



# Radio Frequency Conducted Anti-interference Testing System

## CST 10200B

- ISO 11452-4:2020
- GB/T 33014.4:2016
- IEC 61000-4-6:2023
- GB/T 17626.6:2017

### Features

- > Integrated design with built-in integrated signal generator, RF power amplifier, and RF power meter
- > Supports high current injection (with current injection clamp), optional current monitoring probe, supports closed-loop testing method
- > USB interface, used for remote control of PC
- > Support conducted anti-interference test
- > Design signal generator, RF power amplifier, and RF power meter as independent output ports (for metering)
- > RF power amplifiers have temperature VSWR, Power monitoring, over limit protection

### Introduction

CST 10200B is an automatic testing system designed according to the standards ISO 11452-4 and IEC 61000-4-6. The built-in high dynamic range power meter is used to monitor the test level values in the testing system. Formed a complete testing system with EMC-S software, improving the scalability and efficiency of the system. After installing the testing software, corresponding tests can be executed immediately, and the test results can be saved, printed, and shared internally within the company.

### Application Areas



### Technical Parameters

|                                              |                                                                                                             |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| RF Signal Generator                          |                                                                                                             |
| Frequency Range                              | 9 kHz ~ 3 GHz                                                                                               |
| frequency Resolution                         | 0.23 Hz                                                                                                     |
| Frequency Temperature Stability              | ±0.5 ppm                                                                                                    |
| Harmonic                                     | ≤-30 dBc                                                                                                    |
| Non-harmonics                                | ≤-50 dBc                                                                                                    |
| Output Power Range                           | 120 dBm ~ 0 dBm:9 kHz ~ 500 kHz<br>120 dBm ~ +10 dBm:500 kHz ~ 3 GHz                                        |
| Power Accuracy                               | ±1.0 dB                                                                                                     |
| Resolution                                   | 0.1 dB                                                                                                      |
| Internal Modulation Source (LF)              | Sine wave:0.1 Hz ~ 500 kHz<br>Square wave:0.1 Hz ~ 20 kHz<br>Triangular wave/sawtooth wave:0.1 Hz ~ 100 kHz |
| Amplitude Modulation (AM)                    | Modulation depth: 0% ~ 100%<br>Modulation rate: 1 Hz ~ 1 MHz                                                |
| Frequency Modulation (FM)                    | Maximum frequency offset: 5 MHz<br>Modulation rate: 1 Hz ~ 1 MHz                                            |
| Phase Modulation (ΦM)                        | Modulation phase 0° ~ 360°; 1 Hz ~ 1 MHz                                                                    |
| Pulse Period                                 | 200 ns ~ 160 s                                                                                              |
| Pulse Width                                  | 100 ns ~ 85 s                                                                                               |
| Output Interface                             | N (female)                                                                                                  |
| VSWR                                         | <1.5:1                                                                                                      |
| Power Amplifier                              |                                                                                                             |
| Frequency Range                              | 10 kHz ~ 500 MHz                                                                                            |
| 1 dB Gain                                    | 53 dB ± 2 dB (200 W)                                                                                        |
| VSWR                                         | <1.5:1                                                                                                      |
| Output Impedance                             | 50 Ω                                                                                                        |
| Output Interface                             | N (female)                                                                                                  |
| Power Meter (built-in 3-channel power meter) |                                                                                                             |
| Frequency Range                              | 9 kHz ~ 3 GHz                                                                                               |
| Level                                        | -60 dBm ~ +20 dBm                                                                                           |
| Accuracy                                     | ±0.2 dB                                                                                                     |
| Input Interface                              | N (female)                                                                                                  |
| VSWR                                         | <1.1:1                                                                                                      |

### General Parameters

|                           |                                                     |
|---------------------------|-----------------------------------------------------|
| Working Power             | AC 220 V ±10%,50/60Hz                               |
| Maximum Power Consumption | 500 W                                               |
| Dimension                 | 19 inches/22U 600 mm (W) * 1250 mm (H) * 800 mm (D) |
| Weight                    | Approx. 45 kg                                       |
| Ambient Temperature       | 15°C ~ 35°C                                         |
| Relative Humidity         | 45% ~ 75%, RH (no condensation)                     |
| Atmospheric Pressure      | 86 kPa ~ 106 kPa                                    |

