Automotive electronic power supply fault simulator – RV 16750

1.4.1 Overview

Automotive electronic power supply fault simulator simulates changes or anomalies of vehicle electrical and electronic systems / components under vehicle startup, on-off, electronic device on / off or battery charge / discharge status, including superimposed AC voltage, voltage sag, many tests such as voltage start are ideal interference sources for evaluating the immunity of power supply of onboard electronic equipment. It can also meet the wave test of **P2b (TP7 wave)** and **P4 (TP8 wave)** on ISO 7637-2 standard. Vehicle electronic power supply simulator RV 16750 fully meets the latest requirements of ISO 16750-2.

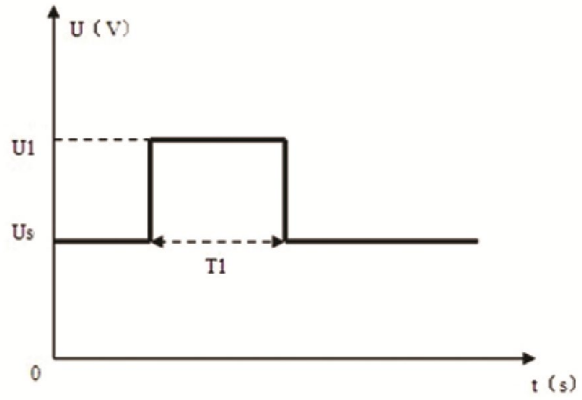
1.4.2 Picture



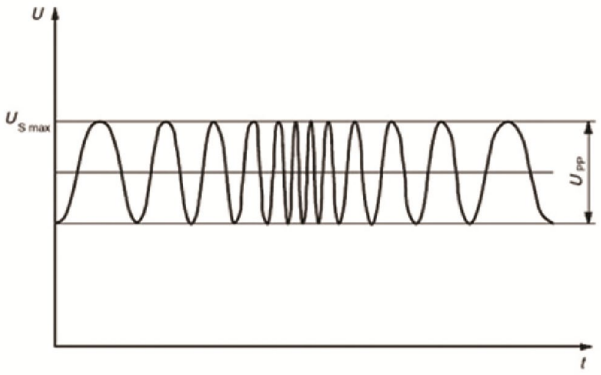
1.4.3 Output waveform

TP1

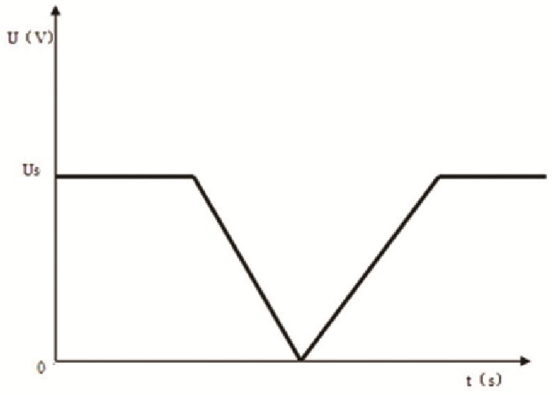
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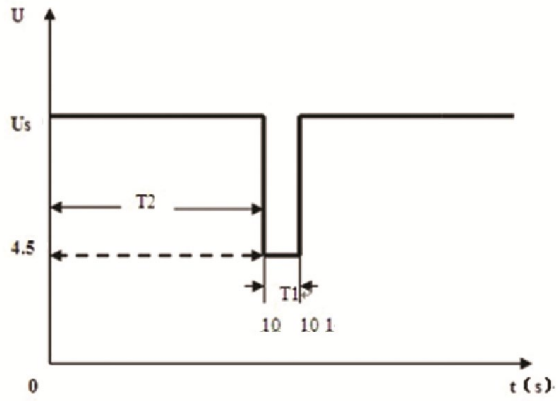
TP2



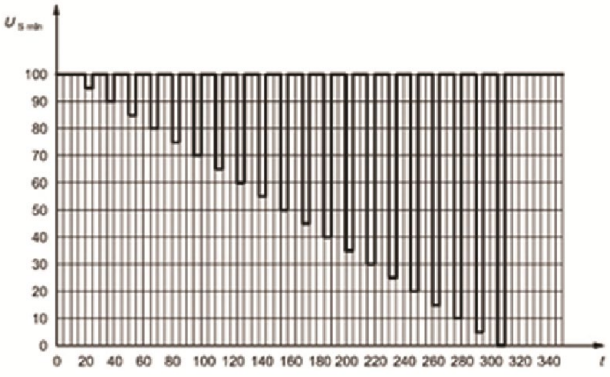
TP3


U (V)
Us
0
t (s)

