

For General Wireless Devices Test

Mobile Phone, PDA, Bluetooth, and similar devices



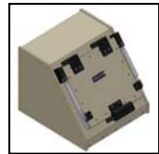
TC-



TC-5915A



TC-5920A



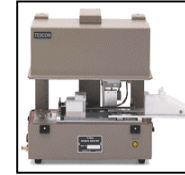
TC-5971A



TC-5951A



TC-5952B



TC-5901B



TC-5970B



TC-5062A



TC-5060B

Small

Medium

Large

UHF TEM Cell

TESCOM Shield Box provides an efficient RF isolated test environment for testing mobiles and small RF devices on the test benches of R&D, service, QA and manufacturing.

Key Features

- High RF shielding
- Manual open/close or pneumatic control for semi-automatic operation
- EMI filters on all data and DC lines
- RS-232C open-close control
- Customization to meet various data and RF connecting requirements
- Easy-to-exchange customized fixtures

What is TEM Cell?

A TEM (Transverse Electro-Magnetic wave transmission) Cell is a broadband E-field generation and radiation measurement apparatus. The concept of a TEM Cell was first developed by U.S. NBS Lab in the 1970's and is now widely used for EMS and EMI tests. When an RF signal is applied to the TEM Cell, a near plane wave develops inside the cell. By placing the device to be tested in the TEM Cell, the electro-magnetic interaction between that DUT (device under test) and the plane wave can be studied. Conversely, if a radiating DUT is placed inside the cell, the radiation can be measured quantitatively at the cell input port. By measuring the radiated power, open site equivalent radiation strength can be calculated.

Application

- Receiver sensitivity testing, Transmitter radiated power testing
- EMI and EMC tests for small UHF devices
- Mobile Phones, PDA, WLAN, Bluetooth

Model	Outer(Inner) Dimension [mm]			* Operation Type (Manual or Pneumatic)	Shielding Effectiveness(DC~2.5G)	I/O Ports		I/O Module	Remote Control	Automatic Fixture	Remark
	W	D	H			RF (Outside-Inside)	Data (Outside-Inside)				
TC-5910C	205(120)	418(225)	152(115)	M	>60 dB	2 N(f)-SMA(f)	DB9(p)-DB9(s), DB25(p)-DB25(s)	×	n/a	n/a	
TC-5915A	310(220)	475(280)	220(170)	M	>70 dB	Variable connector module options available		○	n/a	n/a	
TC-5920A	221(182)	478(380)	262(210)	M	>60 dB	2 SMA(f)-SMA(f)	Variable connector module options available	○	n/a	n/a	
TC-5971A	▲330(280)	370(300)	290(220)	M	>60 dB	4 N(f)-SMA(f)	Variable connector module options available	○	n/a	n/a	
TC-5951A	342(280)	239(150)	262(95)	P	>80 dB	2 N(f)-SMA(f)	DB9(p)-DB9(s), DB25(p)-DB25(s)	×	RS-232C	available	Dual open/close switch
TC-5952B	342(280)	239(150)	262(95)	P	>80 dB	2 N(f)-SMA(f)	DB9(p)-DB9(s), DB25(p)-DB25(s)	×	RS-232C	available	Single open/close switch
TC-5901B	459(408)	300(218)	302(135)	P	>70 dB	2 N(f)-SMA(f)	♣Three(3) DB9(p)-DB9(s), DB25(p)-DB25(s)	×	RS-232C	available	
TC-5970B	★648(540)	682(550)	531(430)	M	>60dB	4 N(f)-SMA(f)	Variable connector module options available	○	n/a	n/a	
TC-5060B	344	380	675	M	>70 dB	N(f)-SMA(f)	DB25(p)-DB25(s)	×	n/a	n/a	
TC-5062A	344	403	675	M	>70 dB	N(f)-SMA(f)	DB25(p)-DB25(s)	×	n/a	n/a	DUT Rotator available

