



3110A Standards Waveform Generator

The AE Techron 3110A Standards Waveform Generator offers a comprehensive library of test waveforms and routines for Automotive and Aviation EMC testing. The list below shows the tests available in the 3110A Standards Library (V2.0.7).

Automotive Tests

<u>ANSI ASAE EP455</u>		
	5.1.1	Operating Temperature
	5.1.2	Storage Temperature
	5.1.3	Thermal Shock
	5.2.1	Altitude, Operating
	5.2.2	Altitude, Storage
	5.3	Dust
	5.5	Immersion
	5.6	Wash
	5.7	Particle Impact
	5.8.1	Spray Exposure
	5.8.2	Brush Exposure
	5.8.9	Salt Exposure
	5.10.2	Over-Voltage
	5.10.3	Reverse Polarity
	5.10.4	Short Circuit Protection
	5.10.5	Memory Retention
	5.10.6	Starting Voltage
	5.10.7	Power-up Operational Requirements
	5.11.1	Accessory Noise
	5.13.1	Humidity, Exposure
	5.13.2	Humidity, Soak
	5.14	Mechanical Shock
	5.15	Mechanical Vibration
	5.17	Combined Environments
<u>Audi I-EE-32</u>		
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	2	Start Voltage Dip, 2
	2	Start Voltage Dip, 3
	2	Start Voltage Dip, 4

	2	Start Voltage Dip, 5
	6	Generator Disorders (sine wave sweep)
	11.1	Load Analysis, Single Occupancy
	11.2	Load Analysis, Full Capacity Utilization
	11.3	Load Analysis, Short Circuit Test
	11.4	Ground Potential Difference
	11.5	Overload Test
	13	Voltage Ramp per VW80101
	13	Fast Voltage Ramp
	14	Overvoltage 26V
	15	Overvoltage 17V
	17	Contact Test, Bounce 1
	17	Contact Test, Bounce 2
	17	Contact Test, Bounce 3
	18	Dips (Voltage Drops)
BMW GS 95003-2		
	5.2.1.1	Testing for Immunity to 18V Transient
	5.2.1.3.1	Slow Decreasing and Increasing of Operating Voltage
	5.2.1.3.1	Slow Decreasing and Increasing of Operating Voltage, alternate
	5.2.1.3.2	Slow Decreasing and Fast Rise of Operating Voltage
	5.2.1.3.3	IGR, Development of Voltage
	5.2.1.5	Cranking Profile, Level I
	5.2.1.5	Cranking Profile, Level Ip
	5.2.1.5	Cranking Profile, Level II
	5.2.1.5	Cranking Profile, Level IIp
	5.2.1.5	Cranking Profile, Level III
	5.2.1.6	Very Brief Voltage Dip
	5.2.1.7	Brief Voltage Dip
	5.3.2	Load Dump Impulses 5A severity Level 3
	5.3.2	Load Dump Impulses 5A severity Level 4
	5.3.2	Load Dump Impulses 5B severity Level 3
	5.3.2	Load Dump Impulses 5B severity Level 4
	5.3.3.1	Protection Against Polarity Reversal
	5.3.3.2	Protection Against Polarity Reversal for Semiconductor Power Circuit
	5.3.4	Interruption

	5.3.5.1	Testing of Inputs and Outputs without Load Circuits
BMW GS 95024-2-1		
	4.1	E-01 Long Term Surge
	4.2	E-02 Transient Surge, Short
	4.2	E-02 Transient Surge, Endurance Test
	4.3	E-03 Transient Undervoltage
	4.4	E-04 Jump Start
	4.6	E-06 Superimposed AC Voltage
	4.7	E-07 Slow Decrease and Increase of Supply Voltage, code a
	4.7	E-07 Slow Decrease and Increase of Supply Voltage, code b
	4.7	E-07 Slow Decrease and Increase of Supply Voltage, code c
	4.7	E-07 Slow Decrease and Increase of Supply Voltage, code d
	4.8	E-08 Slow Decrease and Rapid Increase of Supply Voltage, code a
	4.8	E-08 Slow Decrease and Rapid Increase of Supply Voltage, code b
	4.8	E-08 Slow Decrease and Rapid Increase of Supply Voltage, code c
	4.8	E-08 Slow Decrease and Rapid Increase of Supply Voltage, code d
	4.9	E-09 Reset Behavior, code a, test sequence 1
	4.9	E-09 Reset Behavior, code a, test sequence 2
	4.9	E-09 Reset Behavior, code b, test sequence 1
	4.9	E-09 Reset Behavior, code b, test sequence 2
	4.9	E-09 Reset Behavior, code c, test sequence 1
	4.9	E-09 Reset Behavior, code c, test sequence 2
	4.9	E-09 Reset Behavior, code d, test sequence 1
	4.9	E-09 Reset Behavior, code d, test sequence 2
	4.10	E-10 Short Interruptions
	4.11	E-11 Start Pulse, Cold Start, Normal
	4.11	E-11 Start Pulse, Cold Start, Sharp
	4.11	E-11 Start Pulse, Warm Start, Long Test Sequence
	4.11	E-11 Start Pulse, Warm Start, Short Test Sequence
	4.12	E-12 Voltage Curve with Intelligent Generator Control
	4.13	E-13 Interrupt Pin, Loose Contact 1
	4.14	E-14 Connector Interruption
	4.17	E-17 Short Circuit of Signal Lines and Load Circuits, code a
	4.17	E-17 Short Circuit of Signal Lines and Load Circuits, code b
	4.17	E-17 Short Circuit of Signal Lines and Load Circuits, code c

	4.17	E-17 Short Circuit of Signal Lines and Load Circuits, code d
	4.19	E-19 Quiescent Current
	4.21	E-21 Reverse Power
BMW GS 95024-2-2		
	8.1	E-01 Long Term Surge
	8.2	E-02 Transient Surge, Short Test
	8.2	E-02 Transient Surge, Endurance Test
	8.3	E-03 Transient Undervoltage
	8.4	E-04 Jump Start
	8.6	E-06 Superimposed AC Voltage
	8.7	E-07 Slow Decrease and Increase of Supply Voltage, code a
	8.7	E-07 Slow Decrease and Increase of Supply Voltage, code b
	8.7	E-07 Slow Decrease and Increase of Supply Voltage, code c
	8.7	E-07 Slow Decrease and Increase of Supply Voltage, code d
	8.8	E-08 Slow Decrease and Rapid Increase of Supply Voltage, code a
	8.8	E-08 Slow Decrease and Rapid Increase of Supply Voltage, code b
	8.8	E-08 Slow Decrease and Rapid Increase of Supply Voltage, code c
	8.8	E-08 Slow Decrease and Rapid Increase of Supply Voltage, code d
	8.9	E-09 Reset Behavior, code a, test sequence 1
	8.9	E-09 Reset Behavior, code a, test sequence 2
	8.9	E-09 Reset Behavior, code b, test sequence 1
	8.9	E-09 Reset Behavior, code b, test sequence 2
	8.9	E-09 Reset Behavior, code c, test sequence 1
	8.9	E-09 Reset Behavior, code c, test sequence 2
	8.9	E-09 Reset Behavior, code d, test sequence 1
	8.9	E-09 Reset Behavior, code d, test sequence 2
	8.10	E-10 Short Interruptions
	8.11	E-11 Start Pulse, Cold Start, Normal
	8.11	E-11 Start Pulse, Cold Start, Sharp
	8.11	E-11 Start Pulse, Warm Start, Long Test Sequence
	8.11	E-11 Start Pulse, Warm Start, Short Test Sequence
	8.12	E-12 Voltage Curve with Intelligent Generator Control
	8.13	E-13 Interrupt Pin, Loose Contact 1
	8.14	E-14 Connector Interruption
	8.17	E-17 Short Circuit of Signal Lines and Load Circuits, code a

	8.17	E-17 Short Circuit of Signal Lines and Load Circuits, code b
	8.17	E-17 Short Circuit of Signal Lines and Load Circuits, code c
	8.17	E-17 Short Circuit of Signal Lines and Load Circuits, code d
	8.19	E-19 Quiescent Current
	8.21	E-21 Reverse Power
	9.1	E-40 Very Brief Voltage Drop
	9.3.2	E-42b Low-Resistance Voltage Impulse on Charge Wire
Case New Holland ENS0310		
	9.1.1	High Temperature Soak Tests, 12 VDC
	9.1.1	High Temperature Soak Tests, 24 VDC
	9.1.2	Low Temperature Soak Tests, 12 VDC
	9.1.2	Low Temperature Soak Tests, 24 VDC
	9.1.4	Temperature Shock Tests, 12 VDC
	9.1.4	Temperature Shock Tests, 24 VDC
	9.2.1	Shock Tests, 12 VDC
	9.2.1	Shock Tests, 24 VDC
	9.2.2	Vibration Tests, 12 VDC
	9.2.2	Vibration Tests, 24 VDC
	9.3.1	Altitude Tests, 12 VDC
	9.3.1	Altitude Tests, 24 VDC
	9.3.2	Dust Ingress Test, 12 VDC
	9.3.2	Dust Ingress Test, 24 VDC
	9.3.3	Water Ingress Test, 12 VDC
	9.3.3	Water Ingress Test, 24 VDC
	9.3.3.6	Water Ingress Test, Rain/Shine, 12VDC
	9.3.3.6	Water Ingress Test, Rain/Shine, 24VDC
	9.4.1	Humidity Test, 12 VDC
	9.4.1	Humidity Test, 24 VDC
	9.4.2	Salt Spray Test, 12 VDC
	9.4.2	Salt Spray Test, 24 VDC
	9.4.3	Chemical Resistance Test, 12 VDC
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	9.6.5	Electrical Steady State Tests, Over-Voltage, 12 VDC
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	9.6.6	Electrical Steady State Tests, Reverse Polarity, 12 VDC

	9.6.6	Electrical Steady State Tests, Reverse Polarity, 24 VDC
	9.6.7	Electrical Steady State Tests, Short Circuit to Ground, 12 VDC
	9.6.7	Electrical Steady State Tests, Short Circuit to Ground, 24 VDC
	9.6.8	Electrical Steady State Tests, Short Circuit to Supply, 12 VDC
	9.6.8	Electrical Steady State Tests, Short Circuit to Supply, 24 VDC
	9.6.9	Electrical Steady State Tests, Short Circuit to Ground - Key On, 12 VDC
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	9.6.10	Electrical Steady State Tests, Short Circuit to Supply - Key On, 12 VDC
	9.6.10	Electrical Steady State Tests, Short Circuit to Supply - Key On, 24 VDC
	9.6.11	Electrical Steady State Tests, Power Up Operational Requirements, 12 VDC
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	9.7.7	EMC Tests, Cranking Test, 12 VDC
	9.7.7	EMC Tests, Cranking Test, 24 VDC
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Chrysler CS-11809		
	4.1.1	Supply Voltage Range, 6-16VDC
	4.1.1	Supply Voltage Range, 8-16VDC
	4.1.1	Supply Voltage Range, 9-16VDC
	4.1.2	Ignition Draw Off, 12VDC
	4.2.1	Sneak Path, 12VDC
	4.2.2	Supply Voltage Drop Out, 12VDC
	4.2.3	Supply Voltage Dips, 12VDC
	4.2.4	Engine Cranking Low Voltage, Cold Cranking, 12VDC
	4.2.6	Supply Voltage Ramp Up, 12VDC
	4.2.7	Supply Voltage Ramp Down, 6VDC
	4.2.7	Supply Voltage Ramp Down, 8VDC
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	4.3.1	Defective Regulation (full-fielded alternator), 12VDC
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	4.4.2	Immunity to Short Circuits in the I-O Signal Lines, 12VDC
	4.4.4	Ground Reference Offset, 12VDC

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	4.1.1	Supply Voltage Range, 4.5-16VDC
	4.1.1	Supply Voltage Range, 6-16VDC
	4.1.1	Supply Voltage Range, 8-16VDC
	4.1.1	Supply Voltage Range, 9-16VDC
	4.1.1	Supply Voltage Range, 10-16VDC
	4.1.2	Ignition Draw Off (IOD), 12VDC
	4.1.3	Supply Voltage Ripple (superimposed alternating voltage), 12VDC
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	4.2.3	Power Supply Disconnection, 12VDC
	4.2.4	Reset Behavior at Voltage Drop, 12VDC, Code A
	4.2.4	Reset Behavior at Voltage Drop, 12VDC, Code B
	4.2.4	Reset Behavior at Voltage Drop, 12VDC, Code C
	4.2.4	Reset Behavior at Voltage Drop, 12VDC, Code D
	4.2.6	Engine Cranking Low Voltage, Resembling Cold Cranking, 12VDC
	4.2.7	Engine Cranking Low Voltage, Warm Cranking Start-Stop, 12VDC
	4.2.8	Slow Decrease and Increase of Supply Voltage, 12VDC, Code A
	4.2.8	Slow Decrease and Increase of Supply Voltage, 12VDC, Code B
	4.2.8	Slow Decrease and Increase of Supply Voltage, 12VDC, Code C
	4.2.8	Slow Decrease and Increase of Supply Voltage, 12VDC, Code D
	4.2.8	Slow Decrease and Increase of Supply Voltage, 12VDC, Code A, B, C, D
	4.3.1	Supply Over Voltage-Defective Regulation, 12VDC
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	4.4.1	Immunity to Short Circuits in the Supply Voltage Input and Load Output Lines, 12VDC
	4.4.2	Immunity to Short Circuits in I-O Signal Lines, 12VDC

