

Compact Transient Immunity Simulator

TIS 700x

Datasheet



In Compliance with

- | | |
|------------------------|----------------------------|
| > 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) | |

Introduction

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.

Features

- > 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 60 V/30 A CDN (incl. load dump coupling) , Max. Current up to 200 A (200 A 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

Application

- > Automotive

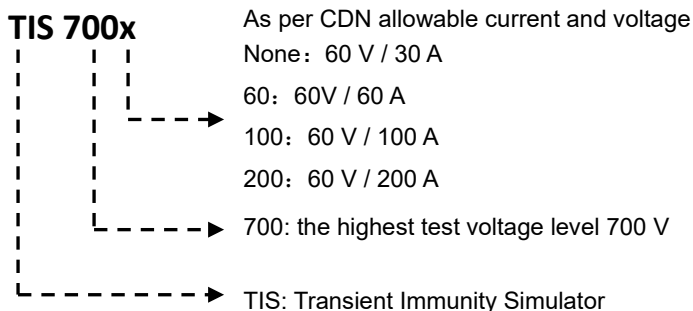
Technical parameters	
Micro pulse module P1	
Test voltage	3-600 V
Test voltage	Negative
Rise time Tr	0.5 us – 1 us 1.5 us – 3 us No load
Duration Td	50 us \pm 20% no load 12 us \pm 20% 2 ohm matching load 1 ms \pm 20% no load 1 ms \pm 20% 50 ohm matching load 2 ms \pm 20% no load 1.5 ms \pm 20% 10 ohm matching load 0.2 ms \pm 20% no load 0.3 ms \pm 20% no load 0.5 ms \pm 20% no load
Source impedance	2 Ω , 4 Ω , 10 Ω , 20 Ω , 30 Ω , 50 Ω
Number of test	1-9999
DUT voltage monitoring	10:1
DUT current monitoring	10 A:1 V
Pulse interval	0.2 s-60 s (the shortest interval depends on output voltage)
Coupling mode	ICC,DCC (50 μ s \pm 20% no load waveform)

Micro pulse module P2a	
Test voltage	3-200 V
Test voltage	Positive
Rise time Tr	0.5 us – 1 us 1.5 us – 3 us No load
Duration Td	50 us \pm 20% no load 12 us \pm 20% 2 ohm matching load 1 ms \pm 20% no load 1 ms \pm 20% 50 ohm matching load 2 ms \pm 20% no load 1.5 ms \pm 20% 10 ohm matching load 0.2 ms \pm 20% no load 0.3 ms \pm 20% no load 0.5 ms \pm 20% no load
Source impedance	2 Ω , 4 Ω , 10 Ω , 20 Ω , 30 Ω , 50 Ω
Number of test	1-9999
DUT voltage monitoring	10:1
DUT current monitoring	10 A:1 V
Pulse interval	0.2 s-60 s (the shortest interval depends on output voltage)
Coupling mode	ICC, DCC

EFT/Burst module P3a/3b		
Test voltage	25-700 V	
Polarity	P3b positive, P3a negative	
Rise time Tr	5 ns \pm 30% into 50 ohm load 5 ns \pm 30% into 1,000 ohm load	
Duration Td	150 ns - 45/+45 ns into 50 ohm load 150 ns - 45/+45 ns into 1,000 ohm load	
Source impedance	50 Ω	
Pulse number	1-200	
Burst interval	50 ms-999 ms	
Pulse frequency	0.1 kHz-200 kHz	
Test duration	1 s-50000 s	
Coupling mode	CCC, DCC	
output	Direct output	By 50 Ω coaxial connector (for test connected to capacitance coupling clamp)







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

Naming rules:



General parameters		
Mains supply	AC 110/220 V, \pm 10%, 45-65 Hz	
Environment temperature	15 $^{\circ}$ C - 35 $^{\circ}$ C	
Relative humidity	35%-85%RH (no condensing)	
Dimension	Output current 30 A: 4U	
	Output current 60 A and 100 A: 6U	
	Output current 200 A: 8U	
Weight	Approx. 20 kg	
Trigger	Automatic, manual	
Network	Internal CDN 60 V/30 A current up to 200 A	
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

Models	
TIS 700	CDN: Max. 60 V/30 A
TIS 700-60	CDN: Max. 60 V/60 A
TIS 700-100	CDN: Max. 60 V/100 A
TIS 700-200	CDN: Max. 60 V/200 A

Options	Main parameters	
1. Inductive coupling clamp BCIP -300 	Frequency range: 10 kHz ~ 200 MHz	
2. Calibration fixture BCICF-400 	Frequency range: DC-400 MHz Characteristic impedance: 50 Ω	
3. 100nF coupling capacitor DCP-100 N 	capacitance: 100 nF withstand voltage: 200 V	
3. 100pF coupling capacitor DCP-100P 	capacitance: 100 pF withstand voltage: 200 V	
4. Calibration resistance PVK 	Model	Impedance[Ω]
	PVK 05	0.5
	PVK 1	1
	PVK 2	2
	PVK 4	4
	PVK 10	10
	PVK 30	30
	PVK 50	50
5. Capacitance coupling clamp V-EFTC 	coupling capacitor: 100 pF ~ 200 pF DC 5 kV	
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.	

Test connection:

