



Test Report: XDR-120-12

120W AC/DC High-End Ultra Slim Industrial DIN Rail
Power

■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

Control Function Test

Component Stress Test

■ SAFETY & E.M.C. TEST

Safety Test

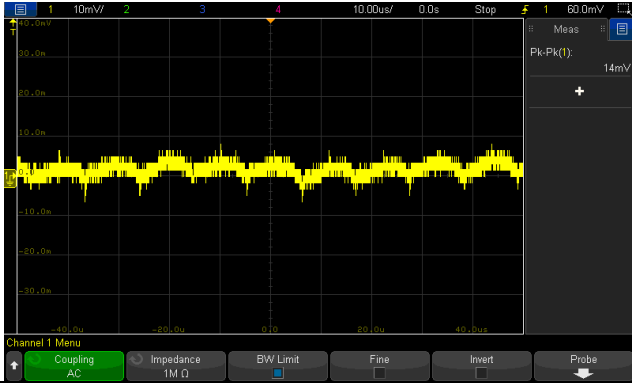
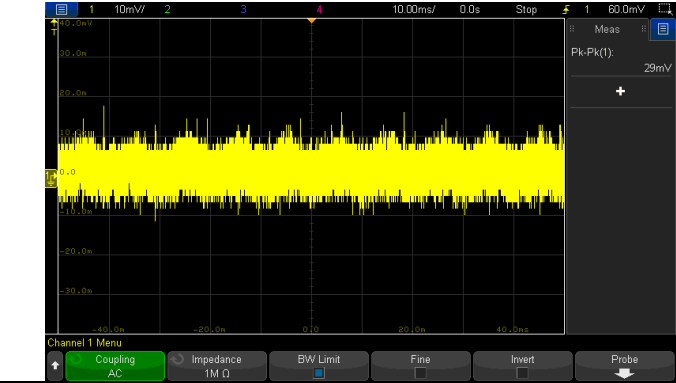
E.M.C. Test

■ RELIABILITY TEST

ENVIRONMENT TEST

DESIGN VERIFY TEST

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OUTPUT VOLTAGE ADJUST RANGE	CH1: 12V~15V	I/P : 277 VAC I/P : 230 VAC I/P : 115 VAC O/P : MIN LOAD Ta : 25°C	11.548V~15.559V/277VAC 11.548V~15.567V/230VAC 11.541V~15.56V/115VAC
2	OUTPUT VOLTAGE TOLERANCE	V1: -1% ~ +1%	I/P: 85VAC~305VAC O/P:FULL~MIN. LOAD Ta:25°C	V1: -0.301% ~ 0.267%
3	LINE REGULATION	V1: -0.5% ~ +0.5%	I/P: 85VAC~ 305VAC O/P:FULL LOAD Ta:25°C	V1: -0.008% ~ 0.084%
4	LOAD REGULATION	V1: -1% ~ +1%	I/P: 230VAC O/P:FULL ~MIN LOAD Ta:25°C	V1: -0.301% ~ 0.267%
5	OVER/UNDERSHOOT TEST	<±5%	I/P: 230VAC O/P:FULL LOAD / NO LOAD Ta:25°C	2.5%
6	RIPPLE & NOISE (Max)	V1: 100mVp-p	I/P:230VAC O/P:FULL LOAD Ta:25°C	14mVp-p / high frequency 29mVp-p / low frequency
		<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>high frequency :</p>  </div> <div style="text-align: center;"> <p>low frequency :</p>  </div> </div>		
7	SET UP TIME(Max)	230VAC/1500ms 115VAC/3000ms	I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	230VAC/ 127.4ms 115VAC/ 155ms
		<p>INPUT=230VAC/50HZ @ FULL LOAD INPUT=115VAC/60HZ @ FULL LOAD</p> <p>CH1: Output Voltage CH3: AC Input Voltage CH1: Output Voltage CH3: AC Input Voltage</p>		