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	4.1.2	Slow Decrease and Increase of Supply Voltage, 12VDC
	4.1.2	Slow Decrease and Increase of Supply Voltage, 24VDC
	4.1.3	Reset Behavior on Voltage Drop, test level 1, 12VDC

	4.1.3	Reset Behavior on Voltage Drop, test level 1, 24VDC
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Cummins 14269		
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	4.2	Reverse Voltage, 12VDC
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	4.2	Reverse Voltage, Low Voltage
	4.3	Short Circuit, 12VDC
	4.3	Short Circuit, 24VDC
	4.4	Open Circuits, 12VDC
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	5.2.2.4	Survival Voltage, 12VDC
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	5.2.2.5	Power Supply Current, 24VDC
	5.3.1.1	Water Intrusion Test - Atmospheric, 12VDC
	5.3.1.1	Water Intrusion Test - Atmospheric, 24VDC
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	5.3.7.3	Short Duration Temperature Spikes, 12VDC
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	5.3.8.1.1	Temperature Cycling (Segments 1 & 3), 12VDC
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	5.3.9	Combined Environment, 12VDC
	5.3.9	Combined Environment, 24VDC
	5.3.12	Salt Fog, 12VDC
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DAF BSL-003		
	101.1	Supply Voltage Requirements
	101.2	Damage Level
	102.1	Reversing Polarity
	102.2	Open and Short Circuiting
DAF BSL-006		
	2.1	Minimum and Maximum Voltage
	2.2	Jump Start
	2.3	Voltage Drain Test
	3	Minimal Currents and Switches
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	4.2	Open and Short Circuiting
Daimler Chrysler DC-10842		
	4.2	Overtoltage, 12VDC
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	4.3.1	Failure of Alternator, 12VDC
	4.3.1	Failure of Alternator, 24VDC
	4.3.2	Series Charging of Batteries, 12VDC
	4.4	Superimposed Alternating Voltage, severity 1, 12VDC
	4.4	Superimposed Alternating Voltage, severity 1, 24VDC
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	4.5.4	Test 3 - Starting Profile, 24VDC
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	4.6.2.1	Reversed Voltage, Case 1, 12VDC
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	4.6.2.1	Reversed Voltage, Case 4, 12VDC
	4.7	Open Circuit Test, 12VDC
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	4.11	Unintentional Current Flows and Voltage Potentials, 12VDC
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	4.12	Supply Voltage Ramp Up Test, 12VDC
	4.13	Supply Voltage Ramp Down Test, code a, 12VDC
	4.13	Supply Voltage Ramp Down Test, code b, 12VDC
	4.13	Supply Voltage Ramp Down Test, code c, 12VDC
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	4.17	Standby Mode - Sleep Mode - IOD Requirements, 24VDC

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	3.2	Operating Voltage Range, class A
	3.2	Operating Voltage Range, class B
	3.2	Operating Voltage Range, class C
	3.2	Operating Voltage Range, class D
	3.3	Ignition Off Current Draw
	3.4	Supply Voltage Extremes, A
	3.4	Supply Voltage Extremes, B
	3.4	Supply Voltage Extremes, C
	3.5.7	Supply Voltage Ramp Down Test
	4.2	Operating Voltage Range, class A
	4.2	Operating Voltage Range, class B
	4.2	Operating Voltage Range, class C
	4.2	Operating Voltage Range, class D

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	3.9.5.1	Reset Behavior at Voltage Drop, Class A1
	3.9.5.1	Reset Behavior at Voltage Drop, Class A2
	3.9.5.1	Reset Behavior at Voltage Drop, Class A3
	3.9.5.3	Immunity to Micro Interruptions, Ref A
	3.9.5.3	Immunity to Micro Interruptions, Ref B
	3.9.5.3	Immunity to Micro Interruptions, Ref C

Ford CS-2009.1

	CI210	Immunity from Continuous Power Line Disturbances, 12VDC
	CI210	Immunity from Continuous Power Line Disturbances, 12VDC (sweep)
	CI220	Pulse f1 (13.5V)
	CI220	Pulse f2 (13.5V)
	CI220	Pulse g1 (13.5V loaded condition)
	CI220	Pulse g1 (13.5V open circuit condition)
	CI220	Pulse g2-a (13.5) (unsuppressed)
	CI220	Pulse g2-b (13.5V) (suppressed)
	CI230	Immunity from Power Cycling, Waveform A
	CI230	Immunity from Power Cycling, Waveform B
	CI230	Immunity from Power Cycling, Waveform C
	CI230	Immunity from Power Cycling, Waveform D

Ford FMC1278		
	CI210	Immunity from Continuous Power Line Disturbances, Level 1, 13.5V (requires attenuator)
	CI210	Immunity from Continuous Power Line Disturbances, Level 1, 27V (requires attenuator)
	CI210	Immunity from Continuous Power Line Disturbances, Level 2, 13.5V (requires attenuator)
	CI210	Immunity from Continuous Power Line Disturbances, Level 2, 27V (requires attenuator)
	CI220	Pulse 2b (24V)
	CI220	Pulse 5a (12V)
	CI220	Pulse 5a (24V)
	CI220	Pulse 5b (12V)
	CI220	Pulse A1 (12v)
	CI230	Immunity from Power Cycling, Waveform A
	CI230	Immunity from Power Cycling, Waveform B
	CI231	Immunity from Power Cycling, 24VDC
	CI250	Immunity to Ground Voltage Offset Continuous Disturbances
	CI260	Waveform ABD 27V Template
	CI260	Waveform A, 13.5V, 100 usec (by loop)
	CI260	Waveform A, 13.5V, 100 usec
	CI260	Waveform A, 13.5V, 300 usec
	CI260	Waveform A, 13.5V, 500 usec
	CI260	Waveform A, 13.5V, 2 msec
	CI260	Waveform A, 13.5V, 5 msec
	CI260	Waveform A, 13.5V, 10 msec
	CI260	Waveform A, 13.5V, 30 msec
	CI260	Waveform A, 13.5V, 50 msec (by loop)
	CI260	Waveform A, 13.5V, 50 msec
	CI260	Waveform A, 27V, 100 usec
	CI260	Waveform A, 27V, 300 usec
	CI260	Waveform A, 27V, 500 usec
	CI260	Waveform A, 27V, 2 msec
	CI260	Waveform A, 27V, 5 msec
	CI260	Waveform A, 27V, 10 msec
	CI260	Waveform A, 27V, 30 msec
	CI260	Waveform A, 27V, 50 msec

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	CI260	Waveform B, 13.5V, 100 usec (by loop)
	CI260	Waveform B, 13.5V, 300 usec (by loop)
	CI260	Waveform B, 13.5V, 500 usec (by loop)
	CI260	Waveform B, 13.5V, 2 msec (by loop)
	CI260	Waveform B, 13.5V, 5 msec (by loop)
	CI260	Waveform B, 13.5V, 10 msec
	CI260	Waveform B, 13.5V, 30 msec (by loop)
	CI260	Waveform B, 13.5V, 50 msec (by loop)
	CI260	Waveform B, 27V, 100 usec
	CI260	Waveform B, 27V, 300 usec
	CI260	Waveform B, 27V, 500 usec
	CI260	Waveform B, 27V, 2 msec
	CI260	Waveform B, 27V, 5 msec
	CI260	Waveform B, 27V, 10 msec
	CI260	Waveform B, 27V, 30 msec
	CI260	Waveform B, 27V, 50 msec
	CI260	Waveform C, 13.5V, 100 usec
	CI260	Waveform C, 13.5V, 300 usec
	CI260	Waveform C, 13.5V, 500 usec
	CI260	Waveform C, 27V, 100 usec
	CI260	Waveform C, 27V, 300 usec
	CI260	Waveform C, 27V, 500 usec
	CI260	Waveform D, 13.5V, 100 usec (by loop)
	CI260	Waveform D, 13.5V, 300 usec (by loop)
	CI260	Waveform D, 13.5V, 500 usec (by loop)
	CI260	Waveform D, 13.5V, 2 msec (by loop)
	CI260	Waveform D, 13.5V, 5 msec (by loop)
	CI260	Waveform D, 13.5V, 10 msec (by loop)
	CI260	Waveform D, 13.5V, 30 msec (by loop)
	CI260	Waveform D, 13.5V, 50 msec (by loop)
	CI260	Waveform D, 27V, 100 usec (by loop)
	CI260	Waveform D, 27V, 300 usec (by loop)
	CI260	Waveform D, 27V, 500 usec (by loop)
	CI260	Waveform D, 27V, 2 msec (by loop)
	CI260	Waveform D, 27V, 5 msec (by loop)

	CI260	Waveform D, 27V, 10 msec (by loop)
	CI260	Waveform D, 27V, 30 msec (by loop)
	CI260	Waveform D, 27V, 50 msec (by loop)
General Motors GMW3172_H		
	8.2.1	Jump Start
	8.2.2	Reverse Polarity
	8.2.3	Overvoltage (with overvoltage protection)
	8.2.3	Overvoltage (without overvoltage protection)
	8.2.4	State Change Waveform Characterization
	9.2.1	Parasitic Current
	9.2.2	Power Supply Interruptions, 12V, Code A
	9.2.2	Power Supply Interruptions, 12V, Code B
	9.2.2	Power Supply Interruptions, 12V, Code C & D
	9.2.2	Power Supply Interruptions, 12V, Code E
	9.2.2	Power Supply Interruptions, 12V, Code F
	9.2.3	Battery Voltage Dropout, 12VDC, Code A
	9.2.3	Battery Voltage Dropout, 12VDC, Code B
	9.2.3	Battery Voltage Dropout, 12VDC, Code C & D
	9.2.3	Battery Voltage Dropout, 12VDC, Code E
	9.2.3	Battery Voltage Dropout, 12VDC, Code F
	9.2.4	Sinusoidal Superimposed Voltage, 12VDC
	9.2.5	Pulse Superimposed Voltage, 12VDC, U(p) only
	9.2.7	Continuous Short Circuit to Battery and to Ground, 12VDC, Code A
	9.2.7	Continuous Short Circuit to Battery and to Ground, 12VDC, Code B
	9.2.7	Continuous Short Circuit to Battery and to Ground, 12VDC, Code C
	9.2.7	Continuous Short Circuit to Battery and to Ground, 12VDC, Code D
	9.2.7	Continuous Short Circuit to Battery and to Ground, 12VDC, Code E
	9.2.7	Continuous Short Circuit to Battery and to Ground, 12VDC, Code F
	9.2.8	Ground Interconnect Short to Battery, 12VDC, Code A, B, C, E, F
	9.2.8	Ground Interconnect Short to Battery, 12VDC, Code D
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity I, Functional, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity I, Durability, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity II, Ua=2.5V, Functional, 12VDC

	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity II, Ua=2.5V, Durability, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity II, Ua=3V, Functional, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity II, Ua=3V, Durability, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity III, Ua=2.5V, Functional, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity III, Ua=2.5V, Durability, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity III, Ua=3V, Functional, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity III, Ua=3V, Durability, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity III, Ua=4V, Functional, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity III, Ua=4V, Durability, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity IV, Ua=2.5V, Functional, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity IV, Ua=2.5V, Durability, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity IV, Ua=3V, Functional, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity IV, Ua=3V, Durability, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity IV, Ua=4V, Functional, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity IV, Ua=4V, Durability, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity IV, Ua=5V, Functional, 12VDC
	9.2.17	Crank Pulse Capability and Durability, GMW3097 pulse 4, Severity IV, Ua=5V, Durability, 12VDC
	9.2.17	Crank Pulse Capability and Durability, Waveform 1, Functional, 12VDC
	9.2.17	Crank Pulse Capability and Durability, Waveform 1, Durability, 12VDC
	9.2.17	Crank Pulse Capability and Durability, Waveform 2, Functional, 12VDC
	9.2.17	Crank Pulse Capability and Durability, Waveform 2, Durability, 12VDC
	9.2.17	Crank Pulse Capability and Durability, Waveform 3, Functional, 12VDC
	9.2.17	Crank Pulse Capability and Durability, Waveform 3, Durability, 12VDC
	9.2.17	Crank Pulse Capability and Durability, Waveform 4, Functional, 12VDC
	9.2.17	Crank Pulse Capability and Durability, Waveform 4, Durability, 12VDC
	9.2.17	Crank Pulse Capability and Durability, Waveform 5, Functional, 12VDC
	9.2.17	Crank Pulse Capability and Durability, Waveform 5, Durability, 12VDC
	9.2.17	Crank Pulse Capability and Durability, Waveform 6, Functional, 12VDC