▲ 280(W)×130(D)×220(H) mm, top side

★540(W)×205(D)×430(H) mm, top side

* M : Manual Operation, P: Pneumatic Operation

○ 100pF Pi filter used

♣ One DB9 with 100pF Pi filter for USB1.1 or RJ-45

Short Form Preliminary DataSheet R50506

For Wireless LAN Devices Test

Mini PCI, Card Bus, PCMCIA, PCI, CF Card, USB



TC-5912C TC-5912D

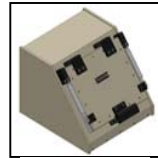
Small



TC-5915A



TC-5920A



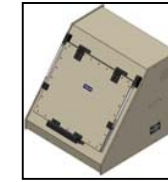
TC-5971A



TC-5953A



TC-5902B



TC-5970B

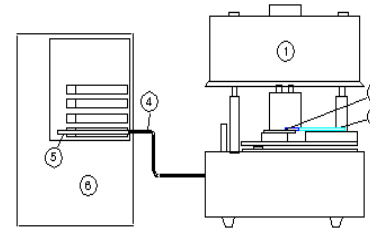
Medium

Large

TESCOM W-LAN Shield Box provides an efficient RF isolated test environment for testing W-LAN and small RF devices on the test benches of R&D, service, QA and manufacturing.

Key Features

- High RF shielding, typically >50dB at 5.8GHz
- IEEE 802.11a,b,g.
- Applicable to CardBus/PCMCIA, mini PCI, PCI, CF Card, PCMCIA, USB1.1, or LAN devices.
- Built-in Bridge for reliable data cable extension
- Built-in Hot Swap Capability for mini PCI device
- EMI filters on all data ports and power line
- Red and Green LED for the Pass/Fail indication



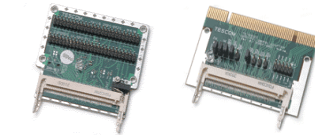
Typical Connection Diagram

- ① W-LAN Shield Box
- ② CardBus or Mini PCI DUT
- ③ CardBus or Mini PCI Adaptor
- ④ Shielded Data Cable 20cm
- ⑤ PCI Adaptor
- ⑥ PC for DUT Control & Communication

Accessories



100 pin to Card Bus



100 pin to Mini PCI



PCI to 100 pin Adaptors

Model	Outer(Inner) Dimension [mm]			* Operation Type (Manual or Pneumatic)	Shield Effectiveness	I/O Ports		Remote Control	Automatic Fixture	Remark
	W	D	H			RF (Outside-Inside)	Data (Outside-Inside)			
TC-5912C	205(120)	418(225)	152(115)	M	>50dB at 2.4GHz >50dB at 5.8GHz	2 N(f)-SMA(f)	⊙100-pin Shielded Flat Cable ★ RJ-45 outside and inside	n/a	n/a	For notebook PC
TC-5912D	205(120)	418(225)	152(115)	M	>55dB at 2.4GHz >50dB at 5.8GHz	2 N(f)-SMA(f)	⊙100-pin Shielded Flat Cable ★ RJ-45 outside and inside	n/a	n/a	For desktop PC
TC-5915A	310(220)	475(280)	220(170)	M	>70 dB at 2.4GHz	Variable connector module options available		○	n/a	n/a
TC-5920A	221(182)	478(380)	262(210)	M	>60 dB at 2.4GHz	2 SMA(f)-SMA(f)	Variable connector module options available	○	n/a	n/a
TC-5971A	▲330(280)	370(300)	290(220)	M	>60 dB at 2.4GHz	4 N(f)-SMA(f)	Variable connector module options available	○	n/a	n/a
TC-5953A	342(280)	239(150)	262(95)	P	>55dB at 2.4GHz >50dB at 5.8GHz	2 N(f)-SMA(f)	⊙100-pin Shielded Flat Cable ★ DB9(p)-DB9(s), ♣ Banana Jack	RS-232C	available	
TC-5902B	459(408)	300(218)	302(135)	P	>55dB at 2.4GHz >50dB at 5.8GHz	2 N(f)-SMA(f)	⊙100-pin Shielded Flat Cable ★ DB9(p)-DB9(s), ♣ Banana Jack	RS-232C	available	
TC-5970B	648(540)	682(550)	531(430)	M	>60dB at 5.8GHz	4 N(f)-SMA(f)	Variable connector module options available	n/a	n/a	

