



TAOGLAS®



Datasheet

Resistor Detection Circuit – FAKRA Connector

Part No:
RDC.FKD.001

Description

External 10k Resistor Detection Circuit

Features:

- Easy integration
- Small form factor
- 10Kohm Resistor
- Dimensions: 55*20.6*12.6mm
- Connector: FAKRA Code D connector
- RoHS & Reach Compliant

| | | |
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1. Introduction



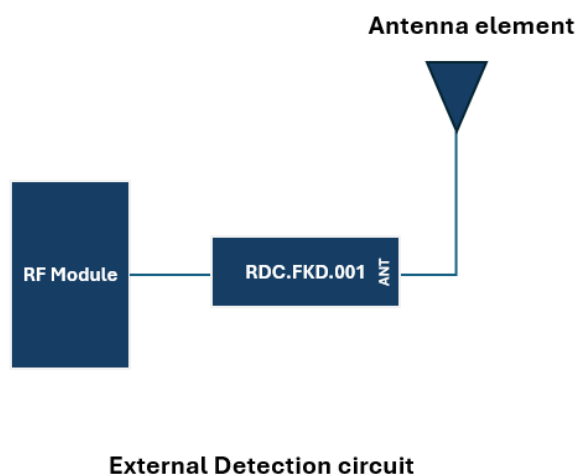
The RDC.FKD.001 is an External Diagnostic 10kOhm Circuit to aid with detection in applications where the user may want to monitor the connection between antenna and module to ensure there is not downtime in connectivity.

The RDC.FKD.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.



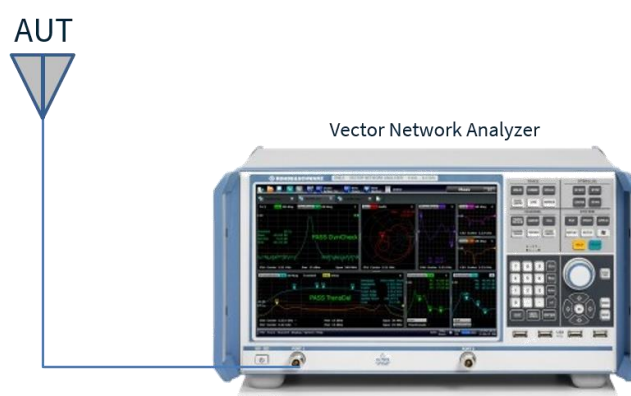
2. Specifications

| RDC.FKD.001 | | | | | | |
|----------------------|-------------|---------------|---------------|---------------|---------------|---------------|
| Frequency (MHz) | 500-999 MHz | 1000-1999 MHz | 2000-2999 MHz | 3000-3999 MHz | 4000-4999 MHz | 5000-5999 MHz |
| VSWR | | | | | | |
| VSWR | < 2 | | | | | |
| Insertion loss | -0.22 | -0.36 | -0.52 | -1.02 | -1.18 | -1.19 |
| Detection Resistance | 10K ohm | | | | | |
| Max. input power | 10w | | | | | |

| Mechanical | |
|--------------------|----------------------------|
| Dimensions | 55 x 20.6 x 12.6mm |
| Weight | 8.5g |
| Enclosure Material | PC/ABS |
| Connector | FAKRA Code D Connectors |
| Environmental | |
| Temperature Range | -40°C to 85°C |
| Humidity | Non-condensing 65°C 95% RH |