	9.2.17	Crank Pulse Capability and Durability, Waveform 6, Durability, 12VDC
	9.3.1	Vibration with Thermal Cycling, 12VDC
	9.3.2	Post Thermal Fatigue Vibration, 12VDC
	9.3.3	Mechanical Shock - Pothole, 12VDC
	9.3.5	Mechanical Shock - Closure Slam, 12VDC
	9.3.9	Connector Installation Abuse - Side Force, 12VDC
	9.3.10	Connector Installation Abuse - Foot Load, 12VDC
	9.4.1	High Temperature Degradation, 12VDC
	9.4.3	Power Temperature Cycle, 12VDC
	9.4.5	Humid Heat Cyclic, 12VDC
	9.4.6	Humid Heat Constant, 12VDC
	9.4.8	Salt Spray, IP Water Code 3 or 6K, wet side of door interior, 12VDC
	9.4.8	Salt Spray, IP Water Code 6K or 8 or 9K, non-interior component without direct exposure to salt spray, 12VDC
	9.4.8	Salt Spray, IP Water Code 6K or 8 or 9K, non-interior component with direct exposure to salt spray, 12VDC
	9.4.8	Salt Spray, IP Water Code 6K or 8 or 9K, 12VDC
	9.5.3	Seal, 12VDC
	9.5.4	Water Freeze, 12VDC
	9.5.5	Sugar Water Function Impairment, 12VDC

Honda 7794Z-SAAA-000

	2	Temperature Characteristic Test
	3	Test at Starting Voltage, Chattering Waveform Application A, 13.5VDC
	3	Test at Starting Voltage, Chattering Waveform Application B, 13.5VDC
	3	Test at Starting Voltage, Chattering Waveform Application C, 13.5VDC
	3	Test at Starting Voltage, Gradual Increase Voltage Application, 8VDC
	3	Test at Starting Voltage, Gradual Increase Voltage Application, 13.5VDC
	3	Test at Starting Voltage, Gradual Increase Voltage Application, 16VDC
	3	Test at Starting Voltage, Ignition Noise Overriding, 13.5VDC
	3	Test at Starting Voltage, Instantaneous Voltage, 8VDC
	3	Test at Starting Voltage, Instantaneous Voltage, 13.5VDC
	3	Test at Starting Voltage, Instantaneous Voltage, 16VDC
	3	Test at Starting Voltage, Sine Wave Application A, 13.5VDC
	3	Test at Starting Voltage, Sine Wave Application B, 13.5VDC
	3	Test at Starting Voltage, Sine Wave Application C, 13.5VDC
	3	Test at Starting Voltage, Sine Wave Application D, 13.5VDC

	13	Horn Function Noise Injection Test, 13.5VDC
	15	Abnormal Power Supply Voltage, Excess Voltage Injection Test (Class A), 13.5VDC
	15	Abnormal Power Supply Voltage, Excess Voltage Injection Test (Class B), 13.5VDC
	15	Abnormal Power Supply Voltage, Excess Voltage Injection Test (Class C), 13.5VDC
	15	Abnormal Power Supply Voltage, Reverse Voltage Injection Test, 13.5VDC
	18	Standard Moisture Test, 13.5VDC
	19	High Temperature Functional Endurance Test, 13.5VDC
	20	Low Temperature Functional Endurance Test, 13.5VDC
	21	Dew Condensation Test, 13.5VDC
	22	Temperature Cycle Test, 13.5VDC
	24	Complex Endurance Test, 13.5VDC
	25	Vibrating Test, 13.5VDC
	29	Intermittent Function Durability Test, Test Waveform A, 8VDC
	29	Intermittent Function Durability Test, Test Waveform B, 13.5VDC
	29	Intermittent Function Durability Test, Test Waveform C, 16VDC
	32	Temperature and Humidity Cycle, 13.5VDC

Hyundai ES 39110-00

	CI 210-B1	Abnormal Sinewave
	CI 230-A	Power Cycle, Run
	CI 230-B1	Power Cycle, Start
	CI 230-B2	Power Cycle, Battery via Relay
	CI 230-C	Power Cycle, Battery Direct
	CI 250-B	Conducted Immunity, Groundshift, Sinewave
	CI 260-A	Power Dropout High (T=100us)
	CI 260-A	Power Dropout High (T=200us)
	CI 260-A	Power Dropout High (T=400us)
	CI 260-A	Power Dropout High (T=700us)
	CI 260-A	Power Dropout High (T=1ms)
	CI 260-A	Power Dropout High (T=3ms)
	CI 260-A	Power Dropout High (T=5ms)
	CI 260-A	Power Dropout High (T=7ms)
	CI 260-A	Power Dropout High (T=10ms)
	CI 260-A	Power Dropout High (T=12ms)
	CI 260-A	Power Dropout High (T=18ms)

	CI 260-A	Power Dropout High (T=20ms)
	CI 260-A	Power Dropout High (T=25ms)
	CI 260-A	Power Dropout High (T=50ms)
	CI 260-C	Power Dropout Single
	CI 260-D	Power Dip (Sag) (T=100us)
	CI 260-D	Power Dip (Sag) (T=200us)
	CI 260-D	Power Dip (Sag) (T=400us)
	CI 260-D	Power Dip (Sag) (T=700us)
	CI 260-D	Power Dip (Sag) (T=1ms)
	CI 260-D	Power Dip (Sag) (T=3ms)
	CI 260-D	Power Dip (Sag) (T=5ms)
	CI 260-D	Power Dip (Sag) (T=7ms)
	CI 260-D	Power Dip (Sag) (T=10ms)
	CI 260-D	Power Dip (Sag) (T=12ms)
	CI 260-D	Power Dip (Sag) (T=18ms)
	CI 260-D	Power Dip (Sag) (T=20ms)
	CI 260-D	Power Dip (Sag) (T=25ms)
	CI 260-D	Power Dip (Sag) (T=50ms)
	CI 260-E	Battery Recovery

Hyundai ES 95400-10

	3.4.2	Dark Current
	3.4.3	Reverse Polarity Test of Power
	3.4.4	Over-Voltage Test 1
	3.4.4	Over-Voltage Test 2
	3.4.5	Change Test of Power Voltage When Starting, Test 1
	3.4.5	Change Test of Power Voltage When Starting, Test 2
	3.4.6	Change Test of Power Voltage When Operating Electric Load, Test 1
	3.4.6	Change Test of Power Voltage When Operating Electric Load, Test 2
	3.4.6	Change Test of Power Voltage When Operating Electric Load, Test 3
	3.4.7	Power Voltage Interruption Test
	3.4.8	Short Circuit Test
	3.4.9	Intermittent Test of Power Voltage, Test 1
	3.4.9	Intermittent Test of Power Voltage, Test 2
	3.4.10	Charge and Discharge of Batteries
	3.4.11	Overvoltage, Test 1

	3.4.11	Overvoltage, Test 2
	3.5.1	High-Temperature Exposure Operation Test
	3.5.2	Low-Temperature Exposure Operation Test
	3.5.3	85-85 High Temperature & High Humidity Test on Bias
	3.5.4	Temperature and Humidity Cycle Test
	3.5.5	Temperature Cycle Test
	3.5.6	Dew Condensation Test
	3.5.9-2	Dust Operation Test
	3.5.12	Water Resistance Test
	3.5.13-1	Salt Water Spray Test
	3.5.13-2	Salt Water Spray Test
	3.6.2-1	Vibration Endurance Test 1
	3.6.3-2	Complex Environment Endurance Test
	3.8.2	Operation Test, High Limit
	3.8.2	Operation Test, Low Limit
Hyundai ES 96100-02		
	4.5.1	Operating Voltage
	4.5.3	Power Reverse Polarity Test
	4.5.4	Over-Voltage, Test 1
	4.5.4	Over-Voltage, Test 2
	4.5.5	Power Voltage Fluctuation When Starting Up Engine, Test 1
	4.5.5	Power Voltage Fluctuation When Starting Up Engine, Test 2
	4.5.6	Power Voltage Fluctuation Test on Electric Load Operation
	4.5.7	Power Voltage Interruption Test
	4.5.8	Short Circuit Test
	4.5.9	Power Voltage Intermittent, Test 1
	4.5.9	Power Voltage Intermittent, Test 2
	4.5.10	Battery Charging-Discharging, Test 1
	4.5.10	Battery Charging-Discharging, Test 2
	4.5.11	AC Wave Inflow Test
	4.6.3	High Temperature Operation Test
	4.6.4	Low Temperature Operation Test
	4.6.5	Power Appl at High Temp-Humidity Test
	4.6.6	Temperature-Humidity Cycle Test
	4.6.9	Dew Condensation Test

	4.8.2	Endurance Test at Normal Temperature
ISO 7637-2		
	5.6.2	Transient Immunity, Test Pulse 2B, 12VDC
	5.6.2	Transient Immunity, Test Pulse 2B, 24VDC
	5.6.4	Transient Immunity, Test Pulse 4, 12VDC
	5.6.4	Transient Immunity, Test Pulse 4, 24VDC
	5.6.5	Transient Immunity, Test Pulse 5A, 12VDC
	5.6.5	Transient Immunity, Test Pulse 4B, 24VDC
ISO 16750-2		
	4.2	Direct Current Supply Voltage, 12VDC, Code A
	4.2	Direct Current Supply Voltage, 12VDC, Code B
	4.2	Direct Current Supply Voltage, 12VDC, Code C
	4.2	Direct Current Supply Voltage, 12VDC, Code D
	4.2	Direct Current Supply Voltage, 12VDC, Code E
	4.2	Direct Current Supply Voltage, 12VDC, Code F
	4.2	Direct Current Supply Voltage, 12VDC, Code G
	4.2	Direct Current Supply Voltage, 12VDC, Code H
	4.3.1.1	Overvoltage, Hot, 12VDC
	4.3.1.2	Overvoltage, Room Temperature, 12VDC
	4.3.2.2	Overvoltage, Hot, 24VDC
	4.4	Superimposed Alternating Current, 12VDC, Severity 1
	4.4	Superimposed Alternating Current, 12VDC, Severity 2
	4.4	Superimposed Alternating Current, 12VDC, Severity 4
	4.4	Superimposed Alternating Current, 24VDC, Severity 1
	4.4	Superimposed Alternating Current, 24VDC, Severity 2
	4.4	Superimposed Alternating Current, 24VDC, Severity 3
	4.5	Slow Decrease and Increase of Supply Voltage, 12VDC, Code A
	4.5	Slow Decrease and Increase of Supply Voltage, 12VDC, Code B
	4.5	Slow Decrease and Increase of Supply Voltage, 12VDC, Code C
	4.5	Slow Decrease and Increase of Supply Voltage, 12VDC, Code D
	4.5	Slow Decrease and Increase of Supply Voltage, 24VDC, Code E
	4.5	Slow Decrease and Increase of Supply Voltage, 24VDC, Code F
	4.5	Slow Decrease and Increase of Supply Voltage, 24VDC, Code G
	4.5	Slow Decrease and Increase of Supply Voltage, 24VDC, Code H
	4.6.1	Momentary Drop in Supply Voltage, 12VDC, Code A

	4.6.1	Momentary Drop in Supply Voltage, 12VDC, Code B
	4.6.1	Momentary Drop in Supply Voltage, 12VDC, Code C
	4.6.1	Momentary Drop in Supply Voltage, 12VDC, Code D
	4.6.1	Momentary Drop in Supply Voltage, 24VDC, Code E
	4.6.1	Momentary Drop in Supply Voltage, 24VDC, Code F
	4.6.1	Momentary Drop in Supply Voltage, 24VDC, Code G
	4.6.1	Momentary Drop in Supply Voltage, 24VDC, Code H
	4.6.3	Starting Profile, 12VDC, Level I
	4.6.3	Starting Profile, 12VDC, Level II
	4.6.3	Starting Profile, 12VDC, Level III
	4.6.3	Starting Profile, 12VDC, Level IV
	4.6.3	Starting Profile, 24VDC, Level I
	4.6.3	Starting Profile, 24VDC, Level II
	4.6.3	Starting Profile, 24VDC, Level III
	4.7.2.2	Reversed Voltage, 12VDC, Case 1
	4.7.2.3	Reversed Voltage, 12VDC, Case 2
	4.7.2.3	Reversed Voltage, 24VDC, Case 2
	4.8.2	Ground Reference and Supply Offset, 12VDC
	4.8.2	Ground Reference and Supply Offset, 24VDC
	4.9.1	Open Circuit Test, 12VDC
	4.9.1	Open Circuit Test, 24VDC
	4.10	Short Circuit Protection, 12VDC
	4.10	Short Circuit Protection, 24VDC
	4.11	Withstand Voltage, 12VDC
	4.11	Withstand Voltage, 24VDC
	A.3.1	Load Dump Pulse Verification 12V 2ohm Load
	A.3.1	Load Dump Pulse Verification 12V No Load
	A.3.1	Load Dump Pulse Verification 24V 2ohm Load
	A.3.1	Load Dump Pulse Verification 24V No Load
ISO 21780		
	10.1	Nominal Voltage Range
	10.2	Lower Nominal Transitory Voltages
	10.2	Upper Nominal Transitory Voltages
	10.3	Momentary Overvoltage
	10.4	Load Dump