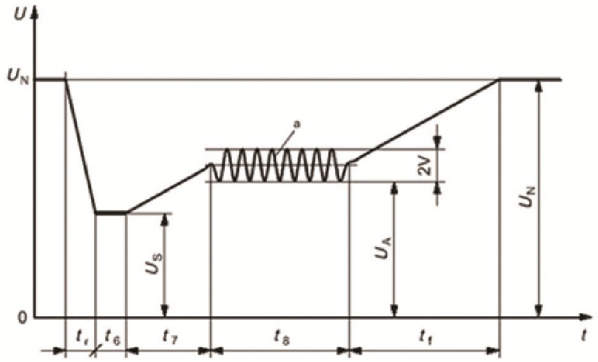
TP4


U
Us
T2
4.5
T1
10
10 1
0
t (s)

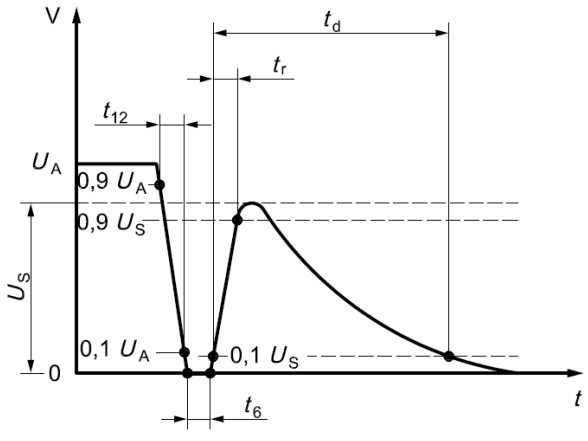
TP5


100
90
80
70
60
50
40
30
20
10
0
0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340

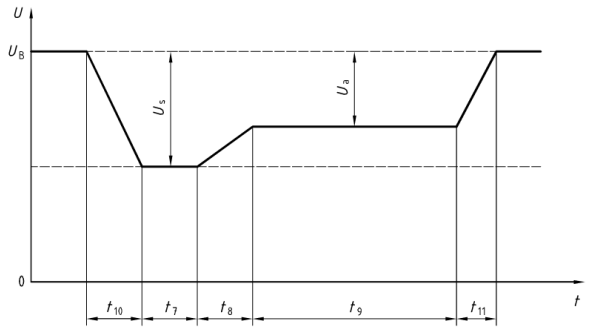
TP6


U
U_N
a
2V
U_S
U_A
U_N
0
t_1
t_6
t_7
t_8
t_9
t

TP7


V
t_d
t_r
t_{12}
U_A
0,9 U_A
0,9 U_S
U_S
0,1 U_A
0,1 U_S
0
t_6
t

TP8



1.4.4 Technical data

Model	RV 16750	
DUT power supply	12V	24V
TP1		
Stable voltage (UB)	12V±0.2V	24V±0.4V
Over voltage amplitude	18V、24V	36V
Test interval	1~9999min	
Test count	1~9999	
TP 2		
Umax	16V	32V
AC stack amplitude (Upp)	1V、4V	1V、4V、10V
Scan duration	120s	
Scan count	1~9999	
Scan interval	1~9999s	
TP 3		
Umax	16V	32V
Slow down and gradual change	0.5 ± 0.1 V/min	
Slow drop and set up time	1min	
Test interval	1~9999s	

Test count	1~9999	
TP 4		
Power supply voltage	6.0V~10.5V	10.0V~22.0V
Voltage drop amplitude	4.5V	9V
Interruption time	0.1~9.9s	
The time of rise and fall	<10ms	
Test count	1~9999	
Test interval	1~9999s	
TP 5		
Power supply voltage	6.0V~10.5V	10.0V~22.0V
Time interval	1~9999s	
Count	1~9999	
TP 6		
Regulated voltage (Un)	12V±0.2V	24V±0.2V
Us	4V~9V	12V~16V
Ua	1.5V~7V(|Ua|≤|Us|)	5V~12V(|Ua|≤|Us|)
T6	10ms~45ms	5ms~100ms
T7	1-50ms	
T8	0.5s~20s	
Tr	5ms	10 ms
Tf	5ms~100ms	
Source impedance (Ri)	10mΩ	
Allowed repeat (N)	1~9999	
Superimposed AC amplitude	2v	
Superimposed AC frequency	2Hz	
TP7		

	12V	24V
UA	13.5V	27V
Us	10V	20V
Impedance (Ri)	0Ω ~ 0.05 Ω	
T12	1ms±0.5ms	
T6	1ms±0.5ms	
Tr	1ms±0.5ms	
Td	0.2s ~ 2s	
Pulse period	0.3s ~ 9.9	
Rated load current	54A	
Count	1 ~ 9999	
TP8		
	12V	24V
UB	12V	24V
Us	-6 ~ -7V	-12V ~ -16V
Ua	-2.5V ~ -6V（| Ua | ≤ | Us |）	-5V ~ -12V（| Ua | ≤ | Us |）
Impedance (Ri)	0 Ω ~ 0.02 Ω	
t7	10ms ~ 45ms	50ms ~ 100ms
t8	≤50ms	
t9	0.5s ~ 20s	
t10	5ms	10ms
T11	5 ~ 100ms	
Rated load current	54A	
Count	1 ~ 9999	
Power supply	AC220V±10% 50/60Hz	
Ambient temperature	15℃ ~ 35℃	

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