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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

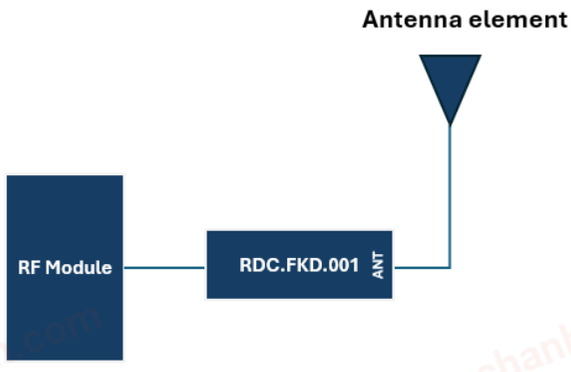


The RDC.FKD.001 is an External Diagnostic 10kOhm Circuit to aid with detection in applications where the user may want to monitor the connection between antenna and module to ensure there is not downtime in connectivity.

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.



External Detection circuit

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2. Specifications

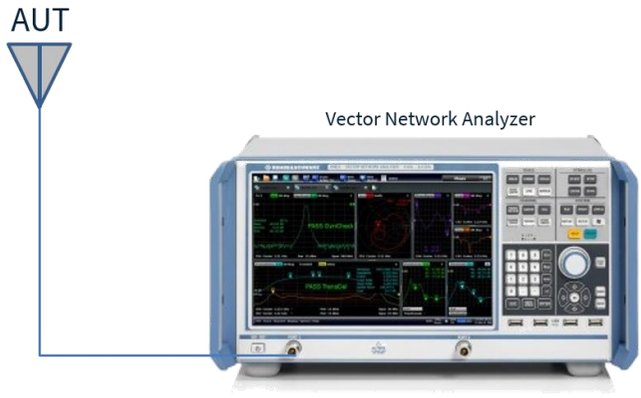
RDC.FKD.001						
Frequency (MHz)	**500-999 MHz**	**1000-1999 MHz**	**2000-2999 MHz**	**3000-3999 MHz**	**4000-4999 MHz**	**5000-5999 MHz**
VSWR						
VSWR	< 2					
Insertion loss	-0.22	-0.36	-0.52	-1.02	-1.18	-1.19
Detection Resistance	10K ohm					
Max. input power	10w					