		<p>230VAC/60ms 115VAC/60ms</p>	<p>I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C</p>	<p>230VAC/ 2.11ms 115VAC/2.10 ms</p>
8	RISE TIME (Max)			
	<p>INPUT=230VAC/50HZ @ FULL LOAD CH1: Output Voltage</p>	<p>230VAC/ 20ms 115VAC/ 20ms</p>	<p>I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C</p>	<p>INPUT=115VAC/60HZ @ FULL LOAD CH1: Output Voltage</p>
9	HOLD UP TIME (Typ.)			
	<p>INPUT=230VAC/50HZ @ FULL LOAD CH1: Output Voltage CH3: AC Input Voltage</p>	<p>V1: 1200mVp-p</p>	<p>I/P: 230VAC O/P: (1) FULL/ MIN LOAD 50%DUTY / 120HZ (2) FULL/ MIN LOAD 50%DUTY / 1KHZ Ta:25°C</p>	<p>INPUT=115VAC/60HZ @ FULL LOAD CH1: Output Voltage CH3: AC Input Voltage</p>
10	DYNAMIC LOAD			


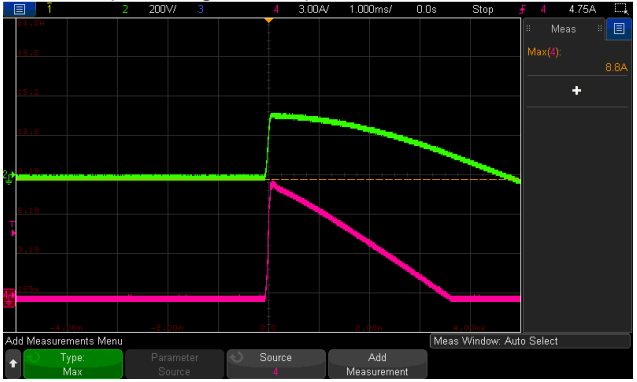

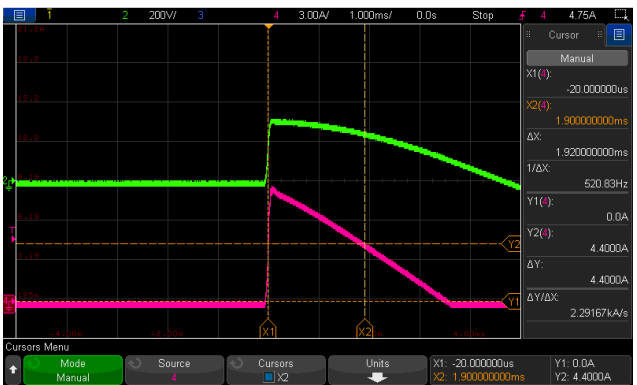
11	TRANSIENT RECOVERY TIME	V1: 1200mVp-p <500us	I/P: 230VAC O/P:40% LOAD CHANGE 50%DUTY/120HZ 1.25A/us	269mVp-p

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT			
1	INPUT VOLTAGE RANGE	85VAC~305VAC 80VDC~ 431VDC 	(1) I/P: TESTING O/P: FULL / 85% LOAD (2) I/P: DC TESTING (L: + N: -) O/P: FULL / 85% LOAD (3) I/P: DC TESTING (L: - N: +) O/P: FULL / 85% LOAD Ta:25°C	(1) 56V~305V/ FULL LOAD 55V~305V/ 85% LOAD (2) 78.3Vdc~431Vdc/FULL LOAD 78Vdc~431Vdc/85% LOAD 78Vdc~431Vdc/50% LOAD (3) 78Vdc~431Vdc/FULL LOAD 78.3Vdc~431Vdc/85% LOAD			
		Derating 50% Load @80VDC	I/P: 80VDC O/P: 50% Load	TEST : OK			
2	INPUT FREQUENCY RANGE	47HZ ~63 HZ NO DAMAGE	I/P: 85VAC~ 305VAC O/P:FULL~MIN LOAD Ta:25°C	TEST: OK			
3	INPUT CURRENT (Typ.)	230V/ 1.2A 115V/ 2.3A	I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	I =0.56A/ 230VAC I =1.1392A/ 115VAC			
4	LEAKAGE CURRENT	< 1mA@240Vac < 1.5mA@277Vac	I/P : 240VAC/60HZ I/P : 277VAC/60HZ O/P : Min LOAD Ta : 25°C	0.627mA@240Vac 0.692mA@277Vac			
5	NO LOAD CONSUMPTION	Remote Power OFF: 0.9W@115Vac & 230Vac	I/P : 115VAC I/P : 230VAC O/P : NO LOAD	TEST: <table border="1" style="display: inline-table;"> <tr> <td></td> <td>Remote Power</td> <td>Remote Power</td> </tr> </table>		Remote Power	Remote Power
	Remote Power	Remote Power					

