

# Pulsed Sinusoidal Disturbances Immunity Test System

## CST 10150DH

### Datasheet



#### In Compliance with

> ISO 7637-4

#### Introduction

The CST 10150DH is designed as per ISO 7637-4 and adopts all-in-one design, which integrate signal generator, RF power amplifier and RF power meter and each of them can be used independently. External power amplifier is optional as well as. Its frequency ranges from 100 kHz to 100 MHz. The CST 10150DH is controlled by PC software, so calibration and test can be conducted automatically, which greatly improves the test efficiency and system extendibility. The generated test result can be saved, printed or shared internally.

#### Features

- > Integrate signal generator, RF power amplifier and RF power meter in one unit;
- > The creation of test templates makes software operation easy;
- > USB interface for PC remote control;

#### Application Areas

- > Automotive
- > Military
- > Electrical Power
- > Aviation
- > Automation Equipment

Technical Parameters (Signal Generator)	
Model No.	CST 10150DH
Standard	ISO 7637-4 Pulse A
Frequency Range	1 $\mu$ Hz~100 MHz
Frequency Resolution	1 $\mu$ Hz
Frequency Stability over Temp.	$\pm 1$ ppm+10 pHz 18°C~28°C
Harmonics	DC~10MHz (including 10 MHz): <-55dBc 10MHz~20MHz (including 20 MHz): <-50dBc 20MHz~40MHz (including 40 MHz): <-40dBc >40MHz: <-35dBc
Non-harmonics	$\leq 10$ MHz: <-60dBc >10MHz: <-60dBc+6dB/Octave
Output Power	$\leq 10$ MHz: 1.0mVpp~10Vpp $\leq 30$ MHz: 1.0mVpp~5.0Vpp $\leq 60$ MHz: 1.0mVpp~2.5Vpp >60MHz: 1.0mVpp~1Vpp
Power Precision	Typical (1kHz sinusoidal, 0V offset, >10mVpp, automatic) $\pm$ (1% of setting value) $\pm 5$ mV
Power Meter Resolution	0.1 mVpp
Amplitude Modulation (AM)	Modulation depth: 0%~120%; Modulated rate: 2 mHz ~1 MHz
Frequency Modulation (FM)	Modulated rate: 2 mHz ~1 MHz
Phase Modulation ( $\Phi$ M)	Phase modulation :0°~360°; Modulated rate: 2 mHz ~1 MHz
Pulse Repetition	1 $\mu$ s ~ 500 s
Pulse Width	0 ns~100 s
Output Interface	N (female)
VSWR	<1.5:1

