TC-5820AP

Pneumatic Shield Box

Data Sheet

ООО «4ТЕСТ»
Телефон: +7 (499) 685-4444
info@4test.ru
www.4test.ru

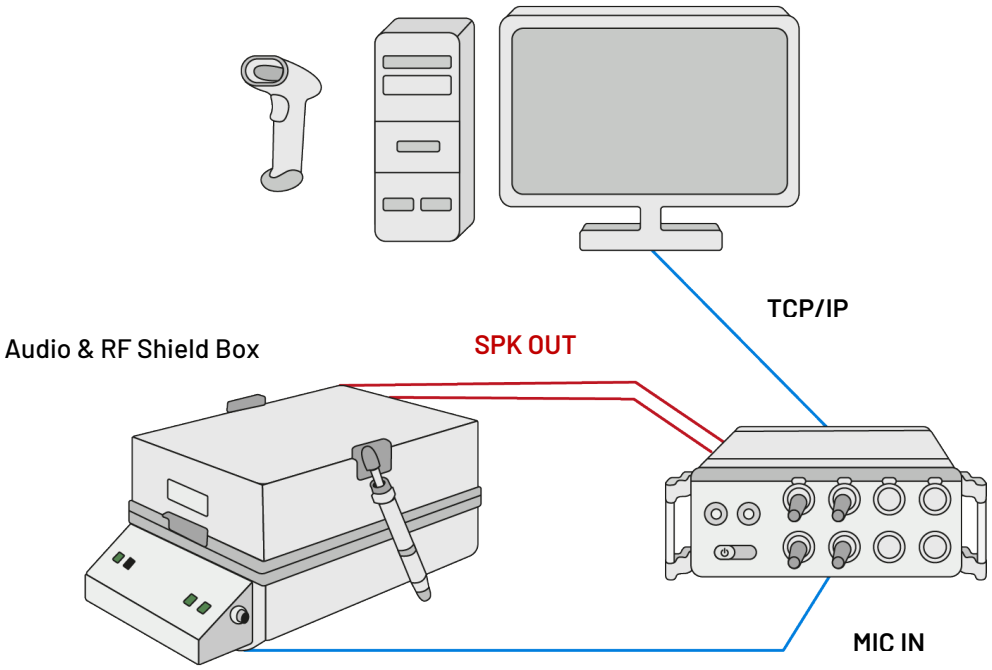
Introduction

TC-5820AP of TESCOM is an RF & Audio Shield Box for testing the acoustic performance of a wireless terminal as well as its RF performance within 100 MHz and 6 GHz bandwidth.

TC-5820AP is equipped with RF & audio absorber optimized for acoustic test. The absorber reduces scattering of EM wave caused by DUT or test antenna, and it also minimizes distortion of audio signal.

Features

- High durability and reliable RF-shielding
- Effective radiation testing environment with RF-absorber
- Specifically designed for various shapes of mobile phones
- Pneumatic operation of lid and fixture movements
- Remote control by RS-232C
- EMI filters on all data ports and power line
- Diverse I/O interface options



Mechanical Specifications

Basic RF Connector	Two (2) N (f) outside and SMA (f) inside
Line Voltage	24 VDC
Power Consumption	Max 1.5 W
Remote Control	RS-232C, 3 wire, DB9 (s), dual remote switch
Air Connection	
Main Connection	6 mm OD hose, one-touch push-on fitting
Fixture Control Connection	4 mm OD hose, one-touch push-on fitting
Input Air Pressure	5 to 10 bar
Dimensions	
Inside	256 (W) x 395 (D) x 198 (H) mm
Outside	417 (W) x 601 (D) x 332 (H) mm: lid closed, 623 (H) mm: lid open
Weight	Approx. 22 kg
***Packing**	
Size	560 (W) x 820 (D) x 480 (H) mm
Weight	Approx. 33 kg

* The size or weight of a package may vary depending on how the product is packed.

