



TAOGLAS®



Datasheet

Resistor Detection Circuit SMA

Part No:
RDC.SMA.001

Description

External 10k Resistor Detection Circuit

Features:

- Easy integration
- Small Form factor
- 10Kohm Resistor
- Dimensions: 37.4*17.3*12.7mm
- Connectors: SMA(M) & SMA(F)
- RoHS & Reach Compliant

1.	Introduction	2
2.	Specifications	3
3.	Product Characteristics	4
4.	Mechanical Drawing	6
5.	Packaging	7
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	Changelog	8

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1. Introduction



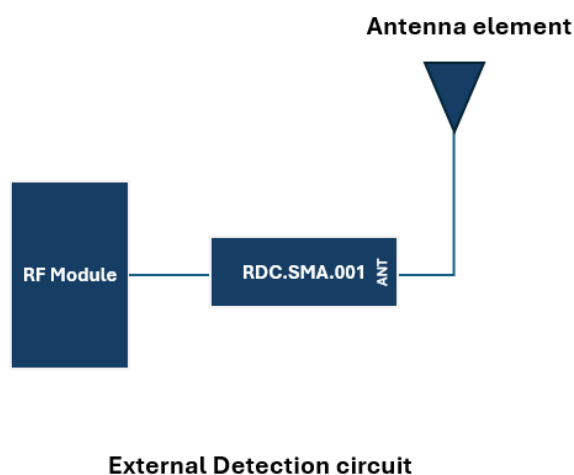
The **RDC.SMA.001** is an External Diagnostic 10kOhm Circuit to aid with detection in applications where the user may want to monitor the connection between antenna and radio module to ensure there is no downtime in connectivity.

The RDC.SMA.001 has been designed to be used as a plug and play option for a detection circuit where often a complicated internal circuit may need to be designed. The RDC is perfect for prototyping and in places where the detection circuit has been considered after the fact.

Typical Applications Include:

- Telematics
- E-Call Systems
- Critical Communications
- Smart Metering

Being able to detect and diagnose the antenna is a valuable feature for many system integrators, especially for automotive applications. The ability to detect if the antenna is connected to the application is useful for diagnosing installation or production problems as well as any tampering with the system.



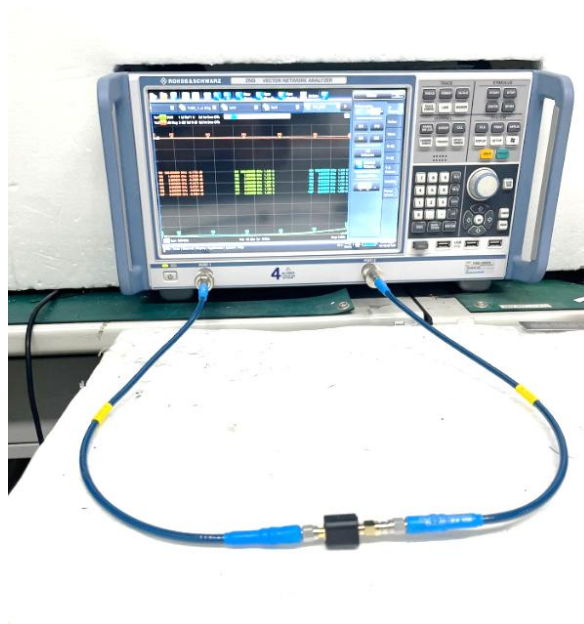
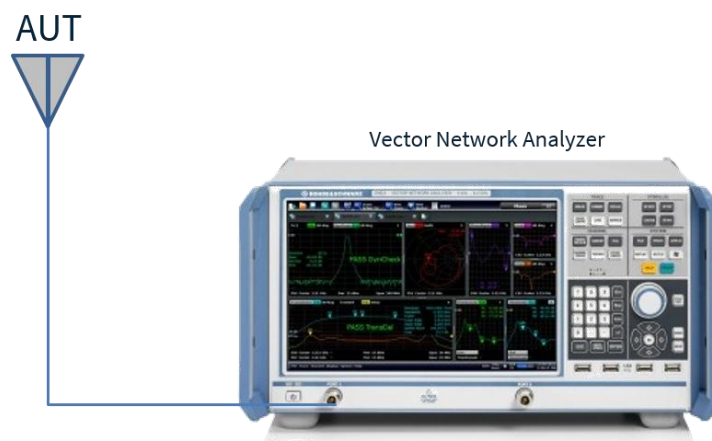
2. Specifications