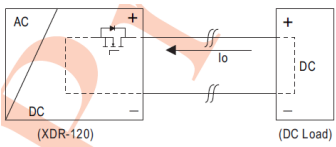


		Remote Power ON: 2W@115Vac & 230Vac	Ta : 25°C	<table border="1"> <tr> <td></td> <td>OFF</td> <td>ON</td> </tr> <tr> <td>115VAC</td> <td>0.515W</td> <td>0.978W</td> </tr> <tr> <td>230VAC</td> <td>0.716W</td> <td>1.117W</td> </tr> </table>		OFF	ON	115VAC	0.515W	0.978W	230VAC	0.716W	1.117W																																			
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6	POWER FACTOR (Typ.)	0.90/ 277VAC 0.95/ 230VAC 0.98/115VAC	I/P : 277 VAC I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	PF=0.9453/277VAC PF=0.99/230VAC PF=0.9922/115VAC																																												
<p>P.F vs LOAD</p> <table border="1"> <caption>Efficiency vs Load Data</caption> <thead> <tr> <th>LOAD (%)</th> <th>115VAC (%)</th> <th>230VAC (%)</th> <th>277VAC (%)</th> </tr> </thead> <tbody> <tr><td>10%</td><td>79</td><td>79</td><td>79</td></tr> <tr><td>20%</td><td>86</td><td>88</td><td>87</td></tr> <tr><td>30%</td><td>89</td><td>90</td><td>89</td></tr> <tr><td>40%</td><td>90</td><td>91</td><td>91</td></tr> <tr><td>50%</td><td>91</td><td>92</td><td>92</td></tr> <tr><td>60%</td><td>92</td><td>93</td><td>93</td></tr> <tr><td>70%</td><td>92</td><td>93</td><td>93</td></tr> <tr><td>80%</td><td>92</td><td>93</td><td>93</td></tr> <tr><td>90%</td><td>92</td><td>93</td><td>93</td></tr> <tr><td>100%</td><td>92</td><td>93</td><td>93</td></tr> </tbody> </table>					LOAD (%)	115VAC (%)	230VAC (%)	277VAC (%)	10%	79	79	79	20%	86	88	87	30%	89	90	89	40%	90	91	91	50%	91	92	92	60%	92	93	93	70%	92	93	93	80%	92	93	93	90%	92	93	93	100%	92	93	93
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7	EFFICIENCY(Typ.)	93.5%	I/P:230 VAC O/P:FULL LOAD Ta:25°C	94.11%																																												
<p>EFFICIENCY vs LOAD</p> <table border="1"> <caption>PF vs Load Data</caption> <thead> <tr> <th>LOAD (%)</th> <th>115VAC</th> <th>230VAC</th> <th>277VAC</th> </tr> </thead> <tbody> <tr><td>10%</td><td>0.85</td><td></td><td></td></tr> <tr><td>20%</td><td>0.96</td><td></td><td></td></tr> <tr><td>30%</td><td>0.97</td><td>0.65</td><td></td></tr> <tr><td>40%</td><td>0.975</td><td>0.77</td><td>0.60</td></tr> <tr><td>50%</td><td>0.98</td><td>0.86</td><td>0.69</td></tr> <tr><td>60%</td><td>0.98</td><td>0.92</td><td>0.76</td></tr> <tr><td>70%</td><td>0.985</td><td>0.95</td><td>0.83</td></tr> <tr><td>80%</td><td>0.985</td><td>0.97</td><td>0.87</td></tr> <tr><td>90%</td><td>0.985</td><td>0.975</td><td>0.90</td></tr> <tr><td>100%</td><td>0.985</td><td>0.98</td><td>0.93</td></tr> </tbody> </table>					LOAD (%)	115VAC	230VAC	277VAC	10%	0.85			20%	0.96			30%	0.97	0.65		40%	0.975	0.77	0.60	50%	0.98	0.86	0.69	60%	0.98	0.92	0.76	70%	0.985	0.95	0.83	80%	0.985	0.97	0.87	90%	0.985	0.975	0.90	100%	0.985	0.98	0.93
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8	INRUSH CURRENT(Typ.)	277V/15A 230V/10A 115V/6A COLD START	I/P : 277 VAC I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	I =12.4A/ 277VAC I =8.8A/ 230VAC I =5.5A/ 115VAC T50=1920us/230V
<p>INPUT=277VAC/50HZ @ FULL LOAD CH2: AC Input Voltage CH4: Input current</p> 		<p>INPUT=230VAC/50HZ @ FULL LOAD CH2: AC Input Voltage CH4: Input current</p> 		
<p>INPUT=115VAC/ 60HZ @ FULL LOAD CH12: AC Input Voltage CH4: Input current</p> 		<p>T50@230VAC:</p> 		