★ 100pF Pi filter used, for USB1.1 or RJ-45

* M : Manual Operation, P: Pneumatic Operation

⊙ 10pF Pi filter used, for CardBus or Mini PCI

♣ for external DC power

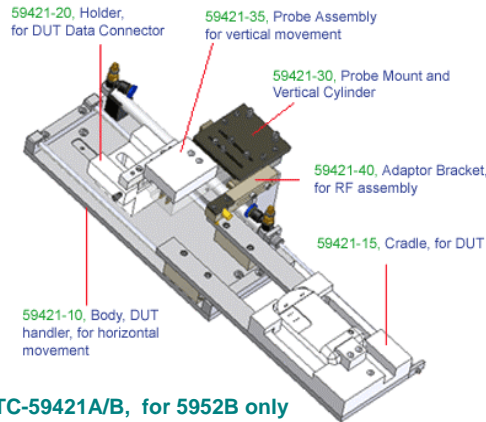
ShortForm Preliminary

Customized Fixture

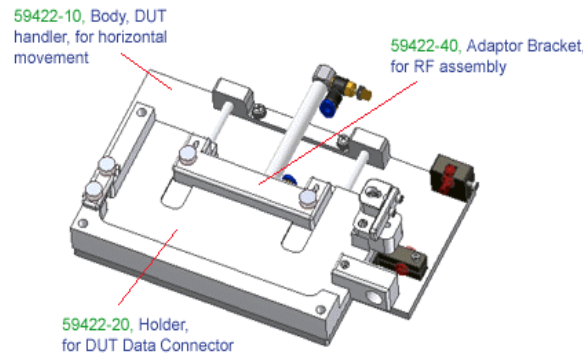
Mobile Phone, PDA, W-LAN

Pneumatic Shield Box with a custom fixture allows automation of most of the test processes. The fixture holds the device, brings it inside the shield box, makes test signal connections and returns the device to the starting position when the test is completed. Once the device is manually loaded on the DUT cradle and the serial number scanned, the rest of the test procedures can be automated. The custom fixture option may be ordered through Tescom by supplying the necessary device information and samples to help design and verification. Typically, every device has unique shape and electrical connections requiring mechanical and electrical customizations from its basic platform design.

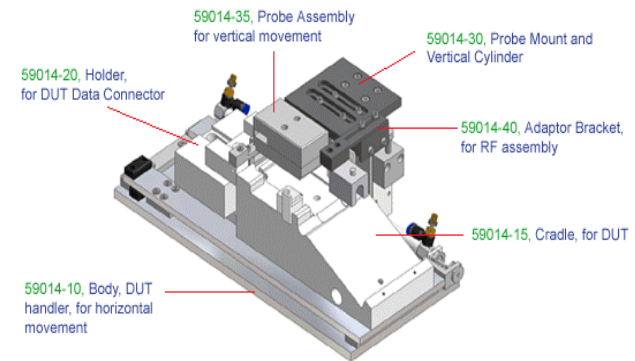
Sample designs are shown below.



TC-59421A/B, for 5952B only



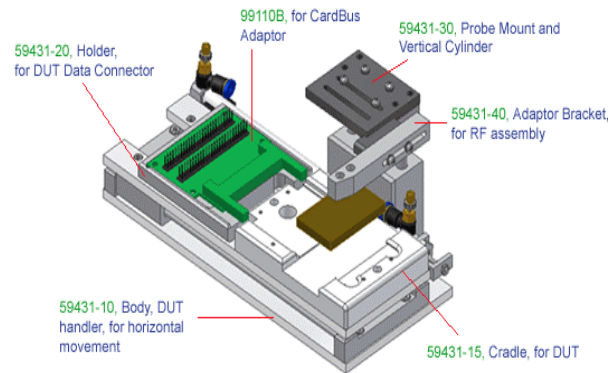
TC-59422A, for 5951A only



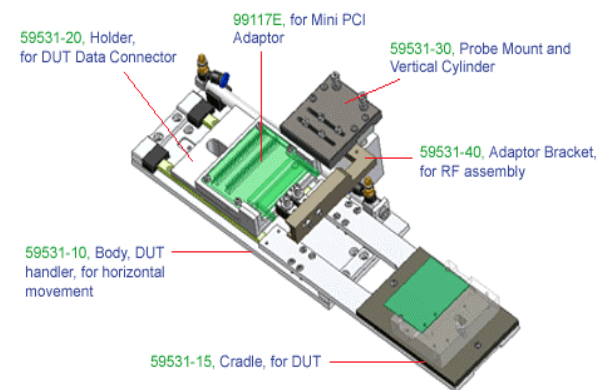
TC-59014A, for 5901B only

For Mobile phone, PDA, and similar devices

Model	Available Models
TC-59421A	TC-5952B
★TC-59421B	TC-5952B
TC-59422A	TC-5951A
TC-59014A	TC-5901B
TC-59431A	TC-5953A, TC-5902B
TC-59531A	TC-5953A, TC-5902B



