

JASO Standard Compliant Automotive Transient Surge Simulator

JSS-001

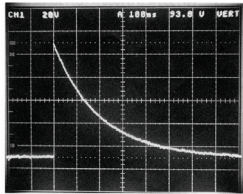
Simulator to reproduce various transient surge phenomena which are generated in a vehicle and required in JASO D001-94 General Rules of Environmental Testing Methods for Automotive Electronic Equipment established by The Society of Automotive Engineers of Japan Standard, and evaluate the immune resistibility of the equipped electronics devices against the surge.

- JASO D001-94 Standard compliant simulator
- Can be used for both 12 V and 24 V systems.
- One touch selection possible for the output surge waveform.

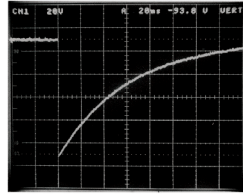


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Output Waveforms



A-1 Waveform
 τ :200ms
 V:20V/Div
 H:100ms/Div



B-1 Waveform
 τ :60ms
 V:20V/Div
 H:20ms/Div

Specifications

Parameter	Specification (JSS-001)
Output voltage / RC Time constant / Output impedance / DC cut time	
Type A-1	100 V / 200ms / 0.8 Ω / -
Type A-2	150 V / 2.5 μ s / 0.4 Ω / -
Type B-1	-100 V / 60ms / 8 Ω / 300ms
Type B-2	-320 V / 2ms / 80 Ω / 10ms
Repetition frequency / number of pulses	30s / 1 ~ 999999
DUT power capacity	Max. DC 50 V / 10 A
Dimensions	(W)555 × (H)1500 × (D)790 mm
Weight	Approx. 160 kg

JASO D001-94

1. Conditions of Transient Voltage Test

Class	Type of test	Test conditions					Number of pulses	Location of transient voltage impression
		Vp (V)	τ (μ s)	f (Hz)	R3 (Ω)			
12V system	Type A	A-1	70	200000	-	0.8	1	Power supply terminal
		A-2	110	2.5	-	0.4	10	
	Type B	B-1	-80	60000	1/30	8	100	
		B-2	-260	2000		80		
24V system	Type C	As agreed between the parties concerned					via agreement	Related Terminal
	Type D	D-1	110	400000	-	1.5	1	Power supply terminal
		D-2	170	2.5	1/30	0.9	10	
	Type E	-320	26000		210	100	via agreement	Related Terminal
	Type F	As agreed between the parties concerned						

2. Constants in the Generating Circuits for Type A and Type D Transient Voltage Tests

Type of test	Capacitor voltage (V)	ResistorR1	ResistorR2 (Ω)	ResistorR3 (Ω)	ResistorR4 (Ω)	Capacitor C (μ F)	Remarks
Type A	A-1	88	5 (100)	1 (100)	4 (100)	80000	} Select the either combination
		70	2 (100)	0.8 (100)	∞	110000	
	A-2	110	0.6 (200)	0.4 (150)	∞	4.7	
Type D	D-1	130	22 (100)	2 (100)	11 (100)	50000	} Select the either combination
		110	5.5 (100)	1.5 (100)	∞	73000	
	D-2	170	1.2 (100)	0.9 (100)	∞	2.2	

Remarks

1. Numbers in parenthesis are reference figures for resistor power rating. Unit: W
 2 The specified values for resistors and capacitors shall be true values not designated values.

3. Constants in the Generating Circuits for Type B and Type E Transient Voltage Tests

Type of test	Capacitor voltage (V)	ResistorR1	ResistorR2 (Ω)	ResistorR3 (Ω)	ResistorR4 (Ω)	Capacitor C (μ F)	Remarks
Type B	B-1	-100	50 (10)	10 (10)	40 (10)	2400	} Select the either combination
		-80	20 (10)	8 (10)	∞	3000	
	B-2	-260	60 (5)	80 (5)	∞	33	
Type E	-457	To be determined along power supply capacity for the charging	27 (100)	300 (10)	700 (10)	1000	} Select the either combination
	-320		13 (100)	210 (10)	∞	2000	

Remarks

1. Numbers in parenthesis are reference figures for resistor power rating. Unit: W
 2 The specified values for resistors and capacitors shall be true values not designated values.
 * See the original document for the Figures.