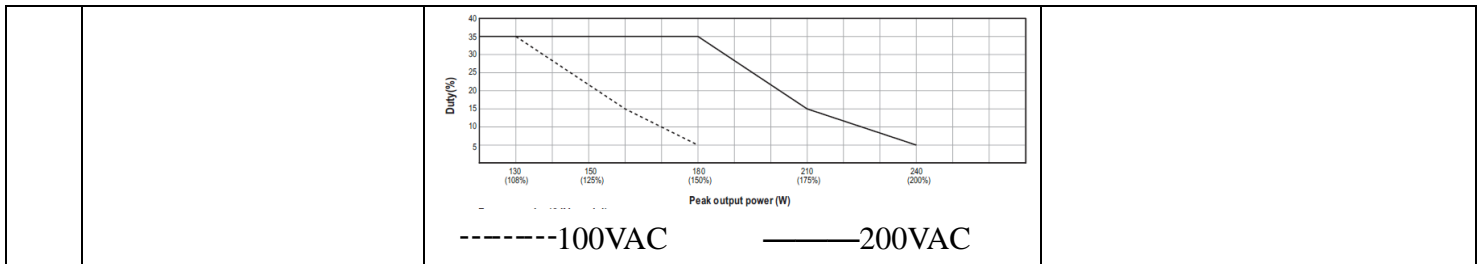
PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OVER LOAD PROTECTION	<p>Protection type: 105%~200% rated output power for more than 5 sec then constant current limiting at rate current without shutdown when $V_o=30\% \sim 100\%$</p> <p>Hiccup mode when $V_o < 30\%$ rated voltage</p>	<p>I/P: 305VAC I/P: 230VAC I/P: 100VAC O/P: TESTING Ta: 25°C</p>	<p>TEST</p> <p>157.2%/ 305VAC 157%/ 230VAC 157.4%/ 100VAC</p> <p>Protection type: 105%~200% rated output power for more than 5 sec then constant current limiting at rate current without shutdown when $V_o=30\% \sim 100\%$</p> <p>Hiccup mode when $V_o < 30\%$ rated voltage</p>

2	OVER VOLTAGE PROTECTION	16V~19V Protection type: Shut down o/p voltage, re-power on to recover	I/P: 305VAC I/P: 85VAC O/P:MIN LOAD Ta:25°C	18.37V/ 305VAC 19.34V/ 90VAC PROTECTION TYPE : Shut down o/p voltage, re-power on to recover
3	OVER TEMPERATURE PROTECTION	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down	I/P: 305VAC I/P: 85VAC O/P:FULL LOAD	O.T.P Active Protection type : Shut down o/p voltage, recovers automatically after temperature goes down
4	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE Protection type: Hiccup mode	I/P: 305VAC I/P: 85VAC O/P:FULL LOAD	NO DAMAGE PROTECTION TYPE : Hiccup mode
5	Protection against Inverse Voltages from the Load	Prevent PSU damage from Back Electro magnetic Force during deceleration of motor or inductive load 	I/P: 230VAC O/P:TESTING Ta:25°C	TEST : <u>OK</u>

