Micro-Pulse Interference Simulator

TIS 700M10

- ISO 7637-2:2011
- ISO 7637-3:2016
- GB/T 21437.2:2008
- GB/T 21437.2:2021
- EN 301489-1
- EN 301489-17
- EN 301489-24
- EN 300329
- EN 300340
- EN 300342-1
- BMW-(Airbag ECU)
- BMW 600 13.0(Part 2)
- BMW GS 95002(1999)
- BMW GS 95002(2001)
- Case New Holland ENS0310
- Cummins 14269 (982022-026)
- DaimlerChrysler PF-10540
- Audi(Reference vehicles)
- Chrysler PF-9326
- Chrysler CS-11809(2009)
- Chrysler CS-11979
- Chrysler DC-11224 Rev.A
- Claas CN 05 0215
- DaimlerChrysler DC-10614

Features

> 5.7-inch color touch screen, front panel operation

> EUT load capacity 80 V, 100 A

> Power cord test pulse P1/2a/3a/3b

> Fast and slow pulse test for signal and data lines

> Equipped with DUT voltage and current detection and overcurrent protection functions

> Built in power switch

> Built in coupling network can serve as a unified central output (EUT) port

> Ethernet and RJ45 interfaces, used for PC remote control and printing test reports

Introduction

The TIS 700M10 micro-pulse interference simulator integrates the test pulse P1/2a/3a/3b power line tests required by the ISO 7637-2 standard as well as the signal line and data line tests required by the ISO 7637-3 standard. The TIS series simulators not only meet the standard requirements of numerous global automotive manufacturers, but also can be customized with various waveform simulation generators according to user needs. It has a higher pulse voltage and frequency, which can be freely set, and is used to find the sensitive points of the tested item, far exceeding the requirements of the standard.

The input of the built-in coupling network is connected to the output of the LDS series and APS series, and can be used as a unified central output port for the test equipment. Different simulators are interconnected by a data bus and connected to a remote PC via Ethernet to form a complete testing system.

Application Areas

Technical Parameters

Micro-pulse P1	
Impulse Amplitude	3 V ~ 600 V, step 1 V
Pulse Polarity	Negative
Pulse Rise Time	0.5 μs ~ 1 μs 1.5 μs ~ 3 μs (no load)
Pulse Duration	50 μs ± 20% (no load) 12 μs ± 20% 2 Ω matching load 1 ms ± 20% (no load) 1 ms ± 20% 50 Ω matching load 2 ms ± 20% (no load) 1.5 ms ± 20% 10 Ω matching load 0.2 ms ± 20% (no load) 0.3 ms ± 20% (no load) 0.5 ms ± 20% (no load)
Source Impedance	2 Ω、4 Ω、10 Ω、20 Ω、30 Ω、50 Ω
Pulse Interval Time	0.2 s ~ 999 s (Where the minimum interval is based on the output voltage)
Test Number	1 ~ 9999

Technical Parameters

Micro-pulse P2a	
Impulse Amplitude	3 V ~ 200 V, step 1 V
Pulse Polarity	Positive
Pulse Rise Time	0.5 μs ~ 1 μs 1.5 μs ~ 3 μs (no load)
Pulse Duration	50 μs ± 20% (no load) 12 μs ± 20% 2 Ω matching load 1 ms ± 20% (no load) 1 ms ± 20% 50 Ω matching load 2 ms ± 20% (no load) 1.5 ms ± 20% 10 Ω matching load 0.2 ms ± 20% (no load) 0.3 ms ± 20% (no load) 0.5 ms ± 20% (no load)
Source Impedance	2 Ω、4 Ω、10 Ω、20 Ω、30 Ω、50 Ω
Pulse Interval Time	0.2 s ~ 999 s (Where the minimum interval is based on the output voltage)
Test Number	1 ~ 9999
Coupled Mode	ICC , DCC