RF Specifications

The Shielding effectiveness below is measure with blank panels. Other interface panels may result in different shielding effectiveness.

Frequency	Shielding effectiveness [dB]
100 to 2000 MHz	> 70 dB
2000 to 3000 MHz	> 70 dB
3000 to 6000 MHz	> 60 dB

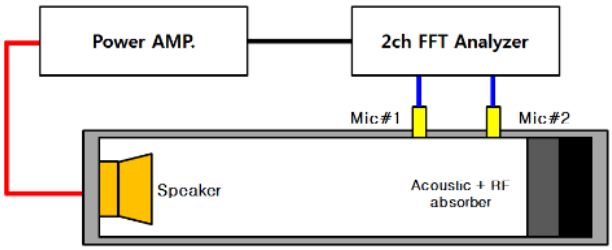
Typical Sound Isolation

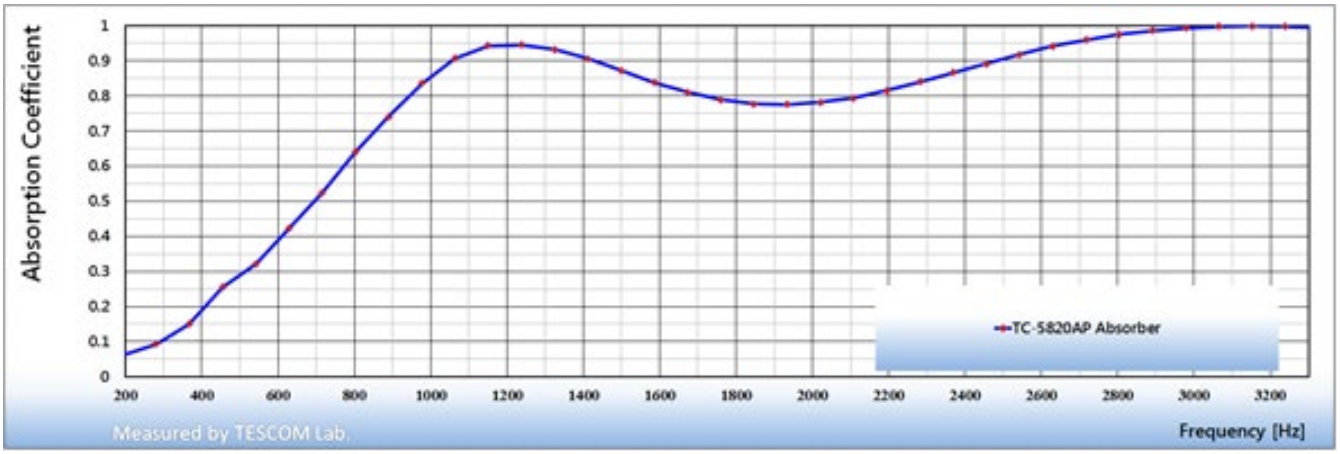
The sound isolation below is measured with blank panels. It is measured with an audio analyzer under the condition of 1 m distance between reference speaker and microphone.

Frequency	Sound Isolation [dB]
200 to 400 MHz	> 15 dB
400 to 2000 MHz	> 25 dB
2000 to 10000 MHz	> 30 dB

Audio Absorber Performance

(ISO 10534-2: Impedance Tube Method)