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT																																
1	DC OK CONTACT RATINGS	30VDC/1A, 30VAC/0.5A RESISTIVE LOAD	I/P:230VAC O/P:FULL LOAD Ta:25°C	TEST: <u>OK</u>																																
2	REMOTE CONTROL	Power OFF: RC + ~ RC- keep 3.3~5Vdc Power ON: RC + ~ RC- keep<0.8Vdc	I/P:230VAC O/P:FULL LOAD Ta:25°C	TEST: <u>OK</u>																																
3	PULSE CURRENT CAPABILTY	<table border="1" data-bbox="513 1615 804 1738"> <thead> <tr> <th rowspan="2">Load</th> <th rowspan="2">Vo(%)</th> <th>12V</th> <th>24V/36V/48V</th> </tr> <tr> <th>Time</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>3xlo</td> <td>75</td> <td>15ms</td> <td>35ms</td> </tr> <tr> <td>4xlo</td> <td>60</td> <td>8ms</td> <td>17ms</td> </tr> <tr> <td>5xlo</td> <td>40</td> <td>5ms</td> <td>13ms</td> </tr> <tr> <td>6xlo</td> <td>25</td> <td>4ms</td> <td>10ms</td> </tr> </tbody> </table> <p>Note: The 4ms~35ms in the table must be after AC mains is turned on.</p>	Load	Vo(%)	12V	24V/36V/48V	Time	Time	3xlo	75	15ms	35ms	4xlo	60	8ms	17ms	5xlo	40	5ms	13ms	6xlo	25	4ms	10ms	I/P:230VAC O/P:FULL LOAD Ta:25°C	TEST: <u>OK</u> <table border="1" data-bbox="1125 1644 1490 1912"> <thead> <tr> <th>Load</th> <th>Time(ms)</th> </tr> </thead> <tbody> <tr> <td>3xlo</td> <td>19.3ms</td> </tr> <tr> <td>4xlo</td> <td>8.62ms</td> </tr> <tr> <td>5xlo</td> <td>5.8ms</td> </tr> <tr> <td>6xlo</td> <td>4.92ms</td> </tr> </tbody> </table>	Load	Time(ms)	3xlo	19.3ms	4xlo	8.62ms	5xlo	5.8ms	6xlo	4.92ms
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4	PEAK Power	I/P: 100/200VAC O/P:		TEST: <u>OK</u>																																



COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	PWM Transistor (D to S) or (C to E) Peak Voltage	Q5/Q6: Rated:15A/650V	AC ON/OFF I/P: High-Line +3V =308V VDS: O/P: (1)Full Load (2)Output Short (3) Dynamic Load Full Load/ Min. Load 90%Duty/1KHz (4) Dynamic Load Full Load/ Min. Load 90%Duty/3KHz (5) Dynamic Load Full Load/ Min. Load 90%Duty/5KHz (6) Dynamic Load 100% Load/ Min. Load 50%Duty/120Hz (7)0%→400% Load. (8) Peak Load Ta:25°C	Q5 Q6 VDS: VDS: (1) 518V (2) 494V (3) 518V (4) 518V (5) 518V (6) 514V (7) 510V (8) 514V (1) 486V (2) 502V (3) 486V (4) 486V (5) 486V (6) 486V (7) 486V (8) 482V
2	P.F.C Transistor (D to S) or (C to E) Peak Voltage	Q1: Rated:21A/600V	AC ON/OFF I/P: High-Line +3V =308V VDS: O/P: (1)Full Load (2)Output Short (3) Dynamic Load Full Load/ Min. Load 90%Duty/1KHz (4) Dynamic Load Full Load/ Min. Load 90%Duty/3KHz (5) Dynamic Load Full Load/ Min. Load 90%Duty/5KHz (6) Dynamic Load 100% Load/ Min. Load 50%Duty/120Hz (7)0%→400% Load. (8) Peak Load Ta:25°C	Q1 VDS: (1) 445V (2) 441V (3) 445V (4) 445V (5) 465V (6) 437V (7) 465V (8) 465V
3	P.F.C DIODE	D1: Rated: 4A/650V	I/P: High-Line +3V =308 V AC ON/OFF O/P: (1)Full Load (2)Output Short (3) Dynamic Load Full Load/ Min. Load 90%Duty/5KHz	(1) 451V (2) 443V (3) 447V (4) 435V (5) 455V

