ISO 21498 Electrically Propelled Road Vehicles-

HV Components Electrical Performance Test System Solution

Datasheet

In Compliance with

> ISO 21498-2
>LV 123
>VW 80300-2016
> Mercedes MBN 11123

Introduction

ISO 21498-2:2021 specifies the test requirement of new energy automotive HV component with the DC voltage from 60 V to 1500 V. A series of electrical characteristic test can be applied to verify the electrical parameters and safety of HV battery system, DC/DC converter HV/LV, on board charger, air conditioning compressor etc.

The HV power EVTS 150C10 in test system supports DC 0 V ~ 1500 V voltage output with voltage slope up to 250 V/ms, it also satisfies the test requirement in LV 123 and VW 80300, featuring high extendibility.

Features

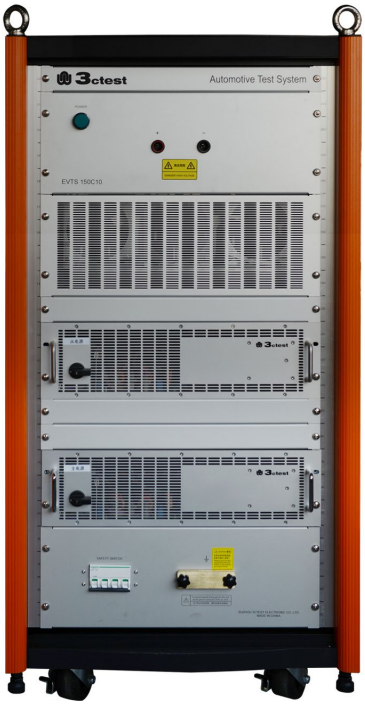
> Meet the latest ISO 21498-2:2021, LV 123 and VW 80300 test requirement;
> Voltage output DC 0 V ~ 1000 V/1500 V, support arbitrary waveform editing;
> Power can be extended to master and 3-slave, current output 60 A, 120 A, 240 A;
> Voltage slope up to 300 V/ms;
> Simulating various complex electrical environment in actual application scene;

Application Areas

> Automotive

ISO 21498 Test Requirement List			
Test Items	Type	Satisfied/Unsatisfied	Needed Equipment
DC supply voltage variation within operational range	Immunity-voltage variation	Satisfied	EVTS 150C10, C101500, AN 1501 TPT-7637-4C100B
Generated voltage slope	Emission	Satisfied	
Immunity to voltage slop	Immunity-voltage variation	Satisfied	
Generated voltage ripple	Emission	Satisfied	
Immunity to voltage ripple	Immunity-DC superimposed ripple	Satisfied	
Overvoltage	Immunity-voltage variation	Satisfied	
Undervoltage	Immunity-voltage variation	Satisfied	
Voltage offset	Immunity-voltage variation	Satisfied	
Generated load dump voltage	Emission	Satisfied	
Immunity to load voltage	Immunity-voltage variation	Satisfied	

Equipment Specification



Vehicle HV DC Power -EVTS 150C10	
DC Voltage	Max. 1500VDC
Current	Max. 120A
Power Consumption	Max. 60 kW
Over-voltage Protection Range	0~ 1650V
Over-current Protection Range	0~ 132A
Over-power Protection Range	0~ 66 kW
Voltage Range	0~ 1500V
Inner Impedance	0/50/100/200 mΩ
Waveform	Sine wave, rectangular wave, triangular wave, RAMP wave
Amplitude and Position Changes	Static, Liner
Sync. Control	0~360°
Number of Segments	Max. 99
count	1~999
Extendibility	Support current and power consumption function customization.
Functions of Generate Load Dump Voltage	
Max. Switch Current	100 A

DC Decoupling Capacitor-C101500	
Input DC Voltage	Max. 1500 V
Capacitance	≥10 mF
Working Power	AC 110 V/220 V, ±10%, 50 Hz /60 Hz (AC 220 V in mainland China)
Fuse	6 A
Max. Power Consumption	100 W
Dimension	22U
Weight	Approx. 70 kg
Ambient Temperature	18℃~28℃
Relative Humidity	25%~75%
Atmospheric Pressure	86 kPa~106 kPa

Artificial Networks-AN 1501	
Test Voltage (Vmax)	1500 V DC
Test Current (Imax)	100 A
Transient Current	Max. 280 A
Input/Output Port	4 mm banana plug/ 100 A port
Impedance	25 mΩ impedance curve
Inductance	1 μH
Capacitance	1 μF
Frequency Range	10 Hz ~ 150 KHz
Fan Power	AC 220 V,±10%，50 Hz
Fuse	6 A
Max. Power Consumption	100 W
Dimension	310 mm*310 mm*600 mm(L*W*D)
Weight	30 kg
Ambient Temperature	15℃ ~35℃
Relative Humidity	45% ~75%
Atmospheric Pressure	86 kPa ~ 106 kPa

Coupling Transformer-TPT-7637-4C100B	
Max. Unsaturated Voltage	15 V@15 Hz≤f≤3 kHz 25 V@3 kHz≤f≤30 kHz 2.5 V@30 kHz≤f≤300 kHz
Primary Current（A）	Max. 32 A
EUT Current（A）	Max. 100 A
Frequency Range	15 Hz ~ 300 kHz
Dimension	440 mm (L)*190 mm (H)*585 mm(D)
Weight（kg）	60 kg

SUZHOU 3CTEST ELECTRONIC CO., LTD.

Add.: No. 99 E'meishan Road, SND, Suzhou, Jiangsu Province, China
Tel: +86 (0)512 6807 7192 Fax: +86-512-68079795
Sales Email: globalsales@3ctest.cn Service Email: service@3ctest.cn
www.3c-test.com