	10.5	Starting Profile
	10.6	Long Term Overvoltage
	10.7	Overvoltage with Consumer Components
	10.8	Decrease and Increase with Voltage Immunity
	10.9	Ripple Immunity
	10.10	Re-installation
	10.11	Discontinuous Supply Voltage
	10.12	Ground Loss
	10.13	Fault Current
JASO D 001-94		
	5.1	Normal Power Supply Voltage Test, 12VDC
	5.1	Normal Power Supply Voltage Test, 24VDC
	5.2	Test for Power Supply Voltage upon Engine Starting, Method 1, Class 1, 12VDC
	5.2	Test for Power Supply Voltage upon Engine Starting, Method 1, Class 2, 12VDC
	5.2	Test for Power Supply Voltage upon Engine Starting, Method 1, 24VDC
	5.2	Test for Power Supply Voltage upon Engine Starting, Method 2, Class 1, 12VDC
	5.2	Test for Power Supply Voltage upon Engine Starting, Method 2, Class 2, 12VDC
	5.2	Test for Power Supply Voltage upon Engine Starting, Method 2, 24VDC
	5.3	Power Source Micro Interruption Test, 12VDC
	5.3	Power Source Micro Interruption Test, 24VDC
	5.4	Power Supply Inverse Polarity Connection Test, 12VDC
	5.4	Power Supply Inverse Polarity Connection Test, 24VDC
	5.5	Overvoltage Test (A Method), 12VDC
	5.5	Overvoltage Test (A Method), 24VDC
	5.5	Overvoltage Test (B Method), 12VDC
	5.5	Overvoltage Test (B Method), 24VDC
	5.11	Temperature Characteristic Test, 12VDC
	5.11	Temperature Characteristic Test, 24VDC
	5.13	Low Temperature Operation Test, 12VDC
	5.13	Low Temperature Operation Test, 24VDC
	5.15	High Temperature Operation Test, 12VDC
	5.15	High Temperature Operation Test, 24VDC
	5.16	Heat Cycle Test, 12VDC

	5.16	Heat Cycle Test, 24VDC
	5.18	Temperature and Humidity Cycle Test, 12VDC
	5.18	Temperature and Humidity Cycle Test, 24VDC
	5.19	Constant High Humidity Test, 12VDC
	5.19	Constant High Humidity Test, 24VDC
Mazda MES PW67600		
	7.2.1	Low Temperature Exposure, 12 VDC
	7.2.1	Low Temperature Exposure, 24 VDC
	7.2.2	Low Temperature Operation, 12VDC
	7.2.2	Low Temperature Operation, 24 VDC
	7.2.3	High Temperature Exposure, 12VDC
	7.2.3	High Temperature Exposure, 24 VDC
	7.2.4	High Temperature Operation, 12VDC
	7.2.4	High Temperature Operation, 24 VDC
	7.2.5	Thermal Cycle, 12VDC
	7.2.5	Thermal Cycle, 24 VDC
	7.2.6	Thermal Shock Resistance, 12VDC
	7.2.6	Thermal Shock Resistance, 24 VDC
	7.2.8	Humidity-Temperature Cycle, 12VDC
	7.2.8	Humidity-Temperature Cycle, 24 VDC
	7.2.9	Water/Fluids Ingress, 12VDC
	7.2.9	Water/Fluids Ingress, 24 VDC
	7.2.10	Dust, 12VDC
	7.2.10	Dust, 24 VDC
	7.3.1	Vibration, 12VDC
	7.3.1	Vibration, 24 VDC
	7.3.3	Mechanical Shock, 12VDC
	7.3.3	Mechanical Shock, 24 VDC
	7.3.4	Connector & Lead/Lock Strength, 12VDC
	7.3.4	Connector & Lead/Lock Strength, 24 VDC
	7.4	Chemical Environment, 12VDC
	7.4	Chemical Environment, 24VDC
	7.5	Endurance, 12VDC
	7.5	Endurance, 24 VDC
	7.7.1	Power Line Ripple Noise, C101-1a, 12VDC

	7.7.1	Power Line Ripple Noise, C101-1a, 24VDC
	7.7.1	Power Line Ripple Noise, C101-1b, 12VDC
	7.7.1	Power Line Ripple Noise, C101-1b, 24VDC
	7.7.1	Power Line Ripple Noise, C101-1c, 12VDC
	7.7.1	Power Line Ripple Noise, C101-1c, 24VDC
	7.7.1	Power Line Ripple Noise, C101-2a, 12VDC
	7.7.1	Power Line Ripple Noise, C101-2a, 24VDC
	7.7.1	Power Line Ripple Noise, C101-2b, 12VDC
	7.7.1	Power Line Ripple Noise, C101-2b, 24VDC
	7.7.2.1	Inductive Switching, C102-1a, 12VDC
	7.7.2.1	Inductive Switching, C102-1a, 24VDC
	7.7.2.1	Inductive Switching, C102-1b, 12VDC
	7.7.2.1	Inductive Switching, C102-1b, 24VDC
	7.7.2.1	Inductive Switching, C102-1c, 12VDC
	7.7.2.1	Inductive Switching, C102-1c, 24VDC
	7.7.6	Stress, C103-1 Reverse Battery, 12VDC
	7.7.6	Stress, C103-1 Reverse Battery, 24VDC
	7.7.6	Stress, C103-2 Overvoltage, 12VDC
	7.7.6	Stress, C103-2 Overvoltage, 24VDC
	7.7.6	Stress, C103-3 Jump Start, 12VDC
	7.7.6	Stress, C103-3 Jump Start, 24VDC
	7.7.6	Stress, C103-4 Offset Supply Voltage, 12VDC
	7.7.6	Stress, C103-4 Offset Supply Voltage, 24VDC
	7.7.8	Stress, Ignition Spark Arc over, 12VDC
	7.7.8	Stress, Ignition Spark Arc over, 24VDC

Mitsubishi ES-X82010 Rev Q

	4.1	Normal Power Supply Voltage Test
	4.2.1	Voltage Fluctuation Under Electric Load (Waveform 1-1)
	4.2.1	Voltage Fluctuation Under Electric Load (Waveform 1-2), 12VDC
	4.2.1	Voltage Fluctuation Under Electric Load (Waveform 1-2), 14VDC
	4.2.1	Voltage Fluctuation Under Electric Load (Waveform 1-3), 12VDC
	4.2.2	Voltage Fluctuation upon Engine Starting, Waveform 2-1, 12VDC
	4.2.2	Voltage Fluctuation upon Engine Starting, Waveform 2-2, 12VDC
	4.2.3	Keeping Memory Contents (clocks and displays)
	4.3.1	Battery Power Supply Chattering Test (Waveform 3-1), 12VDC

	4.4	Supply Voltage Reverse Connection Test
	4.6	Supply Voltage Instantaneous Interruption
	4.7.4	Transient Voltage Impression Test, 12VDC
Mitsubishi ES-X82115 Rev C		
	6.1	Supply Voltage Range, Group A
	6.1	Supply Voltage Range, Group B
	6.1	Supply Voltage Range, Group C
	6.1	Supply Voltage Range, Group D
	6.2	Ignition Off Draw
	6.3	Supply Voltage Ripple
	7.2	Supply Voltage Drop Out
	7.4	Engine Cranking Low Voltage
	8.1	Defective Regulation (Full-Fielded Alternator)
	8.2	Jump Start
	8.4	Reverse Supply Voltage
	8.4	Reverse Supply Voltage (with Reverse Voltage Isolation)
	9.1	Immunity to Short Circuits in the Supply Voltage Input and Load Output Lines
	9.2	Immunity to Short Circuits in I/O Signal Lines
	10.1	Operating and Voltage Stress, Group A
	10.1	Operating and Voltage Stress, Group B
	10.1	Operating and Voltage Stress, Group C
	10.1	Operating and Voltage Stress, Group D
	10.2	Stall
Nissan 28400NDS02 Rev 3		
	3	Resistance to Power Source Voltage Fluctuation (step fluctuation)
Nissan 28400NDS03 Rev 3		
	1	Low Frequency Surge Resistance (battery dump surge), Test Method A, AP-1
	1	Low Frequency Surge Resistance (battery dump surge), Test Method A, AP-2
	1	Low Frequency Surge Resistance (battery dump surge), Test Method B, AP-1
	1	Low Frequency Surge Resistance (battery dump surge), Test Method B, AP-2
Nissan 28401NDS02 Rev 4		
	6.1.2	EQ/TE 02: Resistance to slow Decrease and Increase of Power Supply Voltages
	6.1.4	EQ/TE 04: Resistance to Non-Usual Power Supply Voltages
	6.1.5	EQ/TE 05: Resistance to Ground and positive Supply Voltages Short Circuit

	6.1.10	EQ/IC 04: Resistance to Power Supply Micro-Interruptions, 10us
	6.1.10	EQ/IC 04: Resistance to Power Supply Micro-Interruptions, 100us
	6.1.10	EQ/IC 04: Resistance to Power Supply Micro-Interruptions, 5ms
	6.1.10	EQ/IC 04: Resistance to Power Supply Micro-Interruptions, 50ms, EUT not Operational
	6.1.10	EQ/IC 04: Resistance to Power Supply Micro-Interruptions, 300ms
	6.1.11	EQ/IC 05: Resistance to Starting Profile, No. I
	6.1.11	EQ/IC 05: Resistance to Starting Profile, No. II
	6.1.11	EQ/IC 05: Resistance to Starting Profile, No. III
	6.1.12	EQ/IC 06: Resistance to On-Board Power System Voltage Ripples, 2Vpp
	6.1.12	EQ/IC 06: Resistance to On-Board Power System Voltage Ripples, 4Vpp

SAE J1113-2

	Appendix B	Level 1, Ripple Only, Requires Attenuator
	Appendix B	Level 2, Ripple Only, Requires Attenuator
	Appendix B	Level 3, Ripple Only, Requires Attenuator
	Appendix B	Level 4, Ripple Only, Requires Attenuator

SAE J1113-11

	Test Pulse 4	Single Pulse, Single Pulse, 12VDC
	Test Pulse 4	Single Pulse, Single Pulse, 24VDC

SAE J2139

	4.8	Voltage Regulation Tolerance Testing, 12VDC
	4.8	Voltage Regulation Tolerance Testing, 24VDC

SAE J2628

	4.3	Voltage Dropouts and Dips, Test A
	4.3	Voltage Dropouts and Dips, Test C

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	5.2	Waveform 1 (ACC & IG) Battery Connect and Disconnect, Test Pattern I, 12VDC
	5.2	Waveform 1 (ACC & IG) Battery Connect and Disconnect, Test Pattern I, 24VDC
	5.2	Waveform 1 (B+) Battery Connect and Disconnect, Test Pattern I, 12VDC
	5.2	Waveform 1 (B+) Battery Connect and Disconnect, Test Pattern I, 24VDC
	5.2	Waveform 1 (ACC & IG) Battery Connect and Disconnect, Test Pattern 2, 12VDC
	5.2	Waveform 1 (ACC & IG) Battery Connect and Disconnect, Test Pattern 2, 24VDC
	5.2	Waveform 1 (B+) Battery Connect and Disconnect, Test Pattern 2, 12VDC

	5.2	Waveform 1 (B+) Battery Connect and Disconnect, Test Pattern 2, 24VDC
	5.2	Waveform 2 Battery Terminal Chattering, 12VDC
	5.2	Waveform 2 Battery Terminal Chattering, 24VDC
	5.2	Waveform 3 Repeated Turning On-Off of IG Switch, Test Pattern 1, 12VDC
	5.2	Waveform 3 Repeated Turning On-Off of IG Switch, Test Pattern 1, 24VDC
	5.2	Waveform 3 Repeated Turning On-Off of IG Switch, Test Pattern 2, 12VDC
	5.2	Waveform 3 Repeated Turning On-Off of IG Switch, Test Pattern 2, 24VDC
	5.2	Waveform 4 Instantaneous Disconnection of IG Switch Connector and IG 1 and 2, 12VDC
	5.2	Waveform 4 Instantaneous Disconnection of IG Switch Connector and IG 1 and 2, 24VDC
	5.2	Waveform 5 Instantaneous Disconnect when switching on IGN, 12VDC
	5.2	Waveform 5 Instantaneous Disconnect when switching on IGN, 24VDC
	5.2	Waveform 6 ON-OFF Operation of IGN Switch, 12VDC
	5.2	Waveform 6 ON-OFF Operation of IGN Switch, 24VDC
	5.2	Waveform 8 (ACC & IG) Cranking 1, 12VDC
	5.2	Waveform 8 (ACC & IG) Cranking 1, 24VDC
	5.2	Waveform 8 (+B) Cranking 1, 12VDC
	5.2	Waveform 8 (+B) Cranking 1, 24VDC
	5.2	Waveform 9 (ACC & IGN) Cranking 2, 12VDC
	5.2	Waveform 9 (ACC & IGN) Cranking 2, 24VDC
	5.2	Waveform 9 (B+) Cranking 2, 12VDC
	5.2	Waveform 9 (B+) Cranking 2, 24VDC
	5.2	Waveform 10, Cranking 3, 12VDC
	5.2	Waveform 10, Cranking 3, 24VDC
	5.2	Waveform 11 (ACC & IGN) Cranking 4, 13VDC
	5.2	Waveform 11 (B+) Cranking 4, 13VDC
	5.2	Waveform 12 (ACC & IGN) Dead Batt, 12VDC
	5.2	Waveform 12 (ACC & IGN) Dead Batt, 24VDC
	5.2	Waveform 12 (B+) Dead Batt, 12VDC
	5.2	Waveform 12 (B+) Dead Batt, 24VDC
	5.2	Waveform 13 Jump-Start part 1 (t=0) 12VDC
	5.2	Waveform 13 Jump-Start part 2 (t=50, 100 ms) 12VDC
	5.2	Waveform 13 Jump-Start part 3 (t=1000 ms) 12VDC
	5.2	Waveform 14 (ACC & IG) IG Operation When Battery Voltage Dropped, 12VDC