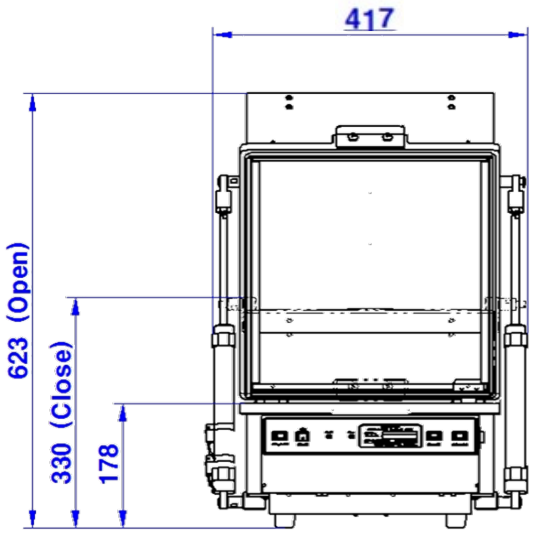
RF Absorber Performance

In reference to metal plate (0 dB @ 0.5 ~ 6 GHz), signal reduction is measured with the RF absorber inserted.

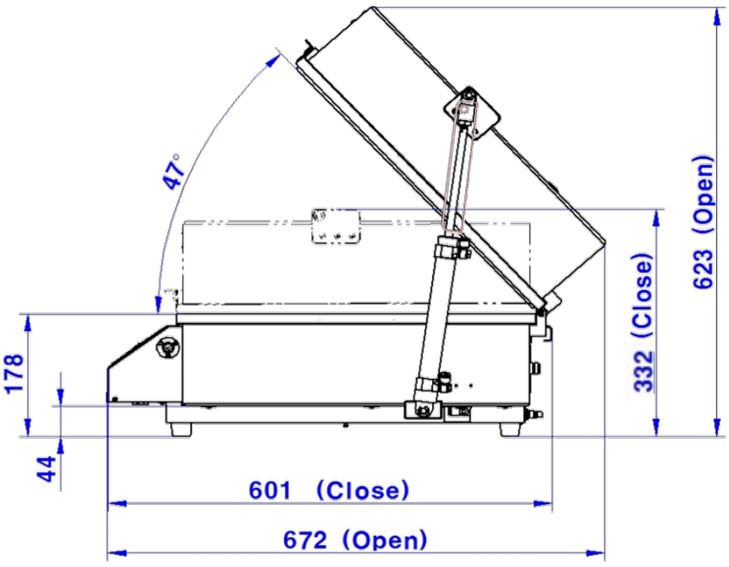
Frequency	Reflectivity [dB]
0.5 GHz to 3.5 GHz	10 dB (Typ.)
3.5 GHz to 6 GHz	15 dB (Typ.)

Outer Dimensions

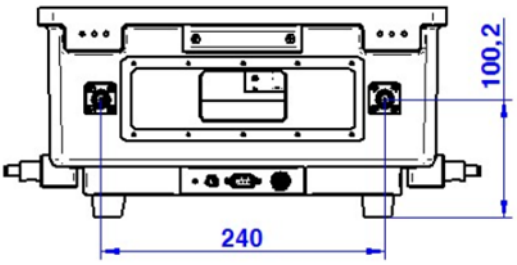
TC-5820AP Inner Dimensions: 417 (W) x 601 (D) x 332 (H) mm: lid closed, 623 (H) mm : lid opened.



[Front View]



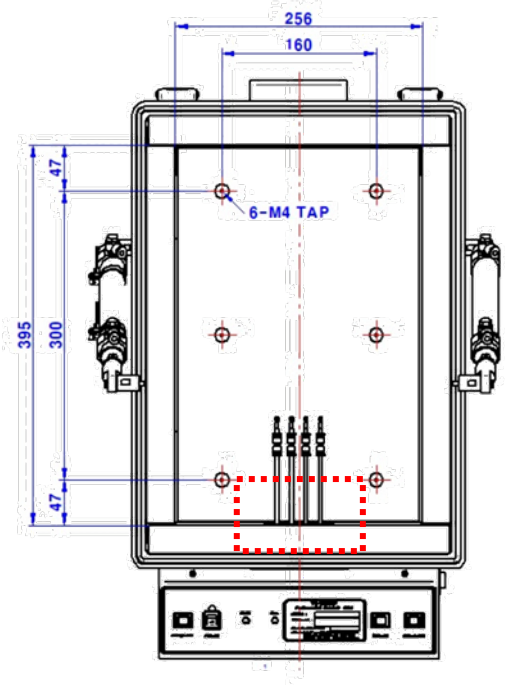
[Side View]