			(4) Dynamic Load 100% Load/ Min. Load 50%Duty/120Hz (5) Peak Load Ta:25°C	
4	Diode Peak Voltage	Q100 / Q101: Rated: 175A/60V	AC ON/OFF I/P: High-Line +3V =308 V VO=Vomax O/P: (1)Full Load (2)Output Short (3) Dynamic Load Full Load/ Min. Load 90%Duty/1KHz (4) Dynamic Load Full Load/ Min. Load 90%Duty/3KHz (5) Dynamic Load Full Load/ Min. Load 90%Duty/5KHz (6) Dynamic Load 100% Load/ Min. Load 50%Duty/120Hz (7)0%→400% Load. (8).NO LOAD (9) Peak Load (10) burst mode VO=Vonormal O/P: (1) Full Load Ta:25°C	Q100: VO=Vomax VDS: (1) 46.5V (2) 45.5V (3) 45.8V (4) 45.5V (5) 45.8V (6) 46.5V (7) 45.5V (8) 45.8V (9) 45.8V (10) 45.8V VO=Vonormal (1) 43.0V Q103: VO=Vomax VDS: (1) 39.8V (2) 35.2V (3) 40.9V (4) 40.2V (5) 40.9V (6) 43.0V (7) 37.7V (8) 36.6V (9) 41.9V (10) 36.6V VO=Vonormal (1) 41.6V
5	AUX Transistor (D to S) or (C to E) Peak Voltage	U5: Rated: 725V	AC ON/OFF I/P: High-Line +3V =308V VDS: O/P: (1)Full Load (2)Output Short (3) Dynamic Load Full Load/ Min. Load 90%Duty/1KHz (4) Dynamic Load Full Load/ Min. Load 90%Duty/3KHz (5) Dynamic Load Full Load/ Min. Load 90%Duty/5KHz (6) Dynamic Load 100% Load/ Min. Load 50%Duty/120Hz (7)0%→400% Load. (8) Peak Load Ta:25°C	VDS: (1) 557V (2) 529V (3) 545V (4) 545V (5) 557V (6) 557V (7) 553V (8) 561V
6	AUX Clamp Diode Peak Voltage	D 19: Rated : 1A/ 1KV	AC ON/OFF I/P : High-Line +3V = 308V O/P : (1) Dynamic Load 90%Duty/1KHz (2) Full load continue Ta : 25°C	(1) 529V (2) 493V
7	AUX Diode Peak Voltage	D200 : Rated : 2 A/ 600V D27 :	AC ON/OFF I/P: High-Line +3V =308 V O/P: (1)Full Load	D200: VDS: (1) 146V D27: VDS: (1) 192V



		Rated : 1A/600 V	(2)Output Short (3) Dynamic Load Full Load/ Min. Load 90%Duty/1KHz (4) Dynamic Load Full Load/ Min. Load 90%Duty/3KHz (5) Dynamic Load Full Load/ Min. Load 90%Duty/5KHz (6) Dynamic Load 100% Load/ Min. Load 50%Duty/120Hz (7)0%→400% Load. (8).NO LOAD (9) Peak Load Ta:25°C	(2) 134V (3) 145V (4) 145V (5) 145V (6) 145V (7) 143V (8) 143V (9) 145V	(2) 186V (3) 196V (4) 196V (5) 194V (6) 194V (7) 188V (8) 188V (9) 194V
8	Input Capacitor Voltage	C5: Rated: 150μ /450V	I/P: High-Line +3V =308V O/P: (1)Full Load input on/off (2) Min load input on /Off (3) Full Load /Min load Change (4) Full load continue (5) Peak Load on/off (6) Peak Load continue Ta:25°C	(1) 441V (2) 441V (3) 437V (4) 437V (5) 441V (6) 437V	
9	Control IC Voltage Test	PFC/PWM IC U1 : Rated : 12.5V~ 27.9V O/P IC U101: Rated: 4.75V~38 V IC U100: Rated: 3V~30V IC U105: Rated: 3V~32V IC U102: Rated: 3V~30V AUX IC U5: Rated: -0.3V~9V	AC ON/OFF I/P: High-Line +3V =308V O/P: (1) Full Load (2) Output Short (3) O.L.P (4) O.V.P. (5) No Load VR min (Low Line) Ta:25°C	U1 (1) 15.0V (2) 15.0V (3) 15.0V (4) 15.0V (5) 15.0V U101 (1) 11.6V (2) 11.6V (3) 11.6V (4) 11.6V (5) 11.6V U100 (1) 11.6V (2) 11.6V (3) 11.6V (4) 11.6V (5) 11.6V	U105 (1) 13.0V (2) 13.0V (3) 12.7V (4) 12.5V (5) 12.5V U102 (1) 11.6V (2) 11.6V (3) 11.6V (4) 11.6V (5) 11.6V U5 (1) 6.41V (2) 6.57V (3) 6.45V (4) 6.45V (5) 6.49V