	5.2	Waveform 14 (ACC & IG) IG Operation When Battery Voltage Dropped, 24VDC
	5.2	Waveform 14 (+B) IG Operation When Battery Voltage Dropped, 12VDC
	5.2	Waveform 14 (+B) IG Operation When Battery Voltage Dropped, 24VDC
	5.2	Waveform 15 (ACC) Switching over IG1 and 2, 12VDC
	5.2	Waveform 15 (ACC) Switching over IG1 and 2, 24VDC
	5.2	Waveform 15 (IG1) Switching over IG1 and 2, 12VDC
	5.2	Waveform 15 (IG1) Switching over IG1 and 2, 24VDC
	5.2	Waveform 15 (IG2) Switching over IG1 and 2, 12VDC
	5.2	Waveform 15 (IG2) Switching over IG1 and 2, 24VDC
	5.2	Waveform 16 (ACC) Battery Connect and Disconnect, Instantaneous Disconnect, Test Pattern 1, 12VDC
	5.2	Waveform 16 (ACC) Battery Connect and Disconnect, Instantaneous Disconnect, Test Pattern 1, 24VDC
	5.2	Waveform 16 (ACC) Battery Connect and Disconnect, Instantaneous Disconnect, Test Pattern 2, 12VDC
	5.2	Waveform 16 (ACC) Battery Connect and Disconnect, Instantaneous Disconnect, Test Pattern 2, 24VDC
	5.2	Waveform 16 (+B) Battery Connect and Disconnect, Instantaneous Disconnect, Test Pattern 1, 12VDC
	5.2	Waveform 16 (+B) Battery Connect and Disconnect, Instantaneous Disconnect, Test Pattern 1, 24VDC
	5.2	Waveform 16 (+B) Battery Connect and Disconnect, Instantaneous Disconnect, Test Pattern 2, 12VDC
	5.2	Waveform 16 (+B) Battery Connect and Disconnect, Instantaneous Disconnect, Test Pattern 2, 24VDC
	5.2	Waveform 16 (IG1, 2) Battery Connect and Disconnect, Instantaneous Disconnect, Test Pattern 1, 12VDC
	5.2	Waveform 16 (IG1, 2) Battery Connect and Disconnect, Instantaneous Disconnect, Test Pattern 1, 24VDC
	5.2	Waveform 16 (IG1, 2) Battery Connect and Disconnect, Instantaneous Disconnect, Test Pattern 2, 12VDC
	5.2	Waveform 16 (IG1, 2) Battery Connect and Disconnect, Instantaneous Disconnect, Test Pattern 2, 24VDC
	5.2	Waveform 17 (SW) Repeated Turning ON-OFF of Switch, 12VDC
	5.2	Waveform 19 (ACC) Cranking 1, 12VDC
	5.2	Waveform 19 (ACC) Cranking 1, 24VDC
	5.2	Waveform 19 (+B) Cranking 1, 12VDC
	5.2	Waveform 19 (+B) Cranking 1, 24VDC
	5.2	Waveform 19 (IG1) Cranking 1, 12VDC
	5.2	Waveform 19 (IG1) Cranking 1, 24VDC
	5.2	Waveform 19 (IG2) Cranking 1, 12VDC
	5.2	Waveform 19 (IG2) Cranking 1, 24VDC

	5.2	Waveform 19 (SW) Cranking 1, 12VDC
	5.2	Waveform 19 (SW) Cranking 1, 24VDC
	5.2	Waveform 20 (ACC) Cranking 2, 12VDC
	5.2	Waveform 20 (ACC) Cranking 2, 24VDC
	5.2	Waveform 20 (+B) Cranking 2, 12VDC
	5.2	Waveform 20 (+B) Cranking 2, 24VDC
	5.2	Waveform 20 (IG1) Cranking 2, 12VDC
	5.2	Waveform 20 (IG1) Cranking 2, 24VDC
	5.2	Waveform 20 (IG2) Cranking 2, 12VDC
	5.2	Waveform 20 (IG2) Cranking 2, 24VDC
	5.2	Waveform 20 (SW) Cranking 2, 12VDC
	5.2	Waveform 20 (SW) Cranking 2, 24VDC
	5.2	Waveform 21 (ACC) Cranking 3, 12VDC
	5.2	Waveform 21 (ACC) Cranking 3, 24VDC
	5.2	Waveform 21 (+B) Cranking 3, 12VDC
	5.2	Waveform 21 (+B) Cranking 3, 24VDC
	5.2	Waveform 21 (IG1) Cranking 3, 12VDC
	5.2	Waveform 21 (IG1) Cranking 3, 24VDC
	5.2	Waveform 21 (IG2) Cranking 3, 12VDC
	5.2	Waveform 21 (IG2) Cranking 3, 24VDC
	5.2	Waveform 21 (SW) Cranking 3, 12VDC
	5.2	Waveform 21 (SW) Cranking 3, 24VDC
	5.2	Waveform 22 (+B, ACC, IG1 & IG2) ST Operation When Battery Voltage is Dropped, 12VDC
	5.2	Waveform 22 (+B, ACC, IG1, IG2) ST Operation When Battery Voltage is Dropped, 12VDC
	5.2	Waveform 22 (+B, ACC, IG1, IG2) ST Operation When Battery Voltage is Dropped, 24VDC
	5.2	Waveform 22 (SW) ST Operation When Battery Voltage is Dropped, 12VDC
	5.2	Waveform 22 (SW) ST Operation When Battery Voltage is Dropped, 24VDC

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	3.2	Operating Voltage Dips, Curve 1, 12VDC
	3.2	Operating Voltage Dips, Curve 1, 24VDC
	3.2	Operating Voltage Dips, Curve 2, 12VDC
	3.2	Operating Voltage Dips, Curve 2, 24VDC
	3.2	Operating Voltage Dips, Curve 3, 12VDC
	3.2	Operating Voltage Dips, Curve 3, 24VDC

	3.2	Operating Voltage Dips, Curve 4, 12VDC
	3.2	Operating Voltage Dips, Curve 4, 24VDC
	3.2	Operating Voltage Dips, Curve 5, 12VDC
	3.2	Operating Voltage Dips, Curve 5, 24VDC
	3.2	Operating Voltage Dips, Curve 6, 12VDC
	3.2	Operating Voltage Dips, Curve 6, 24VDC
	3.2	Operating Voltage Dips, Curve 7, 12VDC
	3.2	Operating Voltage Dips, Curve 7, 24VDC
	3.2	Operating Voltage Dips, Curve 8, 12VDC
	3.2	Operating Voltage Dips, Curve 8, 24VDC
	3.2	Operating Voltage Dips, Curve 9, 12VDC
	3.2	Operating Voltage Dips, Curve 9, 24VDC
	3.2	Operating Voltage Dips, Curve 10, 12VDC
	3.2	Operating Voltage Dips, Curve 10, 24VDC
	3.4	Backfeed to Terminal 15, 12VDC
Volkswagen VW 80000		
	2.6.1	Parameter Test (small), a
	2.6.1	Parameter Test (small), b
	2.6.1	Parameter Test (small), c
	2.6.1	Parameter Test (small), d
	2.6.2	Parameter Test (large), a
	2.6.2	Parameter Test (large), b
	2.6.2	Parameter Test (large), c
	2.6.2	Parameter Test (large), d
	2.6.3	Parameter Test (functional), a
	2.6.3	Parameter Test (functional), b
	2.6.3	Parameter Test (functional), c
	2.6.3	Parameter Test (functional), d
	4.1	E-01 Long Term Overvoltage
	4.2	E-02 Transient Overvoltage, short test
	4.2	E-02 Transient Overvoltage, endurance test
	4.3	E-03 Transient Undervoltage
	4.4	E-04 Jump Start
	4.6	E-06 Superimposed Alternating Voltage, Severity 1
	4.6	E-06 Superimposed Alternating Voltage, Severity 2

	4.7	E-07 Slow Decrease and Increase of the Supply Voltage, a
	4.7	E-07 Slow Decrease and Increase of the Supply Voltage, b
	4.7	E-07 Slow Decrease and Increase of the Supply Voltage, c
	4.7	E-07 Slow Decrease and Increase of the Supply Voltage, d
	4.8	E-08 Slow Decrease, Quick Increase of the Supply Voltage, a
	4.8	E-08 Slow Decrease, Quick Increase of the Supply Voltage, b
	4.8	E-08 Slow Decrease, Quick Increase of the Supply Voltage, c
	4.8	E-08 Slow Decrease, Quick Increase of the Supply Voltage, d
	4.10	E-10 Short Interruptions
	4.11	E-11 Start Pulses, Cold Start, Normal
	4.11	E-11 Start Pulses, Cold Start, Severe
	4.11	E-11 Start Pulses, Warm Start, Short
	4.11	E-11 Start Pulses, Warm Start, Long
	4.12	E-12 Voltage Curve with Intelligent Generator Control, Test Setup 2
	4.17	E-17 Short Circuit in Signal Circuit and Load Circuits, a
	4.17	E-17 Short Circuit in Signal Circuit and Load Circuits, b
	4.17	E-17 Short Circuit in Signal Circuit and Load Circuits, c
	4.17	E-17 Short Circuit in Signal Circuit and Load Circuits, d
	4.18	E-18 Insulation Resistance
	4.19	E-19 Closed Circuit Current
	4.20	E-20 Dielectric Strength
	4.21	E-21 Backfeeds
	5.5.1	Parameter Test (small)
	5.5.2	Parameter Test (large), a
	5.5.2	Parameter Test (large), b
	5.5.2	Parameter Test (large), c
	5.5.2	Parameter Test (large), d
	5.5.3	Parameter Test (functional), a
	5.5.3	Parameter Test (functional), b
	5.5.3	Parameter Test (functional), c
	5.5.3	Parameter Test (functional), d
	8.1	M-01 Free Fall, a
	8.1	M-01 Free Fall, b
	8.1	M-01 Free Fall, c
	8.1	M-01 Free Fall, d

	8.2	M-02 Stone Impact Test
	8.3	M-03 Dust
	8.4	M-04 Vibration
	8.5	M-05 Mechanical Shock
	8.6	M-06 Endurance Shock Test
	9.1	K-01 High-Low Temperature Storage, a
	9.1	K-01 High-Low Temperature Storage, b
	9.1	K-01 High-Low Temperature Storage, c
	9.1	K-01 High-Low Temperature Storage, d
	9.2	K-02 Incremental Temperature Test, a
	9.2	K-02 Incremental Temperature Test, b
	9.2	K-02 Incremental Temperature Test, c
	9.2	K-02 Incremental Temperature Test, d
	9.3	K-03 Low Temperature Operation
	9.4	K-04 Repainting Temperature
	9.5	K-05 Temperature Shock (component), a
	9.5	K-05 Temperature Shock (component), b
	9.5	K-05 Temperature Shock (component), c
	9.5	K-05 Temperature Shock (component), d
	9.6	K-06 Salt Spray Test with Operation, Exterior
	9.7	K-07 Salt Spray Test with Operation, Interior
	9.8	K-08 Humid Heat, Cyclic
	9.9	K-09 Humid Heat, Cyclic (with frost)
	9.10	K-10 Water Protection - IPX0 to IPX6
	9.11	K-11 High-Pressure Cleaning
	9.12	K-12 Temperature Shock with Splash Water
	9.13	K-13 Temperature Shock - Immersion
	9.14	K-14 Humid Heat - Constant
	9.15	K-15 Condensation Test with Electrical Assemblies
	9.16	K-16 Temperature Shock (without housing)
	9.17	K-17 Sun Radiation, a
	9.17	K-17 Sun Radiation, b
	9.17	K-17 Sun Radiation, c
	9.17	K-17 Sun Radiation, d
	9.18	K-18 Harmful Gas Test, a

	9.18	K-18 Harmful Gas Test, b
	9.18	K-18 Harmful Gas Test, c
	9.18	K-18 Harmful Gas Test, d
	10.1	Chemical Tests
	11.1	L-01 Life Test - Mechanical-Hydraulic Endurance Test
	11.1	L-01 Life Test - Mechanical-Hydraulic Endurance Test, a
	11.1	L-01 Life Test - Mechanical-Hydraulic Endurance Test, b
	11.1	L-01 Life Test - Mechanical-Hydraulic Endurance Test, c
	11.1	L-01 Life Test - Mechanical-Hydraulic Endurance Test, d
	11.2	L-02 Life Test - High Temperature Endurance Test
	11.2	L-02 Life Test - High Temperature Endurance Test, a
	11.2	L-02 Life Test - High Temperature Endurance Test, b
	11.2	L-02 Life Test - High Temperature Endurance Test, c
	11.2	L-02 Life Test - High Temperature Endurance Test, d
<u>Volkswagen VW TL 820 66</u>		
	5.2.5	Pulse 5B 42V

Aviation Tests

<u>Airbus ABD0100.1.8 .1 Issue C</u>		
	LDC 101	Steady State Voltage, 28VDC
	LDC 102	Voltage Transients, Test 1, 28VDC
	LDC 102	Voltage Transients, Test 2, 28VDC
	LDC 102	Voltage Transients, Test 3, 28VDC
	LDC 102	Voltage Transients, Test 4, 28VDC
	LDC 103	Voltage Ripple, 28VDC
	LDC 105	Inrush Current, 28VDC
	LDC 106	Voltage Variation Due to APU Starting, 28VDC
	LDC 107	Equipment Current Ripple, 28VDC
	LDC 108	Voltage Spike Due to Equipment Load Switching, 28VDC
	LDC 109	Compatibility with EPDC Voltage Clamping Devices, 28VDC
	LDC 201	Steady-State Voltage, 28VDC
	LDC 202	Voltage Transients, 28VDC
	LDC 203	Voltage Ripple, 28VDC
	LDC 301	Steady-State Voltage, 28VDC
	LDC 302	Voltage Ripple, 28VDC

