

Compact Transient Immunity Simulator

TIS 700x



As per

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|------------------------|----------------------------|
| > ISO 7637-2-2011 | > Case New Holland |
| > ISO 7637-3-2016 | ENS0310 |
| > GB/T 21437.2-2008 | > Cummins 14269 |
| > EN 301489-1 | (982022-026) |
| > EN 301489-17 | > DaimlerChrysler |
| > EN 301489-24 | PF-10540 |
| > EN 300329 | > GJB 181A |
| > EN 300340 | > Audi(Reference vehicles) |
| > EN 300342-1 | > Chrysler PF-9326 |
| > BMW-(Airbag ECU) | > Chrysler CS-11809(2009) |
| > BMW 600 13.0(Part 2) | > Chrysler CS-11979 |
| > BMW GS 95002(1999) | > Chrysler DC-11224 Rev.A |
| > BMW GS 95002(2001) | |

Description

The TIS700 series for automotive transient unifies the capabilities of an EFT/Burst P3a/3b, micro pulse P1/2a and the required coupling network into one box. The TIS700 series are equipped to meet all international, car manufacturer specifications, and kinds of waveform modules can be customized as per user's requirements. The current of built-in coupling network ranges up to 200A depending on the model. The built-in coupling network can be used and controlled by any unit of the LDS200 series, APG series and APS series to be the central EUT output port. Different simulators can be connected together via data bus and connected to PC via Ethernet to be a whole test system.

Feature	Application
<ul style="list-style-type: none">> 5.7 inch color touch screen front panel operation> Internal EFT/burst module > Internal micro-pulse module> As per ISO 7637 JASO SAE NISSAN> Internal 60V/30A CDN (incl. load dump coupling), Max. Current up to 200A (200A customized)> Via CN25 Control external load dump and battery simulation via CN25> DUT voltage and current detection and over current protection function> Emergency stop function > internal mains switch> Ethernet, RJ45 port for remote control, print and documentation.	<ul style="list-style-type: none">> Automotive

Technical parameters		
Micro pulse module P1		
Test voltage	3-600V	
Test voltage	Negative	
Rise time Tr	0.5us - 1us 1.5us - 3us No load	
Duration Td	50us ± 20% no load 12us ± 20% matching load 1ms ± 20% no load 1ms ± 20% 50 ohm matching load 2ms ± 20% no load 1.5ms ± 20% 10 ohm matching load 0.2ms ± 20% no load 0.3ms ± 20% no load 0.5ms ± 20% no load	
Source impedance	2Ω, 4Ω, 10Ω, 30Ω, 50Ω	
Number of test	1-9999	
DUT voltage monitoring	10:1	
DUT current monitoring	10A:1V	
Pulse interval	0.2s-60s (the shortest interval depends on output voltage)	
Coupling mode	ICC,DCC(50us ± 20% no load waveform)	
EFT/Burst module P3a/3b		
Test voltage	25-700V	
Polarity	P3b positive,P3a negative	
Rise time Tr	5ns ± 30% into 50 ohm load 5ns ± 30% into 1,000 ohm load	
Duration Td	150ns - 45/+45ns into 50 ohm load 150ns - 45/+45ns into 1,000 ohm load	
Source impedance	50Ω	
Pulse number	1-200	
Burst interval	50ms-999ms	
Pulse frequency	0.1kHz-200kHz	
Test duration	1s-50000s	
Coupling mode	CCC,DCC	
output	Direct output	By 50Ω coaxial connector (for test connected to capacitance coupling clamp)

Micro pulse module P2a	
Test voltage	3-150V
Test voltage	Positive
Rise time Tr	0.5us - 1us 1.5us - 3us No load
Duration Td	50us ± 20% no load 12us ± 20% matching load
Source impedance	2Ω
Number of test	1-9999
DUT voltage monitoring	10:1
DUT current monitoring	10A:1V
Pulse interval	0.2s-60s (the shortest interval depends on output voltage)
Coupling mode	ICC,DCC

General parameters		
Mains supply	AC 110/220V, ± 10%, 45-65Hz	
Environment temperature	15-35°C	
Relative humidity	35%-85%RH (no condensing)	
Dimension	Output current 30A: 4U Output current 60A and 100A: 6U Output current 200A: 8U	
Weight	Approx. 20kg	
Trigger	Automatic, manual	
Network	Internal CDN 60V/30A current up to 200A	
Input	DUT supply	DC voltage from APS, APG or other DC source
	Pulse 5,7	TIS 700 network superimposing Pulse 5 and Pulse 7
Output	LDS200 input	Central DUT output port
	Coaxial output port	To connect capacitance coupling clamp as per ISO7637-3