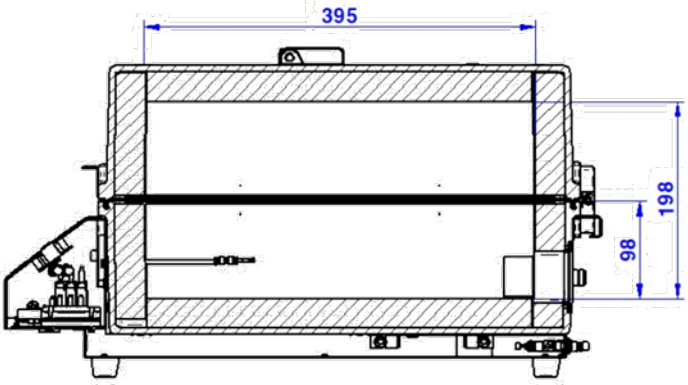
[Rear View (Without Lid)]

Inner Dimensions

TC-5820AP Outer Dimensions : 256 (W) x 395(D) x 198(H) mm, lid closed. 460 (H), lid opened.

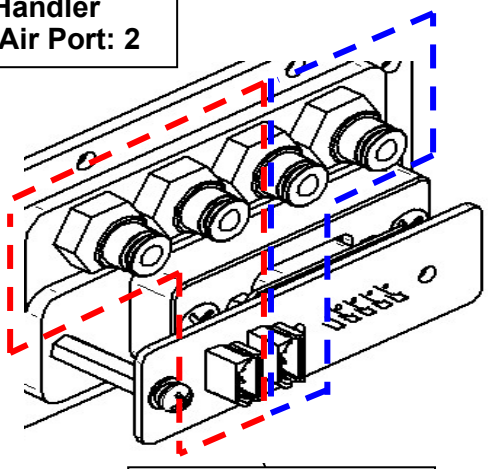


[Top View]



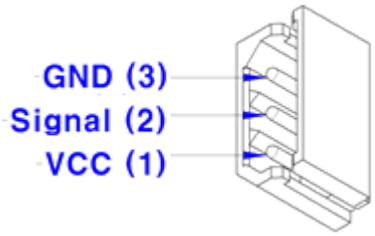
[Side View]

Handler
Ø4 Air Port: 2



Sensor Connector
Molex : 5267-03

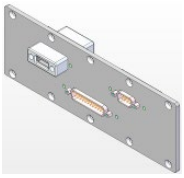
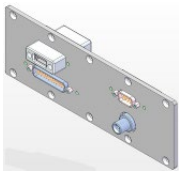
Probe
Ø4 Air Port: 2



Ordering Information

Order Number	Description
TC-5820AP	**Pneumatic Shield Box (including accessories below)** Test Report Power Cable, 220V, 1.5 m, 1 pc Switching Power Supply, 1 pc SS-402, N(m)-N(m), 1 m, 1 pc RS-232 Cable, DB9(p) to DB9(s), 2 m, 1 pc Air Coupler, 1 pc Remote Switch Cable, 2 m, 1 pc

Pre-Configured I/O Interface Panels

I/O Interface Panel	Order Number	Configuration
 Data Interface Panel	M591602A	• One (1) DB25 (p) outside and DB25 (s) inside, 1000 Pi filter •One (1) DB9 (p) outside and DB9 (s) inside, 100 pF Pi filter •One(1) USB 2.0 outside and inside
 Data Interface Panel	M591605A	•One (1) DB2 5(p) outside and DB25 (s) inside, 1000 pF Pi filter •One (1) DB9 (p) outside and DB9 (s) inside, 100 pF Pi filter •One (1) USB 2.0 outside and inside •One (1) DC Power Jack outside and inside