	LDC 303	Inrush Current, 28VDC
	LDC 304	Equipment Current Ripple, 28VDC
	LDC 401	Transparency Time, 28VDC
	SCF 101	Steady State, 115V
	SCF 102	Voltage Transients, 115V, (SYS GAIN = 40)
	SCF 105	Current Distortion, 115V
	SCF 106	Voltage Distortion, 115V
	SCF 106	Voltage Distortion, Endurance w Motor, 115V
	SCF 106	Voltage Distortion, Endurance w out Motor, 115V
	SCF 108	Voltage Distortion Transients, 115V
	SCF 109	Inrush Current 115V
	SCF 111	Voltage DC Content 115V
	SCF 112	Voltage Modulation 115V
	SCF 113	Voltage Spike Load Switching 115V
	SCF 201	Steady State V & F 115V
	SCF 202	Voltage Transients 115V (SYS GAIN = 40)
	SCF 204	Frequency Transients, Test 1, 115V
	SCF 204	Frequency Transients, Test 2, 115V
	SCF 401	Transparency Time, 115V
	SCF 403	Voltage Switching Transients 2, 115V
	SCF 501	Power Line Disconnection, 115V + 28VDC
	SCF 501	Power Line Disconnection, 115V
	SCFH 101	Steady-State V&F (SYS GAIN = 40)
	SCFH 102	Voltage Transients 230V, (SYS GAIN = 60)
	SCFH 105	Current Distortion, 230V (SYS GAIN = 40)
	SCFH 106	Voltage Distortion, 230V (SYS GAIN = 40)
	SCFH 106	Voltage Distortion, Endurance w Motor, 230V (SYS GAIN = 40)
	SCFH 106	Voltage Distortion, Endurance w out Motor, 230V (SYS GAIN = 40)
	SCFH 108	Voltage Distortion Transients, 230V (SYS GAIN = 40)
	SCFH 109	Inrush Current 230V (SYS GAIN = 40)
	SCFH 111	Voltage DC Content (SYS GAIN = 40)
	SCFH 112	Voltage Modulation 230V, (SYS GAIN = 40)
	SCFH 113	Voltage Spike Load Switching, 230V (SYS GAIN = 40)
	SCFH 201	Steady-State V & F 230V, (SYS GAIN = 40)
	SCFH 202	Voltage Transients 230V (SYS GAIN = 60)

	SCFH 204	Abnormal Operation (1), 230V, (SYS GAIN = 40)
	SCFH 204	Abnormal Operation (2), 230V, (SYS GAIN = 40)
	SCFH 204	Frequency Transients, Parts 1 & 2 (GAIN = 40)
	SCFH 401	Transparency Time, 230V (SYS GAIN = 40)
	SCFH 402-1	Voltage Switching Transients 1, 230V
	SCFH 402-2	Voltage Switching Transients 1, 230V
	SCFH 402-3	Voltage Switching Transients 1, 230V
	SCFH 402-4	Voltage Switching Transients 1, 230V
	SCFH 402-5	Voltage Switching Transients 1, 230V
	SCFH 402-6	Voltage Switching Transients 1, 230V
	SCFH 402-7	Voltage Switching Transients 1, 230V
	SCFH 402-8	Voltage Switching Transients 1, 230V
	SCFH 402-9	Voltage Switching Transients 1, 230V
	SCFH 402-10	Voltage Switching Transients 1, 230V
	SCFH 402-11	Voltage Switching Transients 1, 230V
	SCFH 402-12	Voltage Switching Transients 1, 230V
	SCFH 402-13	Voltage Switching Transients 1, 230V
	SCFH 402-14	Voltage Switching Transients 1, 230V
	SCFH 402-15	Voltage Switching Transients 1, 230V
	SCFH 402-16	Voltage Switching Transients 1, 230V
	SCFH 402-17	Voltage Switching Transients 1, 230V
	SCFH 402-18	Voltage Switching Transients 1, 230V
	SCFH 402-19	Voltage Switching Transients 1, 230V
	SCFH 402-20	Voltage Switching Transients 1, 230V
	SCFH 402-21	Voltage Switching Transients 1, 230V
	SCFH 402-22	Voltage Switching Transients 1, 230V
	SCFH 402-23	Voltage Switching Transients 1, 230V
	SCFH 402-24	Voltage Switching Transients 1, 230V
	SCFH 402-25	Voltage Switching Transients 1, 230V
	SCFH 402-26	Voltage Switching Transients 1, 230V
	SCFH 402-27	Voltage Switching Transients 1, 230V
	SCFH 402-28	Voltage Switching Transients 1, 230V
	SCFH 402-29	Voltage Switching Transients 1, 230V
	SCFH 402-30	Voltage Switching Transients 1, 230V
	SCFH 402-31	Voltage Switching Transients 1, 230V

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	SCFH 402-32	Voltage Switching Transients 1, 230V
	SCFH 402-33	Voltage Switching Transients 1, 230V
	SCFH 402-34	Voltage Switching Transients 1, 230V
	SCFH 402-35	Voltage Switching Transients 1, 230V
	SCFH 402-36	Voltage Switching Transients 1, 230V
	SCFH 402-37	Voltage Switching Transients 1, 230V
	SCFH 402-38	Voltage Switching Transients 1, 230V
	SCFH 402-39	Voltage Switching Transients 1, 230V
	SCFH 402-40	Voltage Switching Transients 1, 230V
	SCFH 402-41	Voltage Switching Transients 1, 230V
	SCFH 402-42	Voltage Switching Transients 1, 230V
	SCFH 403	Voltage Switching Transients 2, 230V (SYS GAIN = 40)
	SCFH 501	Power Line Disconnection, 230V + 28VDC
	SCFH 501	Power Line Disconnection, 230V
	SVF 101	Steady-state Voltage and Frequency, 115V
	SVF 102	Voltage Transients, 115V
	SVF 105	Current Distortion, 115V
	SVF 106	Voltage Distortion1, Table 1, 115V
	SVF 106	Voltage Distortion1, Table 2 (endurance), equip not including a motor, 115V
	SVF 106	Voltage Distortion1, Table 2 (endurance), equip including a motor, 115V
	SVF 108	Voltage Distortion Transients, Test Condition 1, 115V
	SVF 108	Voltage Distortion Transients, Test Condition 2, 115V
	SVF 108	Voltage Distortion Transients, Test Condition 3, 115V
	SVF 109	Inrush Current, 115V
	SVF 110	Frequency Variations, 115V
	SVF 112	Voltage DC Content, 115V
	SVF 113	Voltage Modulation Due to Equipment, 115V
	SVF 114	Voltage Spike Due to Equipment Load Switching, 115V
	SVF 201	Steady-State Voltage and Frequency, 115V
	SVF 202	Voltage Transients, 115V
	SVF 301	Steady-State Voltage and Frequency, 115V
	SVF 302	Voltage Distortion1, Table 1, 115V
	SVF 302	Voltage Distortion1, Table 2 (endurance), equip not including motor, 115V
	SVF 302	Voltage Distortion1, Table 2 (endurance), equip including a motor, 115V
	SVF 304	Voltage Distortion Transients, Test Condition 1, 115V

	SVF 304	Voltage Distortion Transients, Test Condition 2, 115V
	SVF 304	Voltage Distortion Transients, Test Condition 3, 115V
	SVF 304	Voltage Distortion Transients, Test Condition 3, 230V (SYS GAIN = 40)
	SVF 305	Inrush Current, 115V
	SVF 306	Frequency Variations, 115V
	SVF 307	Voltage Modulation Due to Equipment, 115V
	SVF 401	Transparency Time, 115V
	SVF 403	Voltage Switching Transients 2, 115V
	SVF 404	Voltage Switching Transients with Frequency Change, 115V
	SVF 501	Power Line Disconnection, 115V + 28VDC, 360Hz
	SVF 501	Power Line Disconnection, 115V + 28VDC, 800Hz
	SVF 501	Power Line Disconnection, 115V, 360Hz
	SVF 501	Power Line Disconnection, 115V, 800Hz
	SVFH 101	Steady-State Voltage and Frequency, 230V (SYS GAIN = 40)
	SVFH 102	Voltage Transients, 230V (SYS GAIN = 60)
	SVFH 105	Current Distortion, 230V, (SYS GAIN = 40)
	SVFH 106	Volt Distort1, Table 2 (endur), equip inc motor, 230V (SYS GAIN = 40)
	SVFH 106	Volt Distort1, Table 2 (endur), equip not inc motor, 230V (SYS GAIN = 40)
	SVFH 106	Volt Distortion1, Table 1 (endur), 230V (SYS GAIN = 40)
	SVFH 108	Volt Distortion Transients, Test Cond 1, 230V (SYS GAIN = 40)
	SVFH 108	Volt Distortion Transients, Test Cond 2, 230V (SYS GAIN = 40)
	SVFH 108	Volt Distortion Transients, Test Cond 3, 230V (SYS GAIN = 40)
	SVFH 109	Inrush Current 230V, (SYS GAIN = 40)
	SVFH 110	Freq Variations 230V, (SYS GAIN = 40)
	SVFH 112	DC Voltage Content, VF, 230V, (SYS GAIN = 40)
	SVFH 113	Voltage Modulation, 230V, (SYS GAIN = 40)
	SVFH 114	Voltage Spike Load Switching, 230V, (SYS GAIN = 40)
	SVFH 201	Steady State V&F, 230V, (SYS GAIN = 40)
	SVFH 202	Voltage Transients 230V, (SYS GAIN = 60)
	SVFH 301	Steady-state V&F 230V, (SYS GAIN = 40)
	SVFH 302	Volt Distort1, Table 2 (endur), equip inc motor, 230V (SYS GAIN = 40)
	SVFH 302	Volt Distort1, Table 2 (endur), equip not inc motor, 230V (SYS GAIN = 40)
	SVFH 302	Volt Distortion1, Table 1, 230V (SYS GAIN = 40)
	SVFH 304	Voltage Distortion Transients, Test Condition 1, 230V (SYS GAIN = 40)
	SVFH 304	Voltage Distortion Transients, Test Condition 2, 230V (SYS GAIN = 40)

	SVFH 305	Inrush current 230V, (SYS GAIN = 40)
	SVFH 306	Freq Variations 230V, (SYS GAIN = 40)
	SVFH 307	Voltage Modulation 230V, (SYS GAIN = 40)
	SVFH 401	Switching Transients 230V, (SYS GAIN = 40)
	SVFH 403	Switching Transients 2, 230V, (SYS GAIN = 40)
	SVFH 404	Switching Transients (SYS GAIN = 40)
	SVFH 501	Power Line Disconnection, 230V + 28VDC, 360Hz (SYS GAIN = 40)
	SVFH 501	Power Line Disconnection, 230V + 28VDC, 800Hz (SYS GAIN = 40)
	SVFH 501	Power Line Disconnection, 230V, 360Hz (SYS GAIN = 40)
	SVFH 501	Power Line Disconnection, 230V, 800Hz (SYS GAIN = 40)

Airbus ABD0100.1.8 Issue E

	A 1	Steady State Voltage and Frequency, Single-Phase, 115V, 400Hz, Emerg Op
	A 1	Steady State Voltage and Frequency, Single-Phase, 115V, 400Hz, Normal Op
	A 2	Abnormal Steady State Volt and Freq, Single-Phase, 115V, 400Hz
	A 3.1	Voltage Surge, Normal Transients, 115V, 400Hz
	A 3.2	Voltage Surge, Normal Transients, 115V, 400Hz
	A 3.3	Voltage Surge, Normal Transients, 115V, 400Hz
	A 3.4	Voltage Surge, Normal Transients, 115V, 400Hz
	A 4.1	Voltage Surge, Abnormal Transients, 115V, 400Hz
	A 4.2	Voltage Surge, Abnormal Transients, 115V, 400Hz
	A 4.3	Voltage Surge, Abnormal Transients, 115V, 400Hz
	A 6	Switching Transients, Additional Requirements (a), 115V, 400Hz
	A 8	Frequency Excursions in Abnormal Operation, Test 1, 115V, 400Hz
	A 8	Frequency Excursions in Abnormal Operation, Test 2, 115V, 400Hz
	A 10	Distorted Voltage, 115V, 400Hz
	A 11	Voltage DC Content, 115V, 400Hz
	B 1	Steady State Voltage and Frequency, Single-Phase, 26V, 400Hz, Emerg Op
	B 1	Steady State Voltage and Frequency, Single-Phase, 26V, 400Hz, Normal Op
	B 2	Abnormal Steady State Volt and Freq, Single-Phase, 26V, 400Hz
	B 3.1	Voltage Surge, Normal Transients, 26V, 400Hz
	B 3.2	Voltage Surge, Normal Transients, 26V, 400Hz
	B 3.3	Voltage Surge, Normal Transients, 26V, 400Hz
	B 3.4	Voltage Surge, Normal Transients, 26V, 400Hz
	B 4.1	Voltage Surge, Abnormal Transients, 26V, 400Hz