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

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3. Product Characteristics

3.1 Test Setup

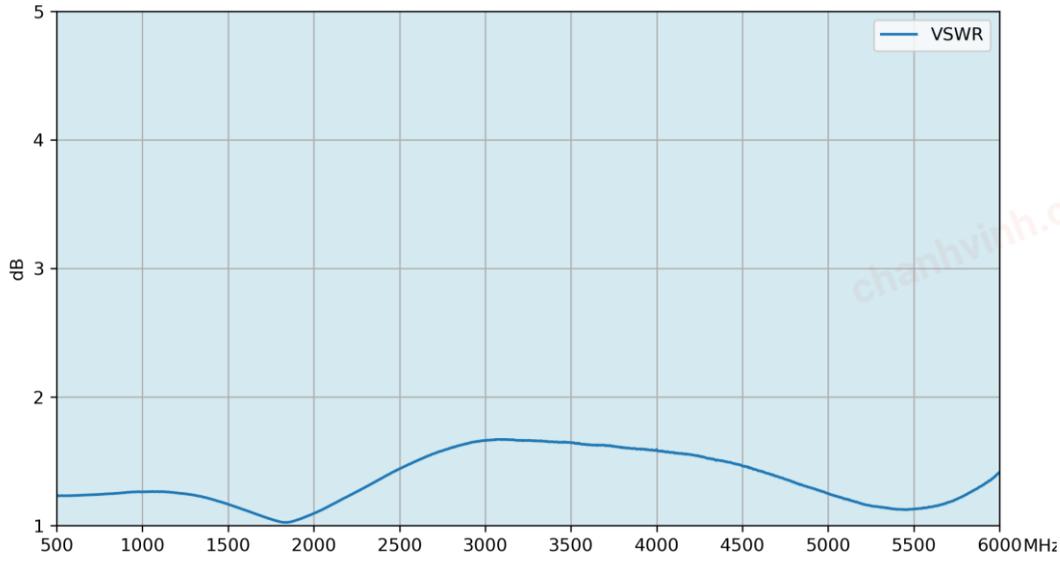




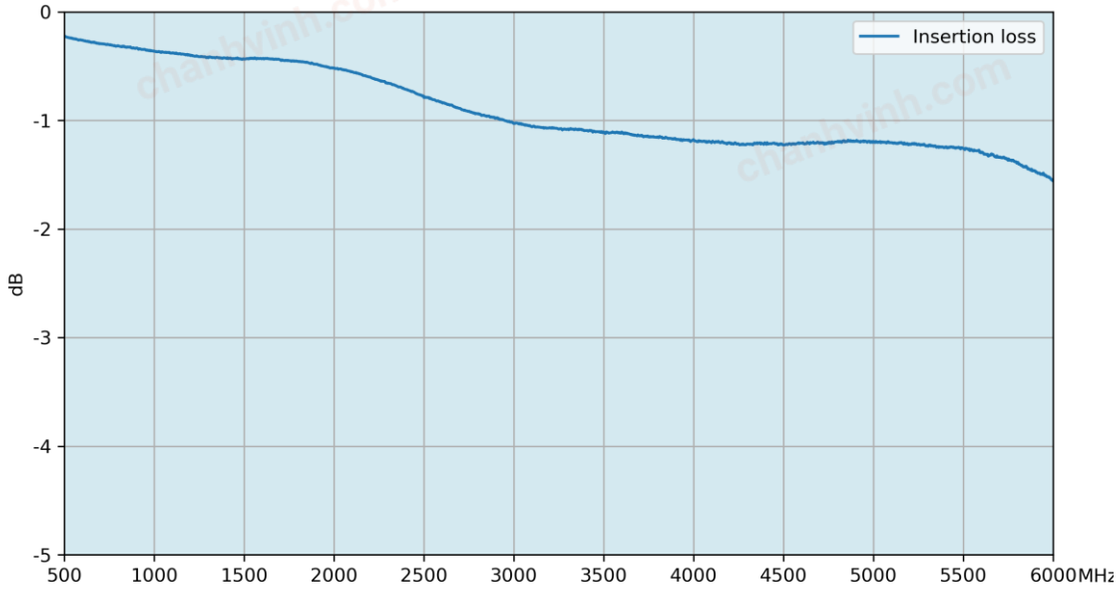
VNA Test Set-up

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3.2 VSWR

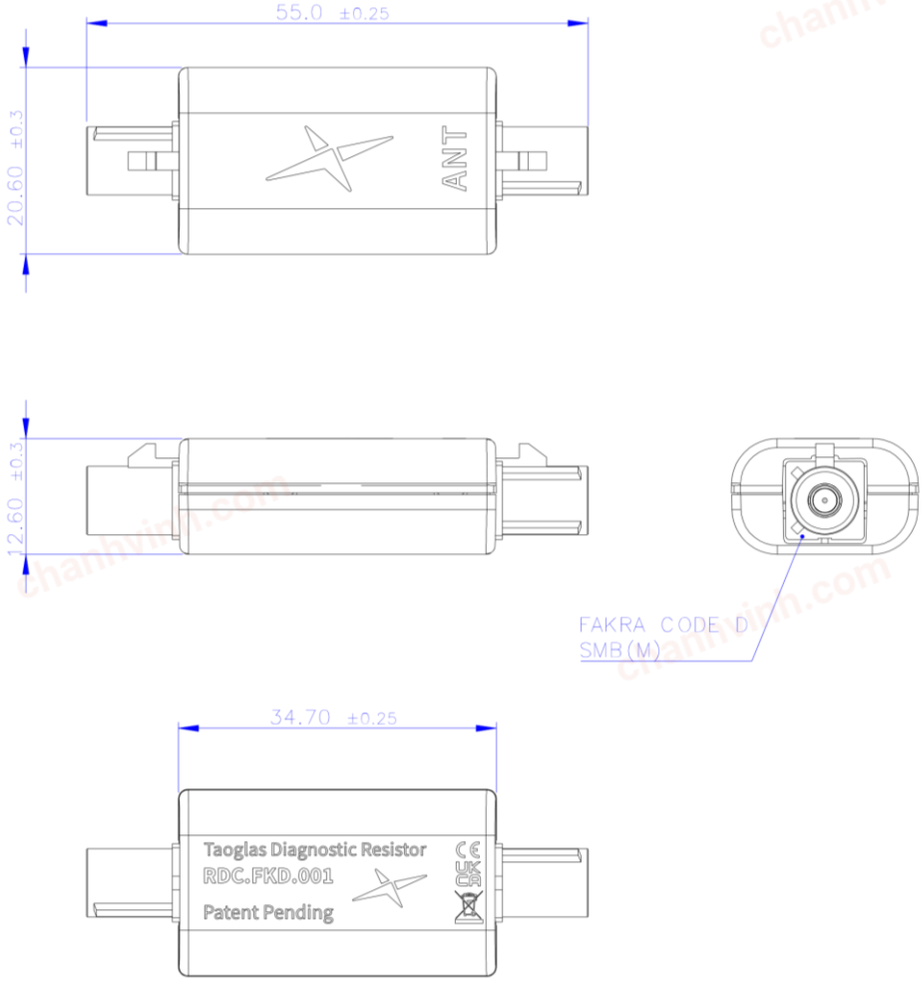


3.3 Isolation



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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

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5. Packaging

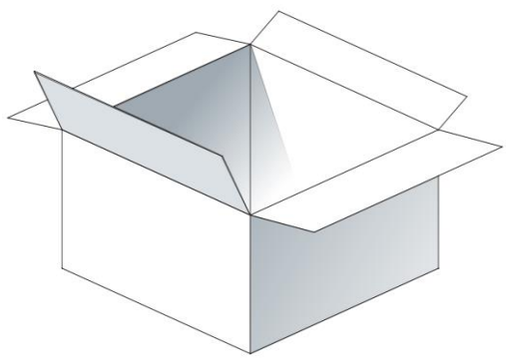
RDC.FKD.001
1 pcs / Bubble bag



18 pcs / PE Bag



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



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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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