Standard equipped
Simulator, user manual, inspection report, warranty, test cables, power cords, DUT power cords, grounding cables

Options	Main parameters	Models																			
1. Inductive coupling clamp BCIP -200 	Frequency range : 10kHz ~ 200MHz	TIS 700	CDN: Max. 60V/30A																		
2. Calibration fixture BCICF-400 	Frequency range: DC-400MHz Characteristic impedance: 50Ω	TIS 700-60	CDN: Max. 60V/60A																		
2.100nF coupling capacitor DCP-100N 	capacitance: 100nF withstand voltage: 200V	TIS 700-100	CDN: Max. 60V/100A																		
3.100pF coupling capacitor DCP-100P 	capacitance: 100pF withstand voltage: 200V	TIS 700-200	CDN: Max. 60V/200A																		
4.Calibration resistance PVK 	<table border="1"> <thead> <tr> <th>Model</th> <th>Impedance[Ω]</th> </tr> </thead> <tbody> <tr> <td>PVK 05</td> <td>0.5</td> </tr> <tr> <td>PVK 1</td> <td>1</td> </tr> <tr> <td>PVK 2</td> <td>2</td> </tr> <tr> <td>PVK 4</td> <td>4</td> </tr> <tr> <td>PVK 10</td> <td>10</td> </tr> <tr> <td>PVK 20</td> <td>20</td> </tr> <tr> <td>PVK 30</td> <td>30</td> </tr> <tr> <td>PVK 50</td> <td>50</td> </tr> </tbody> </table>	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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5.Capacitance coupling clamp V-EFTC 	coupling capacitor: 100pF~200pF DC 5kV																				
6.Software	AUTO Lab Support windows XP and Windows7 and above, convenient operation, self-defined test program for functions and standard library;																				

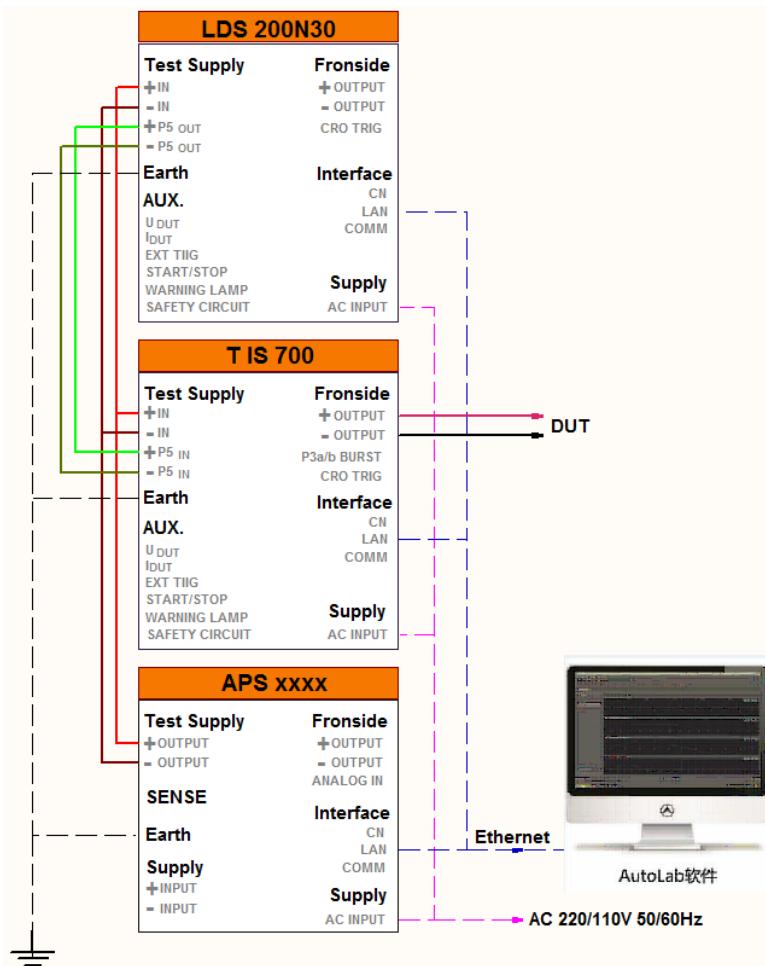
	Automatic/manual identifying the connected equipments and automatic configuration; Based on the template function, users can flexible generate test reports.
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Naming rules:

TIS 700x As per CDN allowable current and voltage
 None: 60V/30A
 60: 60V/60A
 100: 60V/100A
 200: 60V/200A
 700: the highest test voltage level 700V

→ TIS: Transient Immunity Simulator

Test connection:





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