TRDB-54DA

SIM Emulation TR Module

for TR-54D

User's Guide



Description

TRDB-54DA is a development adapter enabling to use the TR-54DA module with SIM connector.



Applications

• For solderless development and debugging of SMT TR-54D(A) applications with an advantage of removable TR module in SIM format.

Key features

- To be plugged in target application via SIM connector
- All individual pins accessible via board-to-board connector
- 2 LEDs
- Power supply 3.1 V to 5.3 V via SIM connector
- Stabilized 3 V, 100 mA supply voltage for target application
- Configurable pins compatible with TR-52DA
- Protection resistors on all TR pins



Simplified schematics



Electrical specifications

(typical values unless otherwise stated, for brief guidance only)

Supply voltage (V_{IN}) Output supply voltage 3.1 V to 5.3 V +3 V \pm 60 mV, 100 mA max. to target application

For other parameters refer to the TR-54D and TR-52D datasheets.

Hardware

Power supply

TRDB-54DA is supplied from target application via SIM connector. Input voltage is converted by the LDO regulator (IC1) to 3 V to supply the TR module. Output voltage 3 V can also be used to supply user application circuitry up to 100 mA via connector XC2.

TR module

• TR-54DA transceiver module (M1) with on-board antenna, soldered.

Connectors

- XC1: PCB edge connector with pads C1 to C8 to be plugged into the SIM socket on target board.
- XC2: Board-to-board 20-pin Hirose connector DF17(3.0)-20DS-0.5V(57) for possible connection of TR non-SIM pins to target board. Mating connector: Hirose DF17(2.0)-20DP-0.5V(57).



Configuration of TR pins

- Every TR I/O pin is protected by series resistor 200 Ω (similarly as for TR-52D).
- TR pins C5 and C8 can be connected TR-52D-like by soldering interconnection pads SJ1, SJ2 and SJ3. Refer to the schematic above and TR-52D datasheet.





Application

Connected via SIM connector

For upload by IQRF programmer (e.g. CK-USB-04) or operation with IQRF kits (e.g. DK-EVAL-04).



Connected via board-to-board connector

For operation with user application.



Connected via the TRDB-54DA-SL kit

For wired connection to user application. See the TRDB-54DA-SL User's guide.





Product information

Pack list	
TRDB-54DA	SIM emulation TR module
TRDB-54DA-SL	Adapter for wired connection of TRDB-54DA to user application
Orderina code	
• TRDB-54DA	SIM emulation TR module
Recommended option	
 DF17(2.0)-20DP-0.5V 	Mating connector (Hirose) for user application
Document history	
• 130307	First release



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