



Supply Circuit Positive Surge Simulator

TIS 60T3

- Toyota TSC0502G
- Toyota TSC3500G
- Toyota TSC3590G
- Toyota TSC7001G
- Toyota TSC7203G
- Toyota TSC7306G

Features

- > Support 5.7-inch color touch screen front panel operation
- > Satisfy the test requirement of positive surge test specified in Toyota TSC0502G
- > Built-in DC switch for spark test
- > Ethernet RJ45 interfaces for PC remote control and test reports printing

Introduction

The TIS 60T3 Vehicle Power Supply Circuit Positive Surge Simulator is designed in accordance with Toyota TSC0502G. It is used to evaluate the immunity of devices against positive surge voltages generated when battery terminals are disconnected.

The TIS 60T3 generates three types of waveforms: high-frequency pulse (Fig. 15), giant pulse (Fig. 17), and positive polarity surge (Fig. 19). Developed based on the 3rd-generation platform, this instrument features simple and intuitive operation with high reliability.

Application Areas



Technical Parameters

Test 1 High-Frequency Pulse	
Output Voltage (V_{IP})	73 V $\pm$ 2 V (connected to 25 $\Omega \pm 0.5 \Omega$ load) 80 V $\pm$ 2 V (connected to 1 k $\Omega \pm 0.02$ k Ω load)
Rise Time (t_r)	$\leq 10 \mu s$
Time Constant (τ)	52 $\mu s \pm 5 \mu s$
Pulse Repetition(t)	5 ms
Test Duration	10 min
Test 2 Giant Pulse	
Output Voltage (V_{GP})	100 V $\pm$ 2 V (connected to 25 $\Omega \pm 0.5 \Omega$ load) 110 V $\pm$ 2 V (connected to 1 k $\Omega \pm 0.02$ k Ω load)
Rise Time (t_r)	≤ 1 ms
Time Constant (τ)	0.188 s $\pm$ 0.004 s
Pulse Repetition (t)	1 min
Counter	1 ~ 99
Test 3 Positive Pole Surge (High-frequency Pulse + Surge Voltage)	
Repeated High-Frequency Pulse	
Pulse Voltage Peak Value (V_{IP})	73 V $\pm$ 2 V (connected to 25 $\Omega \pm 0.5 \Omega$ load) 80 V $\pm$ 2 V (connected to 1 k $\Omega \pm 0.02$ k Ω load)
Rise Time (t_r)	$\leq 10 \mu s$
Time Constant (τ)	52 $\mu s \pm 5 \mu s$
Pulse Repetition (t)	5 ms
Surge Voltage	
Supply Voltage	30 V (+0, -1V)
Pulse Duration	300 ms
Pulse Repetition	1 min
Calibration Resistor	25 $\Omega \pm 0.5 \Omega$ 1 k $\Omega \pm 0.02$ k Ω
DUT Load (Optional)	30 A, 50 A, 75 A, 100 A

General Parameters

Working Power	AC 110 V/220 V $\pm$ 10%, 50/60 Hz $\pm$ 5%
Dimension	6U rack
Weight	Approx. 50 kg
Ambient Temperature	5 $^{\circ}C \sim 23^{\circ}C$
Relative Humidity	25% $\sim$ 70%
Atmospheric Pressure	86 kPa $\sim$ 106 kPa

Standard Accessories

Power Cord, Test Cables, User Manual, Fuse (Spare parts), Calibration Load R25 Ω
Calibration Load R1,000 Ω

Optional Accessories

Autolab Control Software

SUZHOU 3CTEST ELECTRONIC CO., LTD.

Address: No. 99 E'meishan Road, SND, Suzhou, Jiangsu Province, China

E-mail: globalsales@3ctest.cn

Service: service@3ctest.cn

Tel: +86 - 512 - 68077192

Web: www.3ctest.com



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