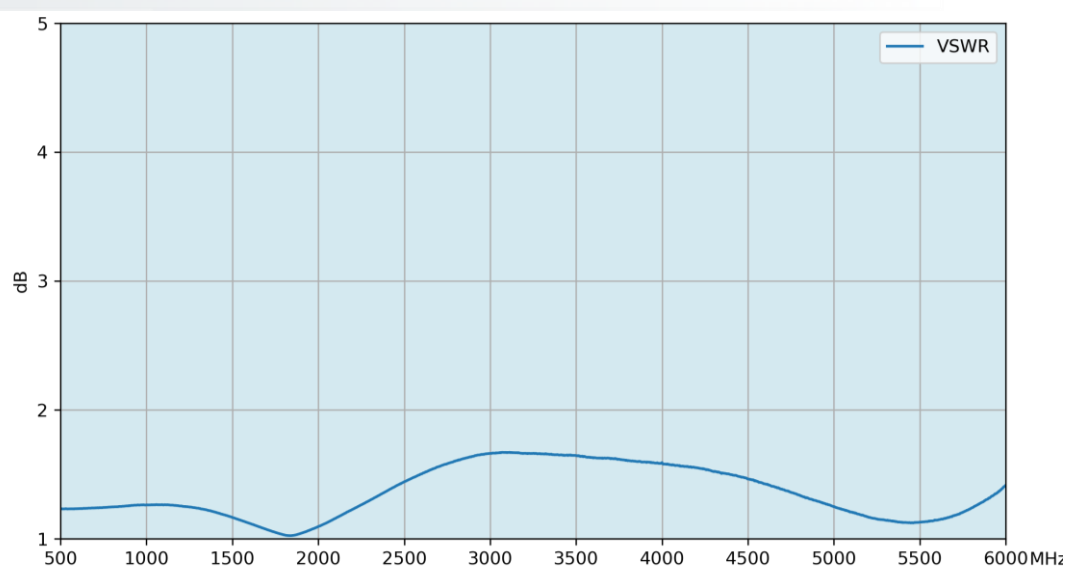
3. Product Characteristics

3.1 Test Setup

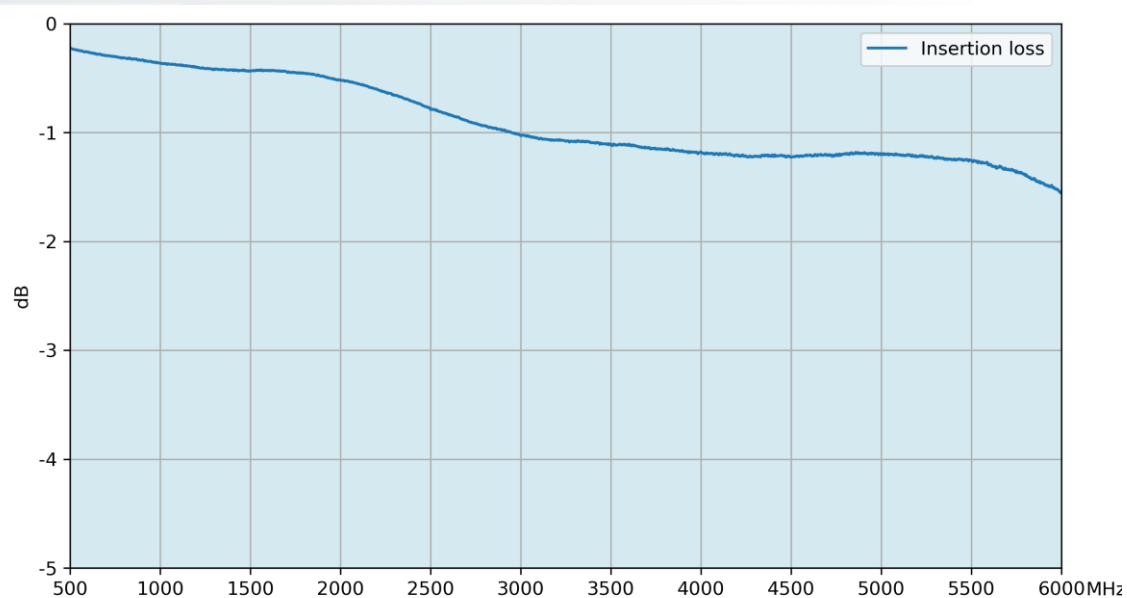


VNA Test Set-up

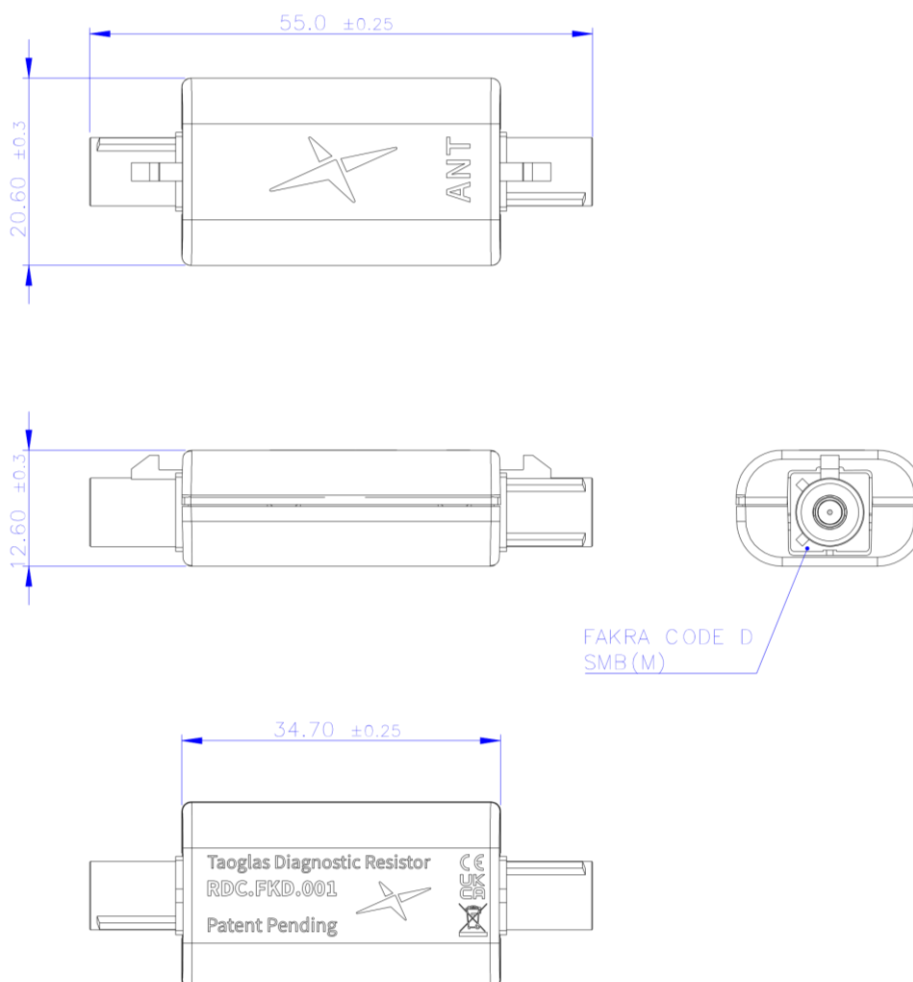
3.2 VSWR



3.3 Isolation



4. Mechanical Drawing



| | Name | Material | Finish | Qty |
|---|----------------|----------|---------------|-----|
| 1 | Bottom Housing | PC/ABS | Black | 1 |
| 2 | TOP Housing | PC/ABS | Black | 1 |
| 3 | Fakra Code D | PA66 | Claret Violet | 1 |

5. Packaging

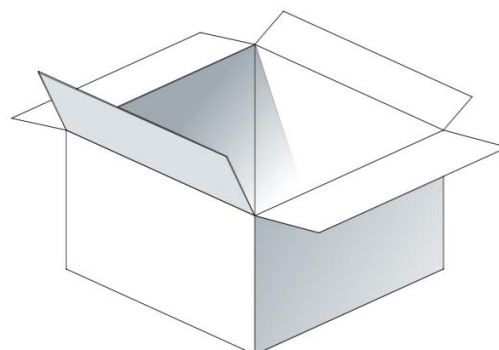
RDC.FKD.001
1 pcs / Bubble bag



18 pcs / PE Bag



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



Changelog for the datasheet

SPE-23-8-267 – RDC.FKD.001

Revision: B (Current Version)

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

Previous Revisions

Revision: A (Original First Release)

| | |
|---------|-----------------|
| Date: | 2023-09-19 |
| Notes: | Initial Release |
| Author: | Cesar Sousa |



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