RDC.SMA.001						
Frequency (MHz)	500-999 MHz	1000-1999 MHz	2000-2999 MHz	3000-3999 MHz	4000-4999 MHz	5000-5999 MHz
VSWR						
VSWR	< 2.0					
Insertion loss	-0.20	-0.26	-0.43	-0.56	-0.71	-0.83
Detection Resistance	10K ohm					
Max. input power	10w					

Mechanical	
Dimensions	37.4 x 17.3 x 12.7mm
Weight	8.6g
Material	PC/ABS
Connector	SMA
Environmental	
Temperature Range	-40°C to 85°C
Humidity	Non-condensing 65°C 95% RH

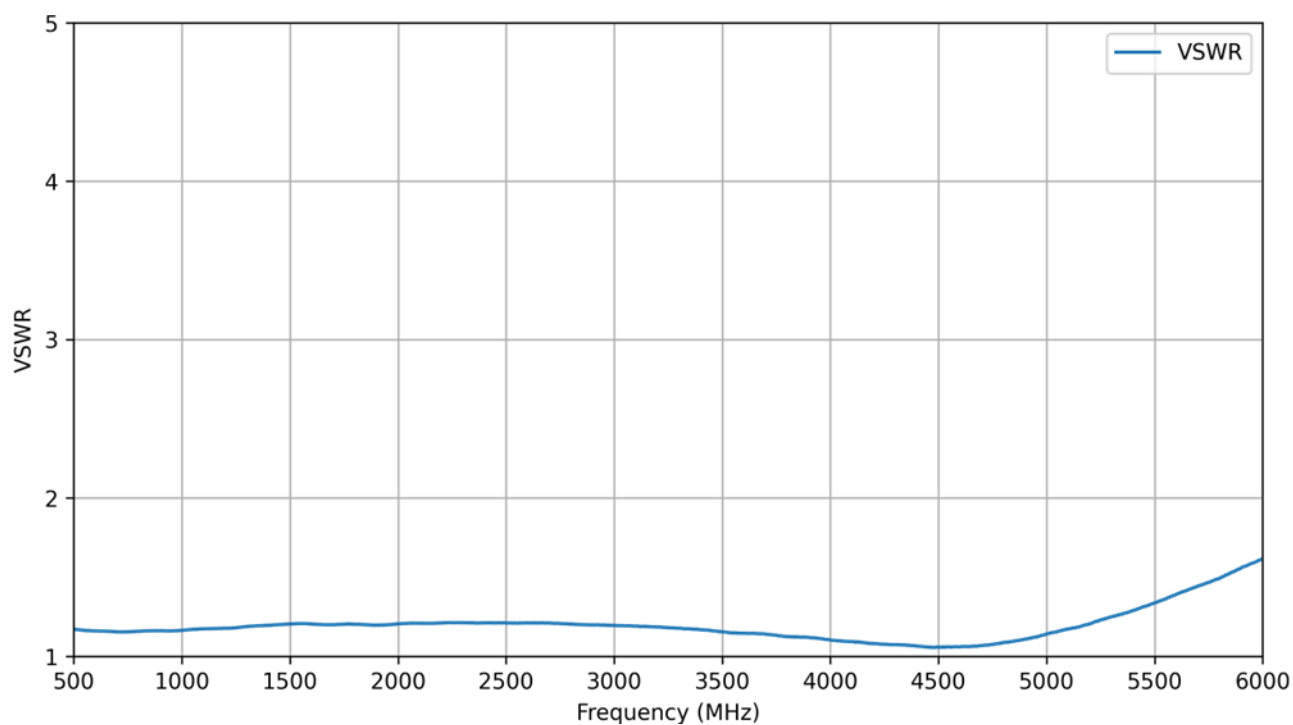