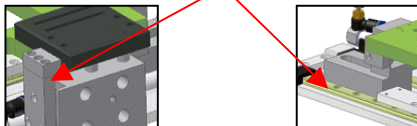
TC-59431A



TC-59531A

For Mini PCI and Card Bus

★ LM (Linear Motion) Guide used



ShortForm Preliminary Design

Ordering Information	
Model	Description
TC-5910C	Shield Box, Manual operation, Small size
5910-10	Tubular Type Antenna Coupler, for 5910B
TC-93020A	Flat Type Antenna Coupler
93020-99	Customized DUT Holder for 93020A
TC-93030A	Flat Type Antenna Coupler
93030-99	Customized DUT Holder for 93030A
TC-5915A	Shield Box, Manual operation, Medium size
TC-93020A	Flat Type Antenna Coupler
93020-99	Customized DUT Holder for 93020A
TC-93030A	Flat Type Antenna Coupler
93030-99	Customized DUT Holder for 93030A
TC-5951A	Pneumatic Shield Box, Dual open/close switch, Wider side front
5951-14	Handler Close Sensor Option, for 5951A only
5952-10	Wire Remote Open/Close Switch
5952-20	Switchable RF connection, RF Connector or Antenna Coupler
5952-80	Spare gasket Assy, set of 2pcs.
★ TC-59422A-MMM-XXXX-YY	Fixture for 5951A
TC-5952B	Pneumatic Shield Box, Single open/close switch, Narrower side front. Clear plastic safety shield
5920-10	Wire Remote Open/Close Switch
5952-20	Switchable RF connection, RF Connector or Antenna Coupler
5952-80	Spare gasket Assy, set of 2pcs.
★ TC-59421A-MMM-XXXX-YY	Fixture for 5952B, fitted with ball bearing shaft
★ TC-59421B-MMM-XXXX-YY	Fixture for 5952B, fitted with LM (Linear Motion) Guide
TC-5901B	Pneumatic Shield Box, Large size
5901-71	Dual open/close switch
5952-80	Spare gasket Assy, set of 2pcs
★ TC-59014A-MMM-XXXX-YY	Fixture for 5901B

Accessories Supplied

N(m) to N(m) Cable, 1m, 1pc.
 DB9(p) to DB9(s) Cable, 1m, 1pc.
 DB25(p) to DB25(s) Cable, 1m, 1pc.

SMA(m) R/A to SMA(m) R/A Cable, 7cm, 1pc.

SMA(m) R/A to SMA(m) R/A Cable, 7cm, 1pc.
 N(m) to SMA(m) cable, 1m, for 93020A, 1pc.

SMA(m) to SMB(m) Cable, 13Cm, 1pc.
 N(m) to SMB(m) Cable, 1m, for 93030A, 1pc.
 Bar Bracket, 2pcs.

N(m) to N(m) Cable, 1m, 1pc.
 DB9(p) to DB9(s) Cable, 1m, 1pc.
 DB25(p) to DB25(s) Cable, 1m, 1pc.

SMA(m) to SMA(m) Cable, 15cm, 1pc.
 N(m) to SMA(m) cable, 1m, for 93020A, 1pc.

N(m) to N(m) cable, 1pc.
 DB9(s) to DB9(s) RS-232C cable, 2m, 1pc.
 DB9(p) to DB(s) cable, 1m, 1pc.
 DB25(p) to DB(s) cable, 1m, 1pc.
 Power cable, 1pc.
 Hand valve, 1pc.
 stopper, 1pc.
 Safety Shield, for 5952B only, 1pc.

SMA(m) to SMB(m) Cable, 13Cm, 1pc.
 N(m) to SMB(m) Cable, 1m, for 93030A, 1pc.
 Bar Bracket, 2pcs., for 93030A, 1pc.