Optional Accessories

Product	Code	Configuration
 Microphone	**3101-0009A**	Canare L-2E5 Cable 30cm, RCA connector
	3101-0010A	Canare L-2E5 Cable 60cm, RCA connector
	3101-0033A	Canare L-2E5 Cable 35cm, DB9 connector
 Speaker	**3101-0011A-1**	RG174 Coax Cable 76cm, RCA connector
	3101-0024A	RG174 Coax Cable 35cm, DB9 connector

Custom I/O Interface Panels

I/O Filters	Code	Description	*Typical Shielding
	**3409-0009-1** DB25, 1000pF pi FIter	3 Mbps / 100 VDC 5 Amps max	>70 dB from 0.5 to 2 GHz >80 dB from 2 to 3 GHz >70 dB from 3 to 6 GHz
	**3409-0014-1** DB25, 100pF pi Filter	10 Mbps / 100 VDC 5 Amps max	>50 dB from 0.5 to 2 GHz >60 dB from 2 to 3 GHz >60 dB from 3 to 6 GHz
	**3409-0008-1** DB9, 1000pF pi Filter	3 Mbps / 100 VDC 5 Amps max	>70 dB from 0.5 to 2 GHz >80 dB from 2 to 3 GHz >70 dB from 3 to 6 GHz
	**3409-0010-1** DB9, 100pF pi Filter	10 Mbps / 100 VDC 5 Amps max	>50 dB from 0.5 to 2 GHz >60 dB from 2 to 3 GHz >60 dB from 3 to 6 GHz
	**3409-0018A-3** USB 2.0 Filter	480 Mbps / 5 V, 500 mA Max Current: 5 A	>60 dB from 0.5 to 2 GHz >70 dB from 2 to 3 GHz >70 dB from 3 to 6 GHz
	**3409-0042A-2** USB 3.0 Filter (Active)	5000 Mbps/ 5 V, 600 mA Max Current: 1.5 A	>80 dB from 0.5 to 2 GHz >80 dB from 2 to 3 GHz >75 dB from 3 to 6 GHz
	**3409-0046A** USB 3.2 Gen 2 Type C Adapter (Active)	10 Gbps / 4 - 22V Max Current: 5 A	>70 dB from 0.5 to 2 GHz >70 dB from 2 to 3 GHz >70 dB from 3 to 6 GHz
	**3409-0022A** RJ-45 Filter	1 Gbit/s Copper-Line Ethernet (1000 BASE-T)	>60 dB from 0.5 to 2 GHz >70 dB from 2 to 3 GHz >70 dB from 3 to 6 GHz
	**3406-0004A** DC Power Adaptor	50 VDC 3 Amps max	>70 dB from 0.5 to 2 GHz >80 dB from 2 to 3 GHz >80 dB from 3 to 6 GHz
	**3406-0005A** (Black) **3406-0006A** (White) DC Power Adaptor (Banana Jack Type)	50 VDC 10 Amps max	>70 dB from 0.5 to 2 GHz >80 dB from 2 to 3 GHz >80 dB from 3 to 6 GHz
	**3103-0009A** AC Power Adaptor	250 VAC 7 Amps max	>70 dB from 0.5 to 2 GHz >80 dB from 2 to 3 GHz >80 dB from 3 to 6 GHz
	**3408-0038** RF, N-SMA Connector	From DC to 6 GHz 50 Ω / 1.15 max	N/A
	**408-0039** RF, SMA-SMA Connector	From DC to 8 GHz 50 Ω / 1.15 max	N/A

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*Typical Shielding is the estimated value of shielding effect with corresponding interface. The data above are measured by Tescom standards. They may differ depending on measuring method and environment. The data above are under the condition that cables are not connected to each filter. When cables are connected, the shielding performance can be affected.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE

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WIRELESS