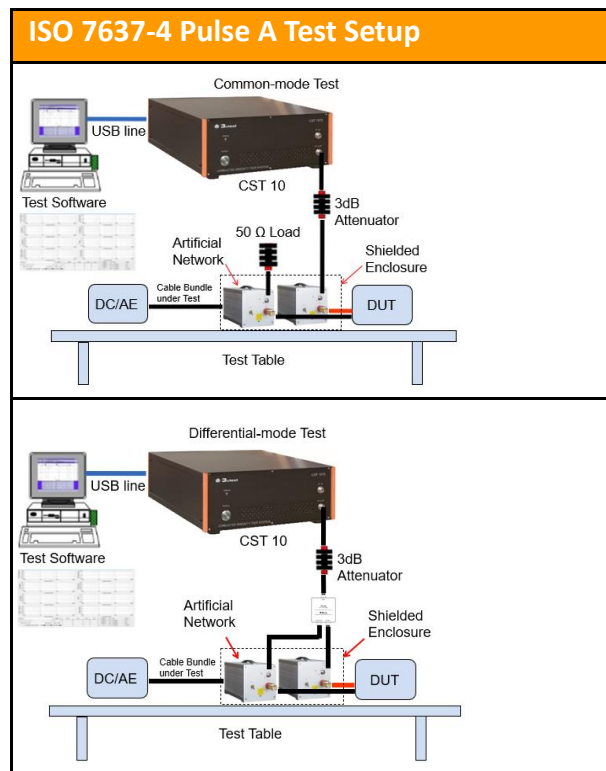
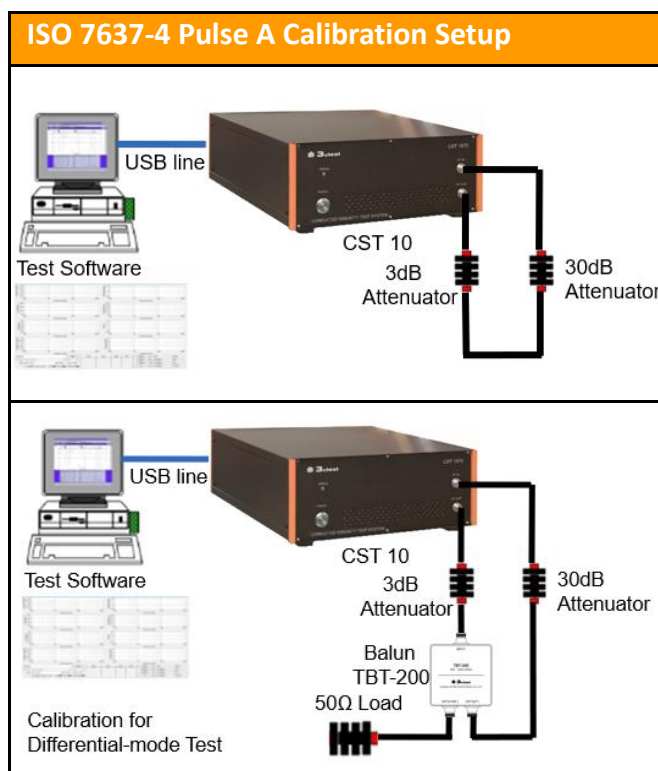
Technical Parameters (Power Meter)	
Frequency Range	9 kHz ~ 6 GHz
Test Electrical Level	-50 dBm ~ +20 dBm
Accuracy	$\pm 0.2$ dB
Input Interface	N (female)
VSWR	<1.1:1

Technical Parameters (Power Amplifier)	
Frequency Range	100 kHz~230 MHz
Gain	51.7 dB $\pm$ 1 dB (150 W)
1dB Gain	51.3 dB $\pm$ 1 dB (135 W)
VSWR	<1.5:1
Output Impedance	50 $\Omega$
Output Interface	N (female)

General Parameters	
Working Power	AC 110 V/220 V $\pm 10\%$ , 50 Hz / 60 Hz $\pm 5\%$ (AC 220 V 50 Hz in mainland China)
Max. Power	500 W
Dimension	19" / 4U
Weight	Approx. 15 kg
Ambient Temperature	15°C~35°C
Relative Humidity	45%~75%
Atmospheric Pressure	86 kPa~106 kPa

Accessories	
User Manual, Test line, Fuse*2 (spare parts), power line, flat grounded line, attenuator, USB 2.0 printer line, BNC 50 $\Omega$ coaxial terminal load, RF cable	

### ISO 7637-4 Pulse A Test Setup



Accessories for ISO 7637-4 Pulse A Test	
Attenuator	30 dB/150 W Frequency Range DC~1 GHz
Attenuator	3 dB/200 W Frequency Range DC~1 GHz
Balanced/ Unbalanced Transformer	TBT-200: 200 V; 1 MHz ~ 10 MHz; -3.3 dB; 50 Ω;
HV Artificial Networks	TANHV 200: 100 kHz ~ 150 MHz; 400 A; AC 700 V, DC 1 kV; 5μH    50 Ω;
50 Ω Load	50Ω/200W Frequency Range DC~1 GHz
HV Shielded Enclosure	HVSE 400
HV Battery Load	7637-4R500/120 3000 W
Test Software	EMC-S 7637-4

Test Environment	
Unshielded Room	Test Table : 2,400 mm *1,000 mm *900 mm
	Ground Reference Plane : 2,400 mm *1,000 mm *1,200 mm



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