (EUT–AE)
RF output	50 Ω BNC
Operating temperature	0–40 °C
Dimensions (L × W × H)	160 × 160 × 100 mm
Weight	1.3 kg

Impedance and Phase Characteristics

The following curves retain the measured traces and axis ranges from the product manual. Dashed lines indicate the original limits.

Figure 1. Common-mode impedance

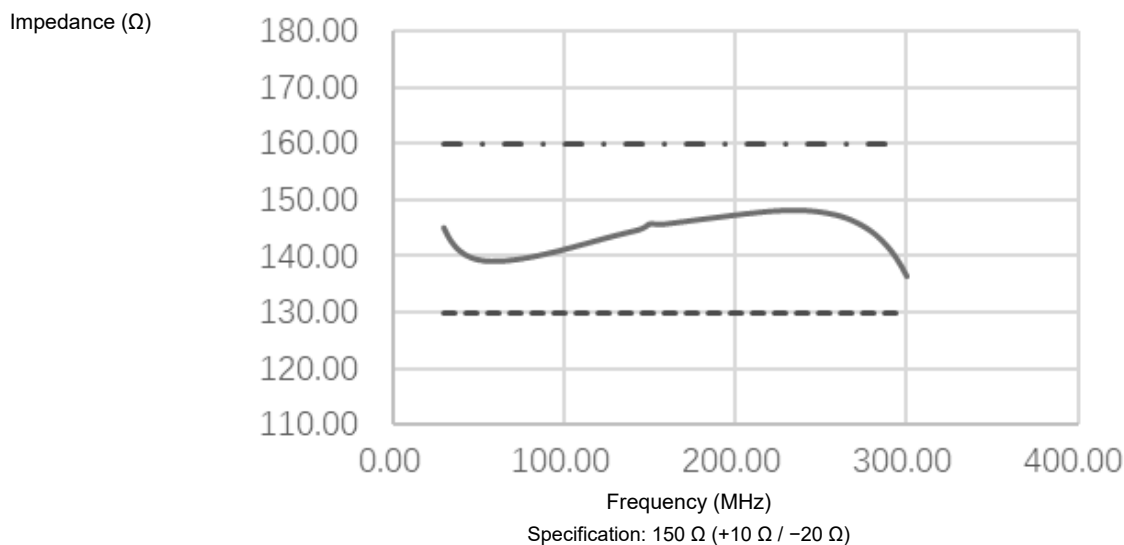


Figure 2. Phase angle

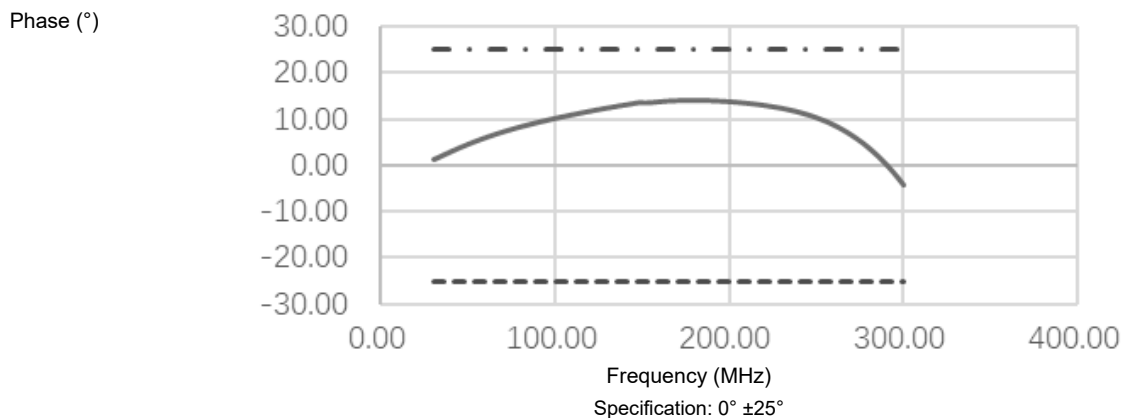
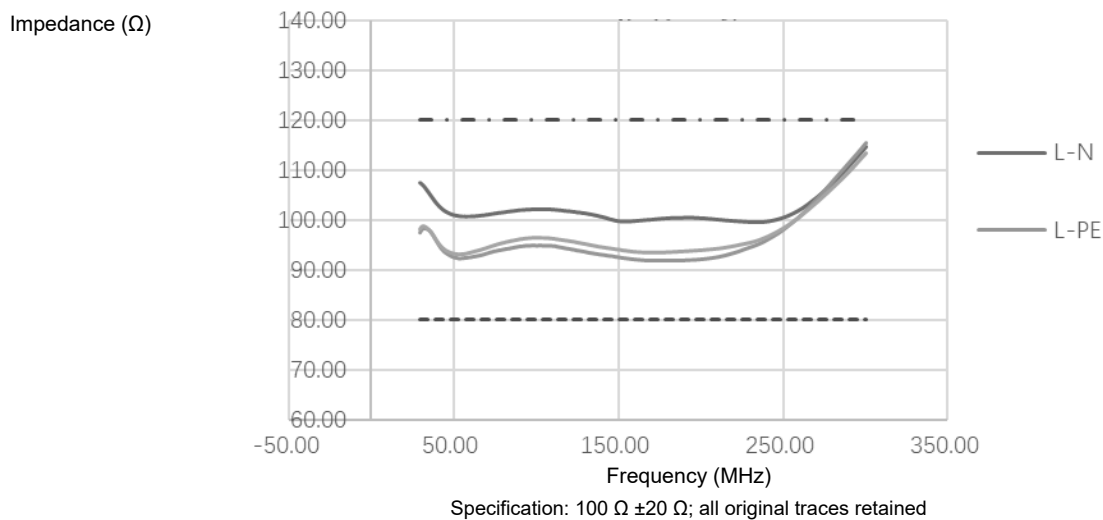