	B 4.2	Voltage Surge, Abnormal Transients, 26V, 400Hz
	B 4.3	Voltage Surge, Abnormal Transients, 26V, 400Hz
	B 6	Switching Transients, Additional Requirements (a), 26V, 400Hz
	B 8	Frequency Excursions in Abnormal Operation, Test 1, 26V, 400Hz
	B 8	Frequency Excursions in Abnormal Operation, Test 2, 26V, 400Hz
	B 10	Distorted Voltage, 26V, 400Hz
	B 11	Voltage DC Content, 26V, 400Hz
	C 1	Steady State Voltage, Normal Operations 115V (VF)
	C 2	Abnormal Steady State Voltage, 115V (VF), 360Hz
	C 2	Abnormal Steady State Voltage, 115V (VF), 800Hz
	C 3.1	Voltage Surge, Normal Transients, 115V (VF), 360Hz
	C 3.1	Voltage Surge, Normal Transients, 115V (VF), 800Hz
	C 3.2	Voltage Surge, Normal Transients, 115V (VF), 360Hz
	C 3.2	Voltage Surge, Normal Transients, 115V (VF), 800Hz
	C 3.3	Voltage Surge, Normal Transients, 115V (VF), 360Hz
	C 3.3	Voltage Surge, Normal Transients, 115V (VF), 800Hz
	C 3.4	Voltage Surge, Normal Transients, 115V (VF), 360Hz
	C 3.4	Voltage Surge, Normal Transients, 115V (VF), 800Hz
	C 4.1	Voltage Surge, Abnormal Transients, 115V (VF), 360Hz
	C 4.1	Voltage Surge, Abnormal Transients, 115V (VF), 800Hz
	C 4.2	Voltage Surge, Abnormal Transients, 115V (VF), 360Hz
	C 4.2	Voltage Surge, Abnormal Transients, 115V (VF), 800Hz
	C 4.3	Voltage Surge, Abnormal Transients, 115V (VF), 360Hz
	C 4.3	Voltage Surge, Abnormal Transients, 115V (VF), 800Hz
	C 6	Switching Transients, Additional Requirements (c), 115V (VF)
	C 6	Switching Transients, Addl Reqmts (a), 115V (VF), 360Hz
	C 6	Switching Transients, Addl Reqmts (a), 115V (VF), 800Hz
	C 8	Normal Frequency Variations, Emergency Operations, 115V, 360Hz
	C 8	Normal Frequency Variations, Emergency Operations, 115V, 800Hz
	C 8	Normal Frequency Variations, Normal Operations, 115V, 360Hz
	C 8	Normal Frequency Variations, Normal Operations, 115V, 800Hz
	C 10	Distorted Voltage, 115V (VF), 360Hz
	C 10	Distorted Voltage, 115V (VF), 800Hz
	C 11	Voltage DC Content, 115V (VF), 360Hz
	C 11	Voltage DC Content, 115V (VF), 800Hz

	D 1	Steady State Voltage, Normal and Emergency Operations, 28.8VDC
	D 2	Abnormal Steady State Voltage, 28.8VDC
	D 3.1	Voltage Surge, Normal Transients, 28.8VDC
	D 3.2	Voltage Surge, Normal Transients, 28.8VDC
	D 3.3	Voltage Surge, Normal Transients, 28.8VDC
	D 3.4	Voltage Surge, Normal Transients, 28.8VDC
	D 4.1	Voltage Surge, Abnormal Transients, 28.8VDC
	D 4.2	Voltage Surge, Abnormal Transients, 28.8VDC
	D 4.3	Voltage Surge, Abnormal Transients, 28.8VDC
	D 6	Switching Transients, Additional Requirements (a), 28.8VDC
	D 6	Switching Transients, Additional Requirements (d), 28.8VDC
	D 7A	Square Waves due to Lg Load Variations in Norm Cond, 28.8VDC
	D 7B	Square Waves due to Lg Load Variations in Norm Cond, 28.8VDC
	E 1	Steady State Voltage, Norm, Abn, Emer Op, NBPT DC Network (28VDC)
	E 2.1	Voltage Surge, Normal Transients, NBPT DC Network (28VDC)
	E 2.2	Voltage Surge, Normal Transients, NBPT DC Network (28VDC)
	E 2.3	Voltage Surge, Normal Transients, NBPT DC Network (28VDC)
	E 2.4	Voltage Surge, Normal Transients, NBPT DC Network (28VDC)
	E 3.1	Voltage Surge, Abnormal Transients, NBPT DC Network (28VDC)
	E 3.2	Voltage Surge, Abnormal Transients, NBPT DC Network (28VDC)
	E 3.3	Voltage Surge, Abnormal Transients, NBPT DC Network (28VDC)
	E 3.4	Voltage Surge, Abnormal Transients, NBPT DC Network (28VDC)
	E 5	Switching Transients, Addl Reqmnts (b) NBPT DC Network (28VDC)
DO160G		
	16.5.1.1	Voltage and Frequency (ac), A(CF), 115V
	16.5.1.1	Voltage and Frequency (ac), A(CF), 230V
	16.5.1.1	Voltage and Frequency (ac), A(NF), 115V
	16.5.1.1	Voltage and Frequency (ac), A(NF), 230V
	16.5.1.1	Voltage and Frequency (ac), A(WF), 115V
	16.5.1.1	Voltage and Frequency (ac), A(WF), 230V
	16.5.1.1	Voltage and Frequency, Emergency Operations (single-phase), A(CF), 115V
	16.5.1.1	Voltage and Frequency, Emergency Operations (single-phase), A(CF), 230V
	16.5.1.4	Momentary Power Interruptions, 360Hz, A(NF), A(WF), 115V
	16.5.1.4	Momentary Power Interruptions, 360Hz, A(NF), A(WF), 230V
	16.5.1.4	Momentary Power Interruptions, 400Hz, A(CF), 115V

	16.5.1.4	Momentary Power Interruptions, 400Hz, A(CF), 230V
	16.5.1.4	Momentary Power Interruptions, 650Hz, A(NF), 115V
	16.5.1.4	Momentary Power Interruptions, 650Hz, A(NF), 230V
	16.5.1.4	Momentary Power Interruptions, 800Hz, A(WF), 115V
	16.5.1.4	Momentary Power Interruptions, 800Hz, A(WF), 230V
	16.5.1.4	Momentary Power Interruptions, Addl Requirements, 360-650Hz, A(NF), 115V
	16.5.1.4	Momentary Power Interruptions, Addl Requirements, 360-650Hz, A(NF), 230V
	16.5.1.4	Momentary Power Interruptions, Addl Requirements, 360-800Hz, A(WF), 115V
	16.5.1.4	Momentary Power Interruptions, Addl Requirements, 360-800Hz, A(WF), 230V
	16.5.1.5.1	Normal Surge Voltage, 360-650Hz, A(NF), 115V
	16.5.1.5.1	Normal Surge Voltage, 360-650Hz, A(NF), 230V
	16.5.1.5.1	Normal Surge Voltage, 360-800Hz, A(WF), 115V
	16.5.1.5.1	Normal Surge Voltage, 360-800Hz, A(WF), 230V
	16.5.1.5.1	Normal Surge Voltage, 400Hz, A(CF), 115V
	16.5.1.5.1	Normal Surge Voltage, 400Hz, A(CF), 230V
	16.5.1.5.2	Normal Frequency Transients (all AC equipment), 115V
	16.5.1.5.2	Normal Frequency Transients (all AC equipment), 230V
	16.5.1.6	Normal Frequency Variations, A(NF), 115V
	16.5.1.6	Normal Frequency Variations, A(NF), 230V
	16.5.1.6	Normal Frequency Variations, A(WF), 115V
	16.5.1.6	Normal Frequency Variations, A(WF), 230V
	16.5.1.7	Voltage DV Content, 360-650Hz, A(NF), 115V
	16.5.1.7	Voltage DV Content, 360-650Hz, A(NF), 230V
	16.5.1.7	Voltage DV Content, 360-800Hz, A(WF), 115V
	16.5.1.7	Voltage DV Content, 360-800Hz, A(WF), 230V
	16.5.1.7	Voltage DV Content, 400Hz, A(CF), 115V
	16.5.1.7	Voltage DV Content, 400Hz, A(CF), 230V
	16.5.2.1	Abnormal Voltage and Frequency Limits in Steady State (ac), A(CF), 115V
	16.5.2.1	Abnormal Voltage and Frequency Limits in Steady State (ac), A(CF), 230V
	16.5.2.1	Abnormal Voltage and Frequency Limits in Steady State (ac), A(NF), 115V
	16.5.2.1	Abnormal Voltage and Frequency Limits in Steady State (ac), A(NF), 230V
	16.5.2.1	Abnormal Voltage and Frequency Limits in Steady State (ac), A(WF), 115V
	16.5.2.1	Abnormal Voltage and Frequency Limits in Steady State (ac), A(WF), 230V
	16.5.2.2	Momentary Undervoltage Operation (ac), A(CF), 115V
	16.5.2.2	Momentary Undervoltage Operation (ac), A(CF), 230V

	16.5.2.2	Momentary Undervoltage Operation (ac), A(NF), 115V
	16.5.2.2	Momentary Undervoltage Operation (ac), A(NF), 230V
	16.5.2.2	Momentary Undervoltage Operation (ac), A(WF), 115V
	16.5.2.2	Momentary Undervoltage Operation (ac), A(WF), 230V
	16.5.2.3.1	Abnormal Surge Voltage (ac), A(CF), 115V
	16.5.2.3.1	Abnormal Surge Voltage (ac), A(CF), 230V
	16.5.2.3.1	Abnormal Surge Voltage (ac), A(NF), 115V
	16.5.2.3.1	Abnormal Surge Voltage (ac), A(NF), 230V
	16.5.2.3.1	Abnormal Surge Voltage (ac), A(WF), 115V
	16.5.2.3.1	Abnormal Surge Voltage (ac), A(WF), 230V
	16.5.2.3.2	Abnormal Frequency Transients (ac), test 1, 115V
	16.5.2.3.2	Abnormal Frequency Transients (ac), test 1, 230V
	16.5.2.3.2	Abnormal Frequency Transients (ac), test 2, 115V
	16.5.2.3.2	Abnormal Frequency Transients (ac), test 2, 230V
	16.5.2.3.2	Abnormal Frequency Transients (ac), test 3, A(NF), 115V
	16.5.2.3.2	Abnormal Frequency Transients (ac), test 3, A(NF), 230V
	16.5.2.3.2	Abnormal Frequency Transients (ac), test 3, A(WF), 115V
	16.5.2.3.2	Abnormal Frequency Transients (ac), test 3, A(WF), 230V
	16.5.2.3.3	Abnormal Frequency Variations, A(NF), 115V
	16.5.2.3.3	Abnormal Frequency Variations, A(NF), 230V
	16.5.2.3.3	Abnormal Frequency Variations, A(WF), 115V
	16.5.2.3.3	Abnormal Frequency Variations, A(WF), 230V
	16.6.1.1	Voltage (Average Value at DC), Cat A, B, and Z, 28VDC
	16.6.1.1	Voltage (Average Value at DC), Cat B, 14VDC
	16.6.1.1	Voltage (Average Value at DC), Cat D, 270VDC
	16.6.1.3	Momentary Power Interruptions (dc) Test B (equipment with digital circuits), Cat. A, 28VDC
	16.6.1.3	Momentary Power Interruptions (dc) Test B (equipment with digital circuits), Cat. B, 14VDC
	16.6.1.3	Momentary Power Interruptions (dc) Test B (equipment with digital circuits), Cat. B, 28VDC
	16.6.1.3	Momentary Power Interruptions (dc) Test B (equipment with digital circuits), Cat. D, 270VDC
	16.6.1.3	Momentary Power Interruptions (dc) Test B (equipment with digital circuits), Cat. Z, 28VDC
	16.6.1.3	Momentary Power Interruptions (dc) Test C (all equipment), Cat. A, 28VDC
	16.6.1.3	Momentary Power Interruptions (dc) Test C (all equipment), Cat. B, 14VDC
	16.6.1.3	Momentary Power Interruptions (dc) Test C (all equipment), Cat. B, 28VDC