■ SAFETY& E.M.C. TEST

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	WITHSTAND VOLTAGE	I/P-O/P: 4 KVAC/min I/P-FG : 2 KVAC/min O/P-FG:1.5 KVAC/min O/P-DC OK: 0.5 KVAC/min	I/P-O/P: 4.4 KVAC/min I/P-FG: 2.4 KVAC/min O/P-FG: 1.8 KVAC/min O/P-DC OK: 0.6 KVAC/min Ta:25°C	I/P-O/P: 3.36 mA I/P-FG: 2.88 mA O/P-FG: 3.73 mA O/P-DC OK: 0.006 mA NO DAMAGE
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ I/P-FG: 500VDC>100MΩ O/P-FG:500VDC>100MΩ	I/P-O/P: 600 VDC I/P-FG: 600 VDC O/P-FG: 600 VDC Ta:25°C	I/P-O/P: 50 GΩ I/P-FG: 23083 MΩ O/P-FG:40285 GΩ NO DAMAGE
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100mΩ	40A /2min Ta:25°C	13 mΩ

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	HARMONIC	BS EN61000-3-2 CLASS A	I/P:230VAC/50HZ O/P:FULL LOAD Ta:25°C	PASS
2	CONDUCTION	BS EN/EN55032 (CISPR32) BS EN/EN61204-3 CNS15936 CLASS B	I/P : 230 VAC (50HZ) O/P : FULL/50% LOAD Ta : 25°C	PASS Test by certified Lab
3	RADIATION	BS EN/EN55032 (CISPR32) BS EN/EN61204-3 CNS15936 CLASS B	I/P : 230 VAC (50HZ) O/P : FULL LOAD Ta : 25°C	PASS Test by certified Lab
4	E.S.D	BS EN61000-4-2 AIR : 15KV / Contact : 8KV	I/P : 230 VAC/50HZ O/P : FULL LOAD Ta : 25°C	CRITERIA A
5	E.F.T	BS EN61000-4-4 INPUT : 4KV	I/P : 230 VAC/50HZ O/P : FULL LOAD Ta : 25°C	CRITERIA A
6	SURGE	BS EN 61000-4-5 L-N : 2KV L,N-PE : 4KV	I/P : 230 VAC/50HZ O/P : FULL LOAD Ta : 25°C	CRITERIA A
7	Test by certified Lab & Test Report Prepare Any contradictions of the test results, please refer to the latest EMC test report			