### Standard Accessories

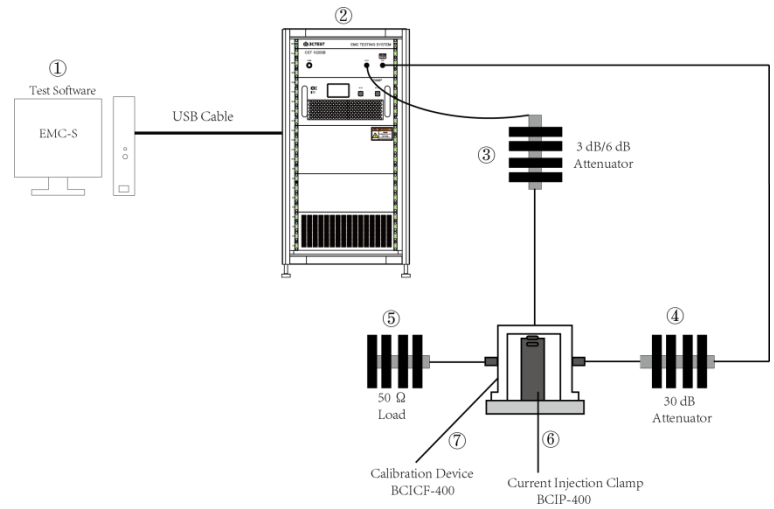
Power Cord, Fuse, Attenuator, USB Cable, Flat Grounding Wire, RF Cable, Calibration Report, Product Warranty, Operation Instructions

### Optional Accessories

| ISO 11452-4 BCI Test Item Equipment Accessories |                                     |                                                                                                                                                                                                                                              |                                                                                       |
|-------------------------------------------------|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1                                               | Testing Software<br>EMC-S BCI       | Supports Windows 10 system, designed for CST series RF conducted immunity PC testing software, supports USB communication mode, and enables remote calibration and testing operations.                                                       |    |
| 2                                               | Attenuator<br>AT200-3dB-1G-NF-NF-A  | Attenuation: 3 dB, Power: 200 W                                                                                                                                                                                                              |    |
| 3                                               | Attenuator<br>AT200-30dB-4G-NF-NF-A | Attenuation: 30 dB, Power: 200 W                                                                                                                                                                                                             |    |
| 4                                               | 50 $\Omega$ Load<br>TF80            | Impedance: 50 $\Omega$ , Power: 80 W                                                                                                                                                                                                         |    |
| 5                                               | Current Injection Clamp<br>BCIP-400 | Frequency: 4 kHz ~ 400 MHz<br>Power:<br>100 W (continuous for 30 minutes)<br>150 W (lasting for 15 minutes)<br>200 W (lasting for 5 minutes)<br>Interface format: N type<br>Inner diameter: 40 mm<br>Outer diameter: 127 mm<br>Height: 70 mm |    |
| 6                                               | Calibration Device<br>BCICF-400     | Frequency: DC ~ 400 MHz<br>Characteristic impedance: 50 $\Omega$<br>Voltage standing wave ratio: $\leq 3.5$<br>Inner length: 80 mm<br>Inner width: 127 mm<br>Internal height: 135 mm                                                         |  |
| 7                                               | Current Probe<br>TWCM-500           | Frequency: 1 kHz ~ 500 MHz<br>Inner diameter: 40 mm<br>Outer diameter: 127 mm<br>Height: 40 mm<br>RF current: 2 A<br>Pulse current: 100 A                                                                                                    |  |

### System Configuration

- ① Test software EMC-S
- ② Host CST 10200B
- ③ Attenuator AT200-3dB-1G-NF-NF-A
- ④ Attenuator AT200-30dB-4G-NF-NF-A
- ⑤ 50  $\Omega$  Load TF80
- ⑥ Current injection clamp BCIP-400
- ⑦ Calibration device BCICF-400



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