	16.6.1.3	Momentary Power Interruptions (dc) Test C (all equipment), Cat. D, 270VDC
	16.6.1.3	Momentary Power Interruptions (dc) Test C (all equipment), Cat. Z, 28VDC
	16.6.1.3	Momentary Power Interruptions (dc) Test D (double interrupt for digital or memory devices), Cat. A and Z, 28VDC
	16.6.1.3	Momentary Power Interruptions (dc) Test D (double interrupt for digital or memory devices), Cat. B, 14VDC
	16.6.1.3	Momentary Power Interruptions (dc) Test D (double interrupt for digital or memory devices), Cat. B, 28VDC
	16.6.1.3	Momentary Power Interruptions (dc) Test D (double interrupt for digital or memory devices), Cat. D, 270VDC
	16.6.1.4	Normal Surge Voltage (dc), Cat. A, 28VDC
	16.6.1.4	Normal Surge Voltage (dc), Cat. B, 14VDC
	16.6.1.4	Normal Surge Voltage (dc), Cat. D, 270VDC
	16.6.1.4	Normal Surge Voltage (dc), Cat. Z, 28VDC
	16.6.1.5	Engine Starting Under Voltage Operation (dc), Cat. Z and 28VDC Cat. B
	16.6.1.6	Exposed Voltage Decay Time (dc), Cat. D, 270VDC
	16.6.2.1	Voltage Steady State (dc), 14VDC
	16.6.2.1	Voltage Steady State (dc), 28VDC
	16.6.2.1	Voltage Steady State (dc), 270VDC
	16.6.2.2	Low Voltage Conditions (dc), Cat B, 14VDC
	16.6.2.2	Low Voltage Conditions (dc), Cat B, 28VDC
	16.6.2.3	Momentary Undervoltage Operation (dc), 14VDC
	16.6.2.3	Momentary Undervoltage Operation (dc), 28VDC
	16.6.2.3	Momentary Undervoltage Operation (dc), 270VDC
	16.6.2.4	Abnormal Surge Voltage (dc), Cat A, 28VDC
	16.6.2.4	Abnormal Surge Voltage (dc), Cat B, 14VDC
	16.6.2.4	Abnormal Surge Voltage (dc), Cat B, 28VDC
	16.6.2.4	Abnormal Surge Voltage (dc), Cat D, 270VDC
	16.6.2.4	Abnormal Surge Voltage (dc), Cat Z, 28VDC
	16.7.1.2	Current Distortion Verification Requirements (ac), A(CF), test condition 1, 115V
	16.7.1.2	Current Distortion Verification Requirements (ac), A(CF), test condition 1, 230V
	16.7.1.2	Current Distortion Verification Requirements (ac), A(NF), test condition 1, 115V
	16.7.1.2	Current Distortion Verification Requirements (ac), A(NF), test condition 1, 230V
	16.7.1.2	Current Distortion Verification Requirements (ac), A(WF), test condition 1, 115V
	16.7.1.2	Current Distortion Verification Requirements (ac), A(WF), test condition 1, 230V
	16.7.1.3	Current Distortion Verification Requirements (ac), A(CF), 115V
	16.7.1.3	Current Distortion Verification Requirements (ac), A(CF), 230V

	16.7.1.3	Current Distortion Verification Requirements (ac), A(NF), 115V
	16.7.1.3	Current Distortion Verification Requirements (ac), A(NF), 230V
	16.7.1.3	Current Distortion Verification Requirements (ac), A(WF), 115V
	16.7.1.3	Current Distortion Verification Requirements (ac), A(WF), 230V
	16.7.3.2	DC Current Content in Steady-State Operation, A(CF), 115V
	16.7.3.2	DC Current Content in Steady-State Operation, A(CF), 230V
	16.7.3.2	DC Current Content in Steady-State Operation, A(NF), 115V
	16.7.3.2	DC Current Content in Steady-State Operation, A(NF), 230V
	16.7.3.2	DC Current Content in Steady-State Operation, A(WF), 115V
	16.7.3.2	DC Current Content in Steady-State Operation, A(WF), 230V
	16.7.4.2	Regenerated Energy (dc) Category D, 270V
	16.7.5.2	Inrush Current Requirement (ac), A(CF), 115V
	16.7.5.2	Inrush Current Requirement (ac), A(CF), 230V
	16.7.5.2	Inrush Current Requirement (ac), A(NF), 115V
	16.7.5.2	Inrush Current Requirement (ac), A(NF), 230V
	16.7.5.2	Inrush Current Requirement (ac), A(WF), 115V
	16.7.5.2	Inrush Current Requirement (ac), A(WF), 230V
	16.7.5.2	Inrush Current Requirement (dc), 14VDC
	16.7.5.2	Inrush Current Requirement (dc), 28VDC
	16.7.5.2	Inrush Current Requirement (dc), 270VDC
	16.7.8.2	Power Factor (all ac equipment) Designation P, A(CF), 115V
	16.7.8.2	Power Factor (all ac equipment) Designation P, A(CF), 230V
	16.7.8.2	Power Factor (all ac equipment) Designation P, A(NF), 115V
	16.7.8.2	Power Factor (all ac equipment) Designation P, A(NF), 230V
	16.7.8.2	Power Factor (all ac equipment) Designation P, A(WF), 115V
	16.7.8.2	Power Factor (all ac equipment) Designation P, A(WF), 230V
	18	Ripple Voltage (dc), Cat. B 14VDC
	18	Ripple Voltage (dc), Cat. B, 28VDC
	18	Ripple Voltage (dc), Cat. R, K, Z, 14VDC
	18	Ripple Voltage (dc), Cat. R, K, Z, 28VDC
	18	Ripple Voltage (dc), Cat. R, K, Z, 270VDC
	19	Fig 19-1 (d) Cat AC L=3m
	19	Fig 19-1 (d) Cat CC L=3m
	19	Fig 19-1 (d) Cat ZC L=3m
	19	Fig 19-1 (e) Cat AN L=3m

	19	Fig 19-1 (e) Cat CN L=3m
	19	Fig 19-1 (e) Cat ZN L=3m
	19	Fig 19-1 (f) Cat AW L=3m
	19	Fig 19-1 (f) Cat CW L=3m
	19	Fig 19-1 (f) Cat ZW L=3m
MIL STD 461F		
	CS101	Calibration, Figure CS101-2
	CS101	Curve 2, Figure CS101-2
	CS101	Curve 2, Figure CS101-2
MIL-HDBK-704-8		
	LDC101	28VDC, Characterization
	LDC102	28VDC, Steady State Limits for Voltage
	LDC102	NHSS Voltage 704A Test C
	LDC102	NHSS Voltage 704B-F Test C
	LDC102	NHSS Voltage 704B-F Test B
	LDC102	NHSS Voltage 704A Test B
	LDC102	Nominal Voltage Test A
	LDC103-1	10 & 25Hz (levels for 704A, C, D & F)
	LDC103-2	(50Hz-10KHz) XFMR Primary for 704A
	LDC103-2	(50Hz-10KHz) XFMR Primary for 704B, C & D
	LDC103-2	(50Hz-10KHz) XFMR Primary for 704F
	LDC105	Test AA
	LDC105	Test BB
	LDC105	Test CC
	LDC105	Test DD
	LDC105	Test EE
	LDC105	Test FF
	LDC105	Test GG
	LDC105	Test HH
	LDC105	Test II
	LDC105	Test JJ
	LDC105	Test KK
	LDC105	Test LL
	LDC105	Test MM
	LDC105	Test NN

	LDC105	Test OO
	LDC105	Test PP
	LDC105	Test QQ
	LDC105	Test RR
	LDC105	Transient A 704A
	LDC105	Transient B 704A
	LDC105	Transient C 704A
	LDC105	Transient D 704A
	LDC105	Transient E 704A
	LDC105	Transient F 704A
	LDC105	Transient G 704A
	LDC105	Transient H 704A
	LDC105	Transient I 704A
	LDC105	Transient J 704A
	LDC105	Transient K 704A
	LDC105	Transient L 704A
	LDC105	Transient M 704A
	LDC105	Transient N 704A
	LDC105	Transient O 704A
	LDC105	Transient P 704A
	LDC105	Transient Q 704A
	LDC105	Transient R 704A
	LDC105	Transient S 704A
	LDC105	Transient T 704A
	LDC105	Transient U 704A
	LDC105	Transient V 704A
	LDC201	Test A
	LDC201	Test B
	LDC201	Test C
	LDC201	Test D
	LDC201	Test E
	LDC201	Test F
	LDC201	Test G
	LDC201	Test H
	LDC201	Test I

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	LDC201	Test J
	LDC201	Test K
	LDC201	Test L
	LDC301	704A AHSS Test B
	LDC301	704A ALSS Test A
	LDC301	704B-F AHSS Test B
	LDC301	704B-F ALSS Test A
	LDC301	Test A
	LDC301	Test B
	LDC302	Test A
	LDC302	Test AA
	LDC302	Test B
	LDC302	Test BB
	LDC302	Test BBB
	LDC302	Test C
	LDC302	Test CC
	LDC302	Test CCC
	LDC302	Test D
	LDC302	Test DD
	LDC302	Test E
	LDC302	Test EE
	LDC302	Test EEE
	LDC302	Test F
	LDC302	Test FF
	LDC302	Test FFF
	LDC302	Test G
	LDC302	Test GG
	LDC302	Test H
	LDC302	Test HH
	LDC302	Test HHH
	LDC302	Test I
	LDC302	Test II
	LDC302	Test III
	LDC302	Test J
	LDC302	Test K

	LDC302	Test KK
	LDC302	Test KKK
	LDC302	Test L
	LDC302	Test LL
	LDC302	Test LLL
	LDC302	Test M
	LDC302	Test MM
	LDC302	Test MMM
	LDC302	Test N
	LDC302	Test NN
	LDC302	Test NNN
	LDC302	Test O
	LDC302	Test P
	LDC302	Test Q
	LDC302	Test R
	LDC302	Test S
	LDC302	Test T
	LDC302	Test U
	LDC302	Test V
	LDC401	704A ELSS Test B
	LDC401	704A, C, D EHSS Test A
	LDC401	704B EHSS Test B
	LDC401	704B, D, E, F EHSS Test B
	LDC401	704B, E, F ELSS Test B
	LDC501	Test A
	LDC501	Test AA
	LDC601	Test A
	LDC601	Test B
	LDC601	Test C
	LDC601	Test D
	LDC602	28VDC

Industry Tests

IEC 6100-4-16

	5.2	Continuous Disturbance at 16.66 Hz, Level 1
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	5.2	Continuous Disturbance at 16.66 Hz, Level 2
	5.2	Continuous Disturbance at 16.66 Hz, Level 3
	5.2	Continuous Disturbance at 16.66 Hz, Level 4
	5.2	Continuous Disturbance at 16.67 Hz, Level 1
	5.2	Continuous Disturbance at 16.67 Hz, Level 2
	5.2	Continuous Disturbance at 16.67 Hz, Level 3
	5.2	Continuous Disturbance at 16.67 Hz, Level 4
	5.2	Continuous Disturbance at 50 Hz, Level 1
	5.2	Continuous Disturbance at 50 Hz, Level 2
	5.2	Continuous Disturbance at 50 Hz, Level 3
	5.2	Continuous Disturbance at 50 Hz, Level 4
	5.2	Continuous Disturbance at 60 Hz, Level 1
	5.2	Continuous Disturbance at 60 Hz, Level 2
	5.2	Continuous Disturbance at 60 Hz, Level 3
	5.2	Continuous Disturbance at 60 Hz, Level 4
	5.2	Continuous Disturbance at DC, Level 1
	5.2	Continuous Disturbance at DC, Level 2
	5.2	Continuous Disturbance at DC, Level 3
	5.2	Continuous Disturbance at DC, Level 4
	5.2	Short Duration Disturbance at 16.66 Hz, Level 1
	5.2	Short Duration Disturbance at 16.66 Hz, Level 2
	5.2	Short Duration Disturbance at 16.66 Hz, Level 3
	5.2	Short Duration Disturbance at 16.66 Hz, Level 4
	5.2	Short Duration Disturbance at 16.67 Hz, Level 1
	5.2	Short Duration Disturbance at 16.67 Hz, Level 2
	5.2	Short Duration Disturbance at 16.67 Hz, Level 3
	5.2	Short Duration Disturbance at 50 Hz, Level 1
	5.2	Short Duration Disturbance at 50 Hz, Level 2
	5.2	Short Duration Disturbance at 50 Hz, Level 3
	5.2	Short Duration Disturbance at 50 Hz, Level 4
	5.2	Short Duration Disturbance at 60 Hz, Level 1
	5.2	Short Duration Disturbance at 60 Hz, Level 2
	5.2	Short Duration Disturbance at 60 Hz, Level 3
	5.2	Short Duration Disturbance at 60 Hz, Level 4
	5.2	Short Duration Disturbance at DC, Level 1

	5.2	Short Duration Disturbance at DC, Level 2
	5.2	Short Duration Disturbance at DC, Level 3
	5.2	Short Duration Disturbance at DC, Level 4
	5.3	15 Hz to 150 kHz Frequency Range Test, Level 1
	5.3	15 Hz to 150 kHz Frequency Range Test, Level 2
	5.3	15 Hz to 150 kHz Frequency Range Test, Level 3
	5.3	15 Hz to 150 kHz Frequency Range Test, Level 4
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	5.1.2	CW Pulse with Pause Level 1 2kHz-9kHz
	5.1.2	CW Pulse with Pause Level 1 9kHz-95kHz
	5.1.2	CW Pulse with Pause Level 1 95kHz-150kHz
	5.1.2	CW Pulse with Pause Level 2 2kHz-9kHz
	5.1.2	CW Pulse with Pause Level 2 9kHz-95kHz
	5.1.2	CW Pulse with Pause Level 2 95kHz-150kHz
	5.1.2	CW Pulse with Pause Level 3 2kHz-9kHz
	5.1.2	CW Pulse with Pause Level 3 9kHz-95kHz
	5.1.2	CW Pulse with Pause Level 3 95kHz-150kHz
	5.1.2	CW Pulse with Pause Level 4 2kHz-9kHz
	5.1.2	CW Pulse with Pause Level 4 9kHz-95kHz
	5.1.2	CW Pulse with Pause Level 4 95kHz-150kHz

Disclaimer:

Although AE Techron has made substantial effort to ensure the accuracy of the Standards' test files (SWG files), which are included with the 3110 unit, no warranty, expressed or implied, is made regarding accuracy, adequacy, completeness, legality, reliability or usefulness of the information provided. It is the responsibility of the user to ensure the accuracy and applicability of these test files for their intended purposes.