

Automotive Transient Emission Testing System

VTE 100

Datasheet



In Compliance with

- > ISO 7637-2:2012
- > GB/T 21437-2008

Introduction

VTE 100 is designed according to ISO 7637-2 for performing conductive voltage emission tests. VTE 100-MS is a standard automotive relay, which is used for measuring transient emission with amplitude over 400 V, while VTE100-ES is a semi-conductive electronic switch for amplitude less than 400 V.

Features

- > Meet the requirement of ISO 7637-2
- > The position of ES switch and MS switch is interchangeable
- > Testing voltage up to 60 V DC, continuous current 100 A
- > Switch on/off time is displayed on Nixie tube, with auto/manual/external trigger characters
- > Built-in R_s resistor, switch automatically
- > With function of over-heating alarm

Application Areas

- > Automotive

General Parameters	
Working Power	AC 110 V/240 V ($\pm 10\%$), 50 Hz /60 Hz
Fuse	6 A
Max. Power Consumption	100 W
EUT Voltage Monitoring Output	BNC, 1:1 coaxial port output
Paralleled Resistor	EXT., 10 Ω , 20 Ω , 40 Ω , 120 Ω
Trigger Mode	Auto, single, external
Mode Selection	Mechanical Switch, Electronic Switch
Grounded Connection Mode	≤ 10 mm Banana plug line
Max. Test Voltage	60 V DC
Max. Test Current	100 A
Temperature Alarm	80 $^{\circ}\text{C}$
Dimension (L*W*H)	330 mm*320 mm*205 mm (socket not included)
Weight	Approx. 11 kg
Ambient Temperature	15 $^{\circ}\text{C}$ –35 $^{\circ}\text{C}$
Relative Humidity	45%–75%
Atmospheric Pressure	86 kPa–106 kPa

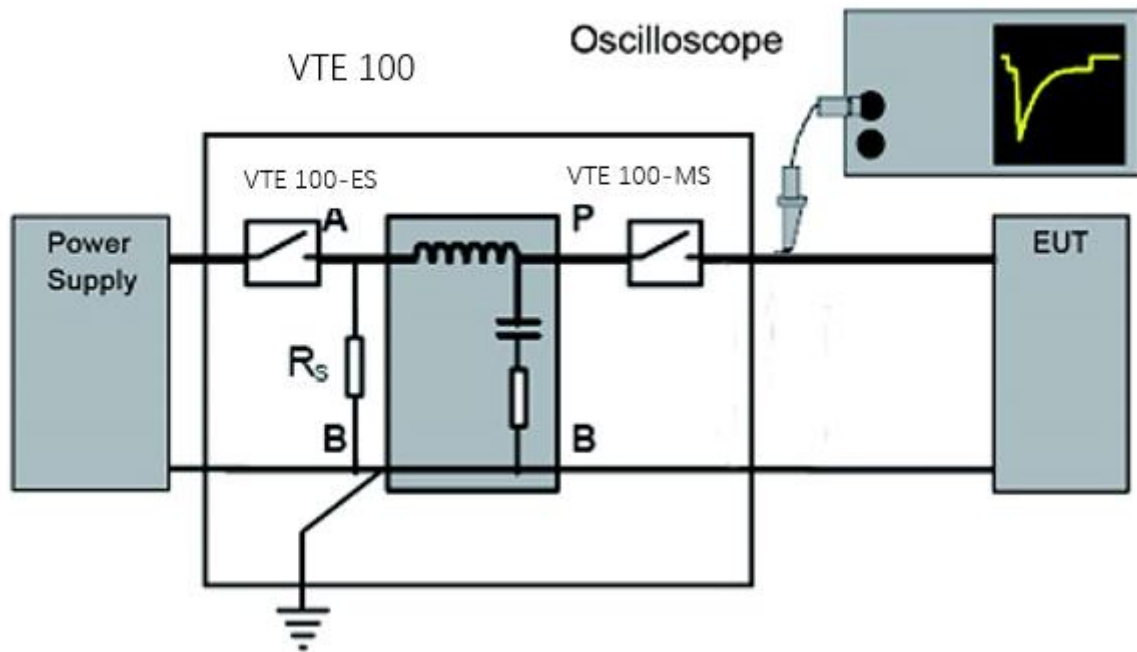
Artificial Network Parameters	
Frequency	0.1 MHz ~100 MHz
Capacitor	0.1 μF
Impedance	5 μH 50 Ω , as per impedance graph in ISO 7637-2
ZPA	< 5 m Ω

Parameters for VTE 100-ES	
Switch ON/OFF Time	0.01 s~99.99 s+(10%+10 ms)
Voltage Drop	< 2 V@25 A, typical 2.3 V@100 A
Switching Time	300 ns+20%@load 50 μH /0.6 Ω
Transient Protective Voltage	440 V
Dimension (L*W*H)	120 mm*215 mm*155 mm (socket not included)
Weight	Approx. 3.2 kg

Accessories	
User manual, Testing wire, Impedance calibration jig, Connecting pole, Data wire, Fuse*2, Power line, Standard M4 plug	

Parameters for VTE 100-MS	
Switch ON/OFF Time	0.05 s~99.99 s+(10%+10 ms)
Max. Switch Current	100 A
Contact	High purity silver contact material, no suppression across relay contact
Dimension (L*W*H)	120 mm*215 mm*155 mm (socket not included)
Weight	Approx. 1.7 kg

VTE –CAES (Optional Module)	
Input Voltage	13.5 V
Ambient Temperature	15 $^{\circ}\text{C}$ –35 $^{\circ}\text{C}$
Dimension (LxWxH)	520 mmx520 mm x590 mm
Weight	Approx. 16 kg
Calibration load 0.6 Ω and 50 μH for the verification of the electronic switch characteristic.	



VTE 100 Schematic Diagram

The diagram includes two switches, one paralleled resistor and one artificial network as per ISO 7637-2.



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