

0.5 Ohm Measuring Resistor

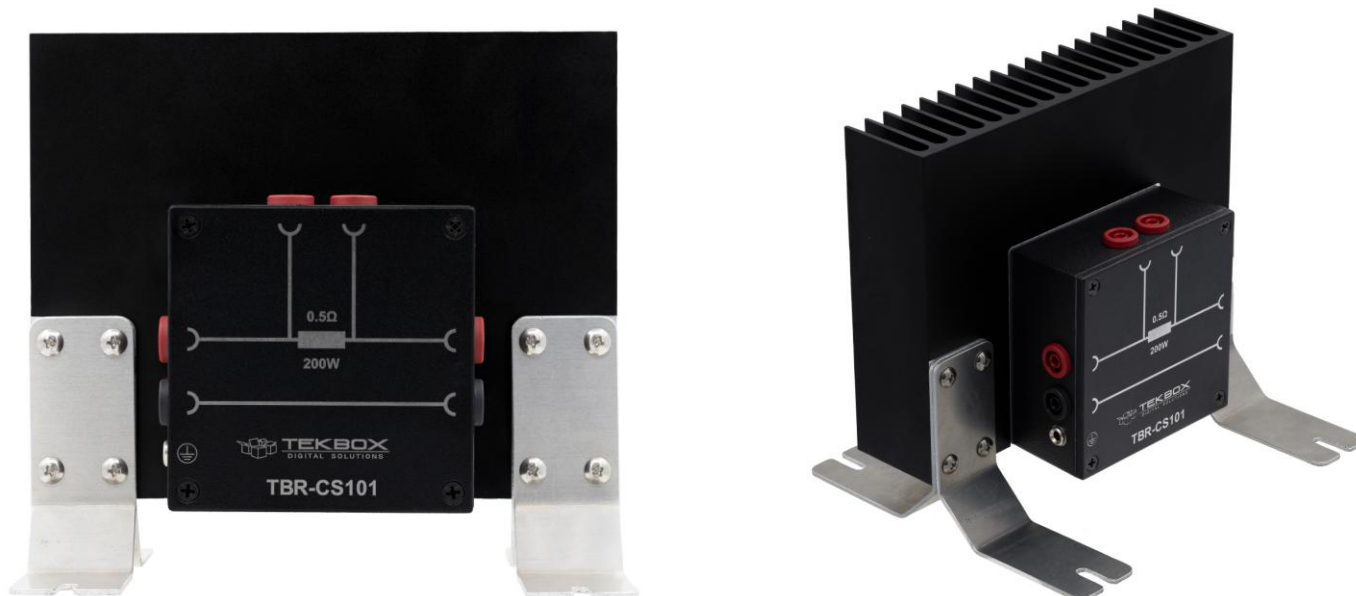


1 Introduction

MIL-STD-461 CS101, conducted susceptibility, power leads, requires a 0.5 Ohm measuring resistor in the test setup. Furthermore, it is required for MIL STD-461 CS109, ISO 11452-10, ISO 7637-2, ISO 16750-2 and various automotive manufacturer standards.

It is also used to measure currents and present a resistive minimum load in setups to generate magnetic fields, where it is connected in between the amplifier output and a Helmholtz coil.

The TBR-CS101 is rated 100W continuous, 200W short time and specified from DC to 300kHz.



Picture 1: TBR-CS101 measuring resistor

2 Specification

Characterized frequency range:	10 Hz to 300 kHz
Maximum power rating:	100 W / 14 A, continuous without forced convection 150 W / 17 A, 7 minutes without forced convection 200 W / 20 A, 4 minutes without forced convection
Connectors:	4 mm safety sockets
Earth:	slotted aluminium brackets; 4 mm socket
Weight:	1.4 kg
Outer Dimensions:	W 185 mm x H 170 mm x L 160 mm

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3 Safety

	Warning: High Temperature In use, it is normal for the temperature of the TBR-CS101 heatsink to rise to about 90°C (194°F). Do not touch and do not block the the heatsink
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4 Frequency response

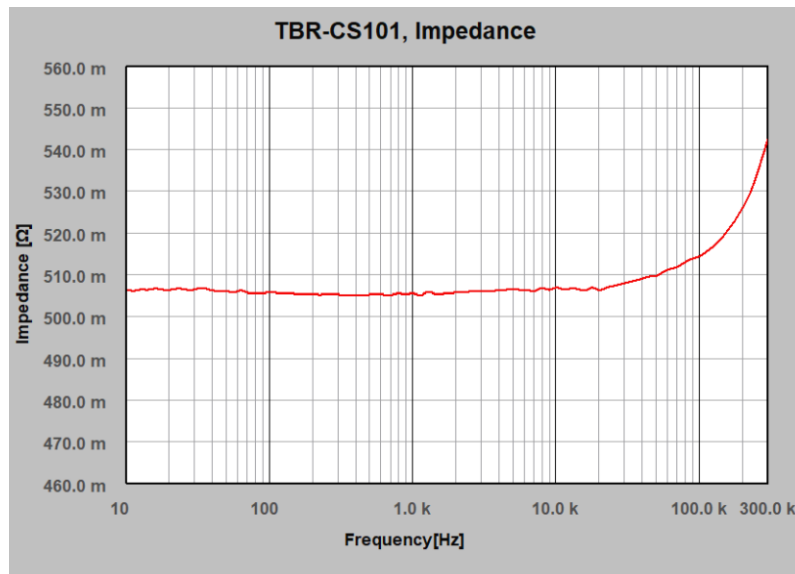


Figure1: typical frequency response, 10 Hz – 300 kHz;

5 Resistance table

Frequency	Resistance value [Ω]	Frequency	Resistance value [Ω]
10 Hz	0.506	25 kHz	0.507
25 Hz	0.505	50 kHz	0.509
50 Hz	0.506	75 kHz	0.511
75 Hz	0.505	100 kHz	0.514
100 Hz	0.506	125 kHz	0.516
250 Hz	0.506	150 kHz	0.519
500 Hz	0.506	175 kHz	0.523
750 Hz	0.506	200 kHz	0.527
1 kHz	0.505	225 kHz	0.531
2.5 kHz	0.506	250 kHz	0.533
5 kHz	0.506	275 kHz	0.541
7.5 kHz	0.506	300 kHz	0.544
10 kHz	0.506		

Table1: Impedance, 10 Hz to 300 kHz, typical data

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6 Ordering Information

Part Number	Description
TBR-CS101	0.5 Ohm measuring resistor, individual impedance plot and table

7 History

Version	Date	Author	Changes
V 1.0	28.8.2026	Mayerhofer	Creation

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