3. Product Characteristics

3.1 Test Setup

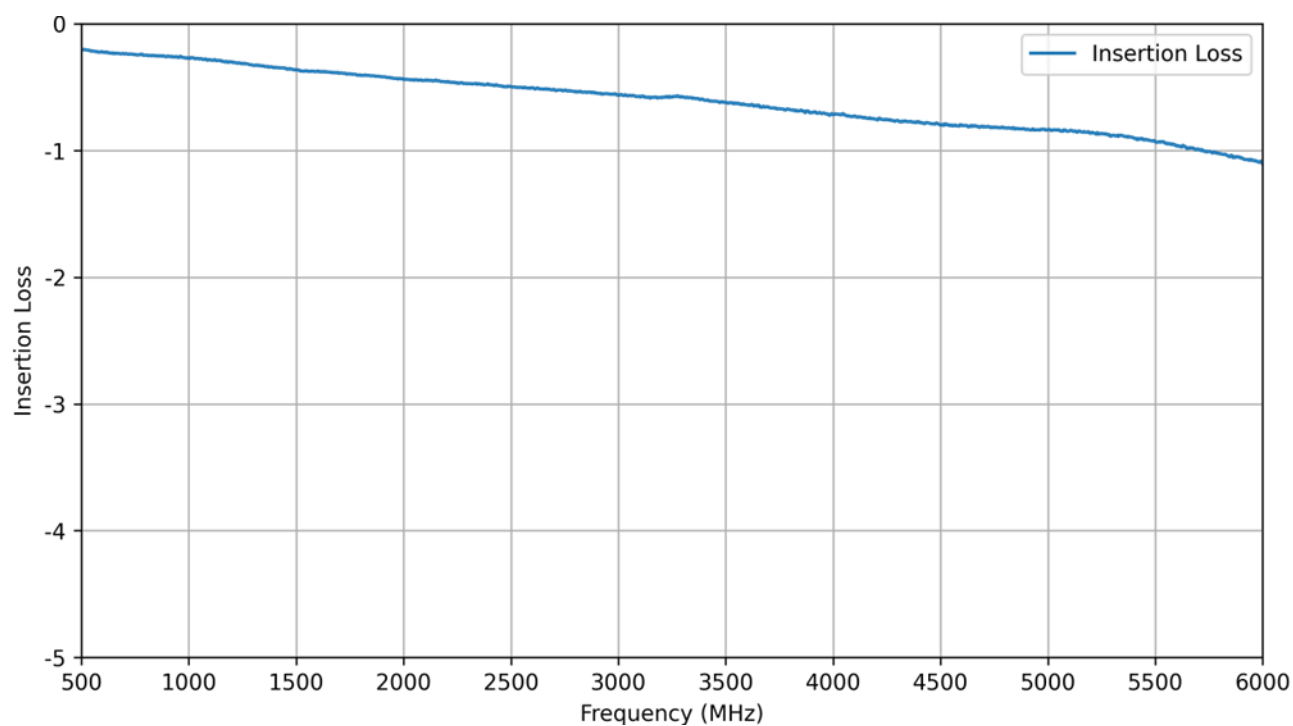


VNA Test Setup

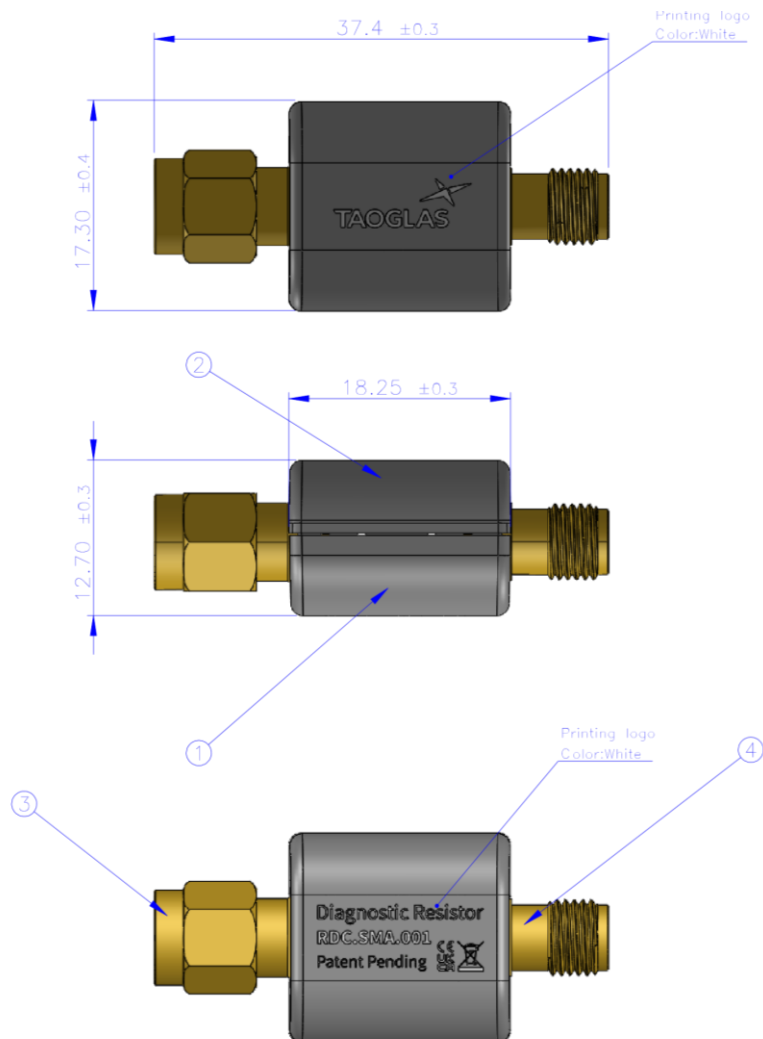
3.2 VSWR



3.3 Insertion Loss



4. Mechanical Drawing



	Name	Material	Finish	數量
1	Bottom Housing	PC/ABS	Black	1
2	Top Housing	PC/ABS	Black	1
3	SMA(M)	Brass	Au Plated	1
4	SMA(F)	Brass	Au Plated	1

5. Packaging

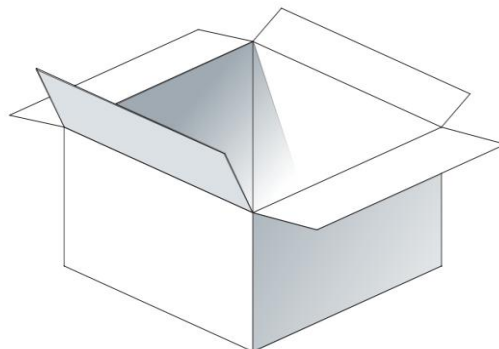
RDC.SMA.001
1 PCS / Bubble Bag



18 PCS / PE Bag



180 PCS / Carton
Carton(mm): 230 x 175 x 160mm
Carton Label



Changelog for the datasheet

SPE-23-8-266 – RDC.SMA.001

Revision: C (Current Version)	
Date:	2025-11-14
Notes:	Updated data
Author:	Gary West

Previous Revisions

Revision: B	
Date:	2024-08-28
Notes:	Updated detection circuit.
Author:	Gary West

Revision: A (Original First Release)	
Date:	2023-09-19
Notes:	Initial Release
Author:	Gary West



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