■ RELIABILITY TEST

ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	
1	TEMPERATURE RISE TEST	MODEL : XDR-120-12 1. ROOM AMBIENT BURN-IN : 2HRS I/P : 230VAC O/P : FULL LOAD Ta= 26.1°C 2. HIGH AMBIENT BURN-IN : 2HRS I/P : 230VAC O/P : FULL LOAD Ta=60.2°C			
			ROOM AMBIENT Ta=26.1°C	HIGH AMBIENT Ta=60.2°C	
		NO	Position		
		1	C2	44.7°C	77.7°C
		2	RY1	47.0°C	80.8°C
		3	R11	45.8°C	78.9°C
		4	L2	44.3°C	77.7°C
		5	L1	49.3°C	81.5°C
		6	RTH2	49.1°C	81.4°C
		7	C5	47.1°C	79.4°C
		8	Q1	46.6°C	79.1°C
		9	C42	48.7°C	80.7°C
		10	C106	50.3°C	81.7°C
		11	U5	63.3°C	94.7°C
		12	T1coil	56.7°C	87.7°C
		13	T1core	51.7°C	83.0°C
		14	T2	53.4°C	84.7°C
		15	C202	50.5°C	82.8°C
		16	Q106	51.2°C	82.9°C
		17	Q105	52.0°C	83.9°C
		18	C107	50.9°C	82.4°C
		19	C110	48.4°C	80.8°C
		20	LF100	51.5°C	84.0°C
		21	RY100	47.5°C	79.0°C
		22	LF2	43.3°C	76.1°C
		23	U1	57.2°C	89.1°C
		24	D1	50.6°C	82.9°C
		25	Q6	47.2°C	79.7°C
		26	Q5	47.5°C	80.2°C
		27	BD1	50.1°C	82.3°C
		28	U101	55.9°C	89.2°C
		29	Q103	49.6°C	81.8°C
		30	Q100	50.5°C	83.0°C
		31	Q108	52.4°C	83.6°C
		32	C204	50.8°C	82.4°C



2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P : 230 VAC O/P : 116%LOAD Ta : 25°C	TEST : OK
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P : 305VAC/100VAC O/P : 80%/100 %LOAD Ta= -45°C/-35°C	TEST : OK
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 60°C/95 %R.H NO DAMAGE	I/P : 315 VAC O/P : FULL LOAD Ta= 60°C HUMIDITY= 95 %R.H	TEST : OK
5	TEMPERATURE COEFFICIENT	± 0.03%/°C(0~60°C)	I/P : 230 VAC O/P : FULL LOAD	± 0.006 %/°C(0~60°C)
6	STORAGE TEMPERATURE TEST	-40~85°C	1. Thermal shock Temperature : -45°C~ +90°C 2. Temperature change rate : 25°C / MIN 3. Dwell time low and high temperature : 30 MIN/EACH 4. Total test cycle : 10 CYCLE 5. Input/Output condition : STATIC	
7	THERMAL SHOCK TEST	-30~60°C	1. Thermal shock Temperature : -35°C~ +65°C 2. Temperature change rate : 25°C / MIN 3. Dwell time low and high temperature : 30 MIN/EACH 4. Total test cycle : 16 CYCLE 5. Input/Output condition : 15cycle:230V/ FULL LOAD AC ON 3sec/AC OFF 1sec TEST 1cycle:230V/ FULL LOAD Burn In Test	
8	VIBRATION TEST	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes	1 Carton & 1 Set (1) Waveform : Sine Wave (2) Frequency : 10~500Hz (3) Sweep Time : 10min/sweep cycle (4) Acceleration : 3G (5) Test Time : 180min in each axis (X.Y.Z) (6) Ta : 25°C	
9	CAPACITOR LIFE CYCLE	SUPPOSE C107 IS THE MOST CRITICAL COMPONENT (1) I/P : 230VAC O/P : FULL LOAD Ta= 25°C LIFE TIME (2) I/P : 230VAC O/P : FULL LOAD Ta= 60°C LIFE TIME (3) I/P : 230VAC O/P : 75% LOAD Ta= 60°C LIFE TIME (4) I/P : 230VAC O/P : 50% LOAD Ta= 60°C LIFE TIME	(1) 1114648HRS (2) 117977HRS (3) 201180HRS (4) 288130HRS	
10	MTBF	Conducted by Parts Stress Analysis Prediction 1550.7K hrs min. Telcordia SR-332 (Bellcore) ; 246.3K hrs min. MIL-HDBK-217F (25°C)		
11	Ongoing Reliability Test	I/P : 230VAC O/P : FULL LOAD TA=50°C Demonstration Mean Time Between Failure : 50,000 hours		

TEST RESULT	TESTER	REVIEW	APPROVAL
PASS	Hanxr	Liutt	Wangzd

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