Figure 3. Differential-mode impedance



Transmission and Application Information

Figure 4. Voltage division factor

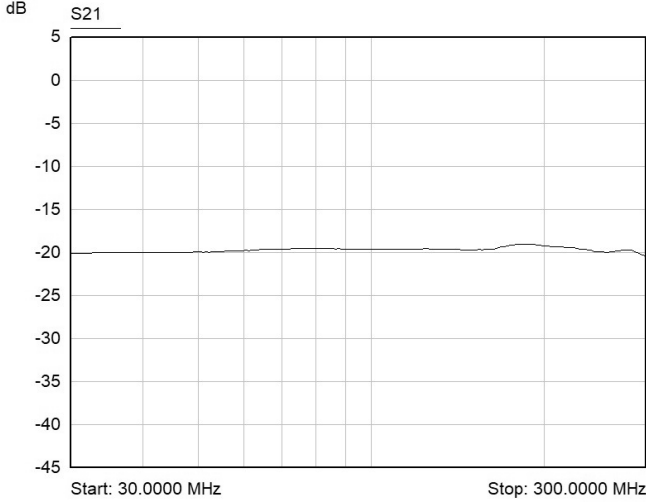
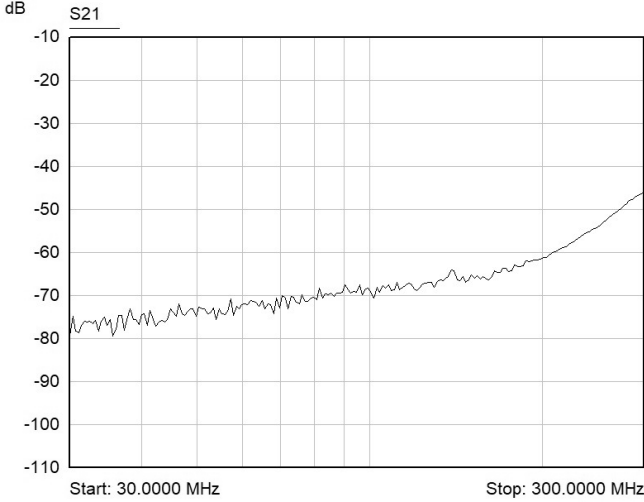


Figure 5. Isolation (EUT-AE)



Figures 4 and 5 show the original S21 transmission plots: frequency (30–300 MHz) on the horizontal axis and dB on the vertical axis. Voltage division factor and isolation are expressed as positive attenuation: 20 dB ±1.5 dB and >30 dB, respectively.

3. Interfaces and Connection Notes

The front panel connects to the EUT; the rear panel connects to the auxiliary equipment/supply side (AE). PE is protective earth (yellow/green), L is line (red), and N is neutral (black). The RF measurement output is a 50 Ω BNC connector. A grounding plate and grounding terminal are provided.

With the supply disconnected, securely bond the grounding plate to the test system reference ground plane. Connect the EUT side and measuring receiver, then connect the input supply last. Operators must be safety trained. Use in a ventilated, dry environment. Refer to the complete manual for connection details and application restrictions.

4. Supplied Configuration

Item	Quantity
CDNE-M3 coupling/decoupling network	1
N-BNC test cable, 1 m	1
φ4 mm banana plugs (2 black, 2 red, 2 yellow)	6
User manual / certificate of conformity	1 each

5. Warranty and Contact

Warranty: 18 months from shipment, subject to the transport and use conditions stated in the manual.
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