DB9(s) to DB9(s) RS-232C Cable, 2m, 1pc.
 DB9(p) to DB9(s) Cable, 1m, 2pcs.
 DB25(p) to DB25(s) Cable, 1m, 1pc.
 N(m) to N(m) Cable, 1m, 1pc.
 RJ45 to DB9(p) Cable, 2pcs., 30Cm and 1.5m
 HDEB9(s) to USB A(p) Cable, 1m, 1pc.
 HDEB9(p) to USB A(s) Cable, 15Cm, 1pc.
 Power Cord (1pc.), Hand Valve (1pc.), Safety Shield (1pc.), LID Stopper (1pc.)

R50509

Ordering Information

Model	Description
TC-5912C	W-LAN Shield Box, Manual operation, for notebook PC
TC-5912D	W-LAN Shield Box, Manual operation, for desktop PC
TC-5953A	W-LAN Shield Box, Pneumatic operation, Medium size
5952-10	Wire Remote Open/Close Switch
5952-80	Spare gasket Assy, set of 2pcs.
TC-99117E	for Mini PCI Adaptor
TC-99110B	for CardBus Adaptor
★ TC-59431A-MMM-XXXX-YY	CardBus Fixture, for 5953A
★ TC-59531A-MMM-XXXX-YY	Mini PCI Fixture, for 5953A
TC-5902B	W-LAN Shield Box, Pneumatic operation, Large size
5901-71	Dual open/close switch
5952-80	Spare gasket Assy, set of 2pcs.
TC-99117E	for Mini PCI Adaptor
TC-99110B	for CardBus Adaptor
TC-5060B	UHF TEM Cell
5060-10	DUT Mounting Fixture, Maximum 50mm x 125mm
5060-20	DUT Mounting Fixture, Maximum 90mm x 125mm
TC-5062A	UHF TEM Cell, DUT Rotator available
5060-10	DUT Mounting Fixture, Maximum 50mm x 125mm
5060-20	DUT Mounting Fixture, Maximum 90mm x 125mm
TC-50621A	DUT Rotator

★ : MMM-XXXX-YY is a unique fixture code that will be given by Tescom.

Accessories Supplied

N(m) to SMA(m) Cable, 1pc.
 RJ-45 to USB A(p) Cables, 1.5m, 1pc.
 RJ-45 to USB B(p) Cables, 30cm, 1pc.
 RJ-45 to RJ-45 Cables, Direct, 2pcs., 2m and 30cm
 99110C, 100pin to CardBus Adaptor, 1pc.
 99115C, PCI to 100pin Adaptor, 1pc.
 99117F, 100pin to mini PCI Adaptor, 1pc.

N(m) to SMA(m) Cable, 1m, 2pcs.
 RJ-45 to USB A(p), 1.5m, 1pc.
 RJ-45 to USB B(p), 30cm, 1pc.
 RJ-45 to RJ-45 Cables, Direct, 2pcs., 2m and 30cm
 2pin to RJ45 Cable, 22cm, 1pc.
 RJ45 to Banana Jack, 1.5m, 1pc.
 CBC S/W Driver (1x 3.5" diskette), 1pc.
 99110B, 100pin to CardBus Adaptor, 1pc.
 99117E, 100pin to Mini PCI Adaptor, 1pc.
 99120A, PCI to 100pin Adaptor, for right side motherboard, 1pc.
 99120B, PCI to 100pin Adaptor, for left side motherboard, 1pc.

DB9(s) to DB9(s) RS-232C Cable, 2m, 1pc.
 DB9(p) to DB9(s) Cable, 1m, 1pc.
 N(m) to SMA(m) RF Cable, 1m, 2pcs.
 USB A(p) to HDEB9(s) Cables, 1m 1pc.
 USB A(s) to HDEB9(p) Cables, 15cm 1pc.
 RJ-45 to SUB9(p) Cables, 30cm, 1pc.
 RJ-45 to SUB9(s) Cables, 1.5m, 1pc.
 CBC S/W Driver (1x 3.5" diskette), 1pc.
 99120A, PCI to 100pin Adaptor, for right side motherboard, 1pc.
 99120B, PCI to 100pin Adaptor, for left side motherboard, 1pc.
 99110B, 100pin to CardBus Adaptor, 1pc.
 99117E, 100pin to Mini PCI Adaptor, 1pc.
 Power Cord (1pc.), Hand Valve (1pc.), Safety Shield (1pc.), LID Stopper (1pc.)

N(m) to N(m) Cable, 1m; 1pc.
 DB25(p) to DB25(s) Cable, 1m, 1pc.
 50 ohm SMA Termination, 1pc.

R50509