Conducted Immunity Test System

CST 1075B

- IEC 61000-4-6
- ISO 11452-4
- GB/T 33014.4
- GB/T 17626.6

Features

> Highly integrated design with built-in signal generator, RF power amplifier and power meter
> Built-in an internal wide dynamic range power meter for real-time and precise monitor
> Accurate traceable closed-loop test; optional current probe for closed-loop method
> High expandability, supports conducted immunity testing
> Automated test procedures double testing efficiency
> High-stability hardware configuration for worry-free long-term operation
> Support monitoring and overrange protection functions for temperature, VSWR and power

Introduction

CST 1075B RF Conducted Immunity Tester is an integrated automatic test system specially developed for automotive electronic BCI tests. It is fully designed in compliance with standards including ISO 11452-4, GB/T 33014.4, IEC 61000-4-6, GB/T 17626.6 and other relevant standards.

Adopting a highly integrated design, it comes with a built-in signal generator, RF power amplifier and RF power meter, greatly reducing setup costs and system complexity. Built-in wide dynamic range power meter ensures real-time and precise monitoring, stable test procedures and reliable measurement results.

The whole test system, centrally controlled by EMC-S(BCI) software (This product requires the software for operation), can improve system scalability and test efficiency. Test results support one-click saving, printing and internal enterprise sharing.

Application Areas

Technical Parameters

Signal Generator	
Frequency	9 kHz ~ 3 GHz
Frequency Resolution	0.23 Hz
Frequency Temperature Stability	±0.5 ppm
Harmonics	⩽ -30 dBc
Non-Harmonic	⩽ -50 dBc
Output Power	120 dBm ~ 0 dBm：9 kHz ~ 500 kHz 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 Square wave: 0.1 Hz ~ 20 kHz Triangular wave/Sawtooth wave: 0.1 Hz ~ 100 kHz
Amplitude Modulation (AM)	Modulation depth: 0% ~ 100% Modulation frequency: 20 Hz ~ 1 MHz
Frequency Modulation (FM)	Max Frequency Deviation: 5 MHz Modulation frequency: 20 Hz ~ 1 MHz
Phase Modulation (ΦM)	Phase deviation range: 0° ~ 360° Modulation frequency: 1 Hz ~ 1 MHz
Pulse Period	200 ns ~ 160 s
Pulse Width	100 ns ~ 85 s
Output Port	N-Female
VSWR	＜1.5
Power Amplifier	
Frequency	100 kHz ~ 400 MHz
Output Power (1dB compression point)	＞75 W
VSWR	⩽ 1.5
Output Impedance	50 Ω
Output Port	N-Female
Power Meter (Built-in 3-channel Power Meter)	
Frequency	9 kHz ~ 3 GHz
Measurement Range	-60 dBm ~ +20 dBm
Measurement Accuracy	±0.5 dB
Input Port	N-Female
VSWR	＜1.3

General Parameters

Working Power	AC 220 V, ± 10%, 50 Hz / 60 Hz
Max. Power Consumption	500 W
Dimension	4U rack, 450 (W) *190 (H) *620 (D)mm
Weight	Approx. 20 kg
Ambient Temperature	15°C ~ 35°C
Relative Humidity	45% ~ 75%, RH (no condensation)
Atmospheric Pressure	86 kPa ~ 106 kPa

Standard Accessories

Power Cord, RF cable, Falt Grounding Wire, USB Cable, Attenuator, Fuse, User Manual

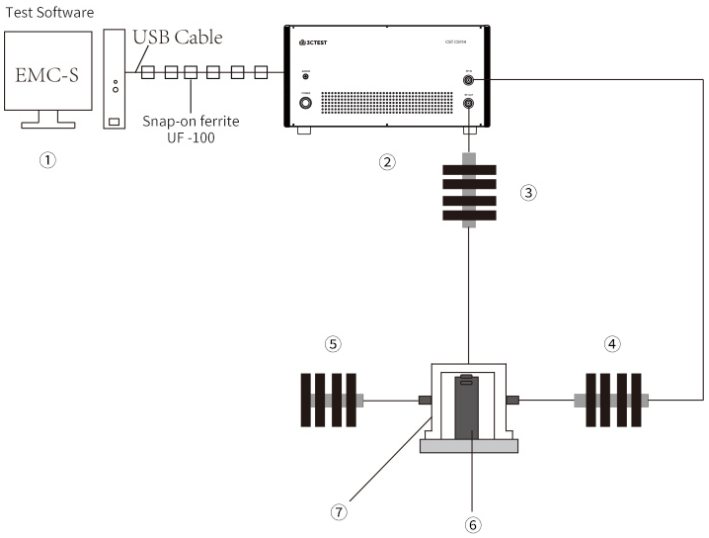
Optional Accessories

1	Test Software (This series of products shall be used with this software)	Model: EMC-S(BCI) A RF conducted immunity test software for the CST series; support Windows 10 and USB communication; enable remote calibration and test operations	
2	Attenuator	Model: AT80-3dB-1G-NF-NF-A Attenuation value: 3 dB Power: 80 W	
3	Attenuator	Model: AT80-30dB-4G-NF-NF Attenuation value: 30 dB Power: 80 W	
4	Coaxial Load	Model: TF80 Impedance: 50 Ω Power: 80 W	
5	Current Injection Clamp	Model: BCIP-500 Frequency: 2 kHz ~ 500 MHz Power: 100 W (30 min cont.) 150 W (15 min cont.) 200 W (5 min cont.) Connector type: N type Inner diameter: 40 mm Outer diameter: 127 mm Height: 70 mm	
6	Calibration Fixture	Model: BCICF-500 Frequency: DC ~ 500 MHz Impedance: 50 Ω Inner diameter: 40 mm Inner length: 80 mm Inner width: 127 mm Inner height: 135 mm	

Optional Accessories

7	Current Monitoring Clamp	Model: TWCM-500 Frequency: 1 kHz ~ 500 MHz Inner diameter: 40 mm; Outer diameter: 127 mm; Height: 40 mm RF current: 2 A Pulse current: 100 A	

System Setup



① Test Software: EMC-S(BCI)

② Main Unit: CST 1075B

③ Attenuator: AT80-3dB-1G-NF-NF-A

④ Attenuator: AT80-30dB-4G-NF-NF

⑤ Coaxial Load: TF80

⑥ Current Injection Clamp: BCIP-500

⑦ Balun Transformer: BCICF-500

CST B Series Selection Guide

Model	Power Amplifier	
	Frequency	1 dB Gain
CST 10200B	10 kHz ~ 500 MHz	53 dB ± 2 dB (200 W)
CST 20150B	10 kHz ~ 400 MHz	51.8 dB ± 1 dB (150 W)
CST 1075B	100 kHz ~ 400 MHz	48.5 dB ± 2 dB (75 W)
CST 10150B	100 kHz ~ 400 MHz	51.8 dB ± 2 dB (150 W)

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