Technical Parameters

Electric fast transient/pulse train generator module P3a/3b	
Impulse Amplitude	18 V ~ 1000 V, step 1 V
Pulse Polarity	Pulse 3b is positive and pulse 3a is negative
Pulse Rise Time	5 ns ± 30%
Pulse Duration	100 ns ± 30 ns
	150 ns ± 45 ns
Source Impedance	50 Ω
Number of Pulses	1 ~ 200
Pulse Group Duration	0.1 ms ~ 10 ms
Pulse Group Interval Time	50 ms ~ 999 ms
Pulse Frequency	0.1 kHz ~ 200 kHz
Test Duration	1 s ~ 50000 s
Coupled Mode	CCC , DCC

Technical Parameters

Free Programming Mode	
Impulse Amplitude	3 V ~ 200 V, step 1 V
Pulse Polarity	Positive / Negative
Impedance	2 Ω , 4 Ω , 5 Ω ~ 100 Ω (Step 5Ω), 200 Ω, 400 Ω , 450 Ω
Pulse Rise Time	1 μs ~ 10 μs +0/-50% (Step 1 μs)
Pulse Duration	50 μs ~ 1000 μs ± 10 % (Step 50 μs) 1000 μs ~ 10,000 μs ± 10 % (Step 500 μs)
Power Disconnection Time t2	1 ms ~ 500 ms
The Power Disconnection Time Point t3	0 μs ~ 150 μs
Pulse Interval Time	0.2 s ~ 999 s
Test Number	1 ~ 9999

General Parameters	
Display Screen	5.7-inch TFT touch screen
Working Power	AC 230 V，±10%，50/60Hz
Fuses	6 A
Maximum Power Consumption	300 W
Memory Space	Infinity (PC)
Communication Methods	Ethernet LAN, RJ45
Trigger Mode	Automatic , manual , external trigger
Network	Built-in coupling/decoupling network 80V / 100A
External Trigger Input	BNC , 5V TTL, normally open node, closed trigger
CRO Trigger Output	BNC , 5V TTL
Operation Control Input	BNC , 5V TTL
Failure Detection	When it fails, the front panel LCD displays and the instrument stops working
DUT Voltage Monitoring Output	BNC , 10:1 Coaxial terminal output
DUT Current Monitoring Output	BNC , 40 A:1 V Coaxial terminal output
Working Status Indication	The front panel features LED indication and LCD display
Grounding Connection Method	Use a flat grounding wire
DUT Power Supply Voltage Injection	Red and black test leads
Dimension	19 inches /6U 446mm(W)*280mm(H)*612 mm(D)
Weight	Approx.28 Kg
Ambient Temperature	15℃ ~ 35℃
Relative Humidity	45% ~ 75%
Atmospheric Pressure	86kPa ~ 106kPa

Standard Accessories	
Test line, grounding wire, fuse, RF cable, coaxial cable assembly, ZJH 100 adapter box, instruction manual, inspection report, product warranty	

Optional Accessories

1	Automotive Immunity Test Software	Model: AutoLab Compatible with Windows 7 / 8 / 10 / 11 operating systems. Supports Ethernet interface and serial port communication modes. Supports parameter scheduling testing and test sequences, enabling one-click testing with simple operation. It allows for the setting of customer information, automatic generation of test reports, and supports the export of test reports, facilitating users to record real-time data.	
ISO 7637-3 Calibration Attachment			
2	Current Injection Clamp BCIP7637-3	Frequency Range : 4 kHz ~ 100 MHz	
3	Current Injection Clamp Calibration Fixture BCICF-200	Frequency Range : DC ~ 200 MHz Natural Impedance : 50 Ω	
4	Direct Capacitive Coupling DCC-100 nF	Capacitance : 100 nF Pressure Resistance : 200 V	
5	Direct Capacitive Coupling DCC-100 pF	Capacitance : 100 pF Pressure Resistance : 200 V	
6	Direct Capacitive Coupling DCC-470 pF	Capacitance : 470 pF Pressure Resistance : 200 V	
7	Capacitance-Coupled Clamp V-EFTC	Coupling Capacity : 100 pF ~ 200 pF DC 5 kV	
ISO 7637-2 Calibration Accessories			
8	Pulse calibration device	Model / Impedance[Ω] PVK 05 / 0.5 PVK 1 / 1 PVK 2 / 2 PVK 4 / 4 PVK 10 / 10 PVK 20 / 20 PVK 30 / 30 PVK 50 / 50	

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