Test Report: XDR-480-36

480W 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

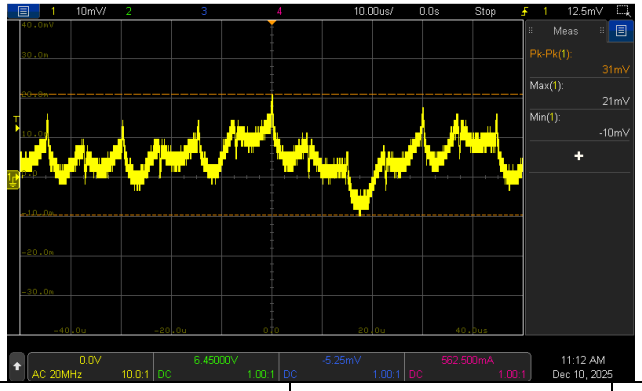
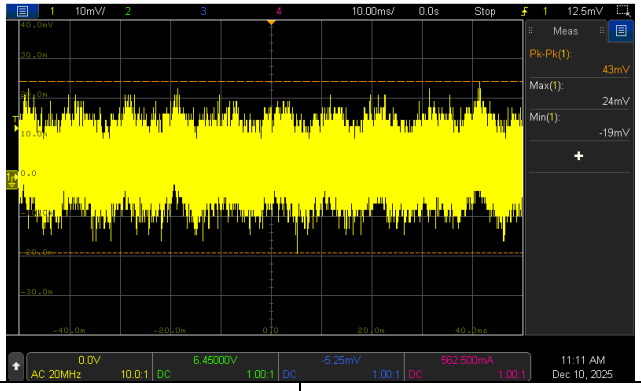
Safety Test
E.M.C. Test

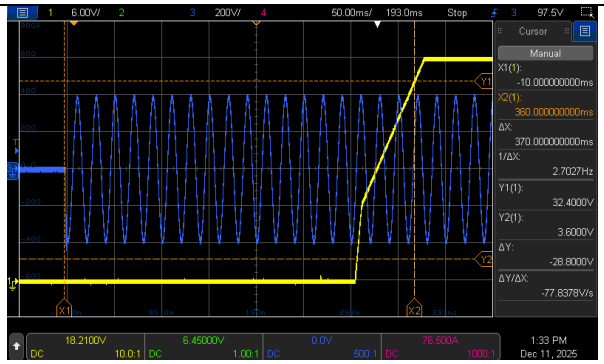
■ RELIABILITY TEST

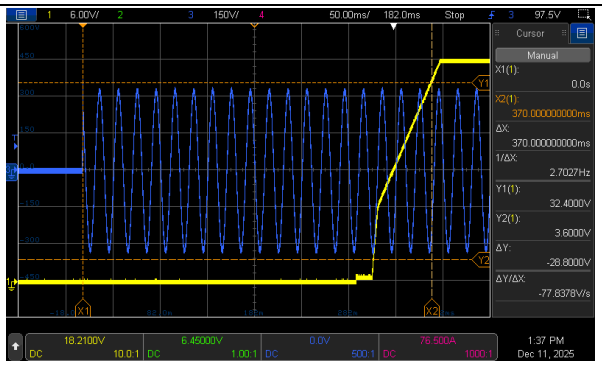
ENVIRONMENT TEST

■ DESIGN VERIFY TEST

OUTPUT FUNCTION TEST

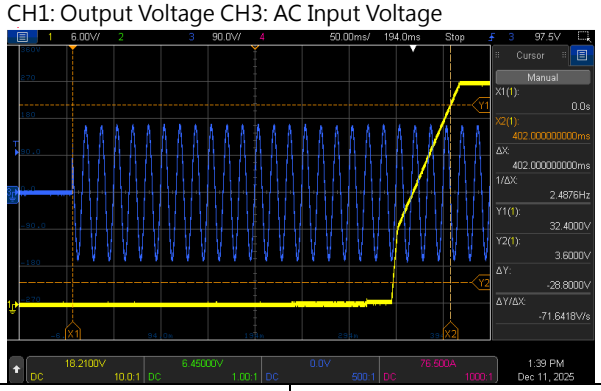
NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OUTPUT VOLTAGE ADJUST RANGE	CH1: 36V~42V	I/P： 277 VAC I/P： 230 VAC I/P： 115 VAC O/P：MIN LOAD Ta：25℃	34.888V~43.162V/277VAC 34.889V~43.162V/230VAC 34.888V~43.162V/115VAC
2	OUTPUT VOLTAGE TOLERANCE	V1: -1% ~ +1%	I/P: 85VAC~305VAC O/P:FULL~MIN. LOAD Ta:25℃	V1: -0.0472% ~ 0.0417%
3	LINE REGULATION	V1: -0.5% ~ +0.5%	I/P: 85VAC~ 305VAC O/P:FULL LOAD Ta:25℃	V1: 0% ~ 0.0139%
4	LOAD REGULATION	V1: -1% ~ +1%	I/P: 230VAC O/P:FULL ~MIN LOAD Ta:25℃	V1: -0.0472% ~ 0.0417%
5	OVER/UNDERSHOOT TEST	<±5%	I/P: 230VAC O/P:FULL LOAD / NO LOAD/ PEAK LOAD Ta:25℃	1.25%
6	RIPPLE & NOISE (Max)	V1: 120mVp-p	I/P:230VAC O/P:FULL LOAD Ta:25℃	31mVp-p / high frequency 43 mVp-p / low frequency
	high frequency：  low frequency： 			
7	SET UP TIME(Max)	230VAC/1500ms 115VAC/3000ms	I/P： 277 VAC I/P： 230 VAC I/P： 115 VAC O/P：FULL LOAD Ta：25℃	277VAC/ 370ms 230VAC/ 370ms 115VAC/402 ms
	INPUT=277VAC/50HZ @ FULL LOAD CH1: Output Voltage CH3: AC Input Voltage		INPUT=115VAC/60HZ @ FULL LOAD CH1: Output Voltage CH3: AC Input Voltage	





INPUT=230VAC/50HZ @ FULL LOAD

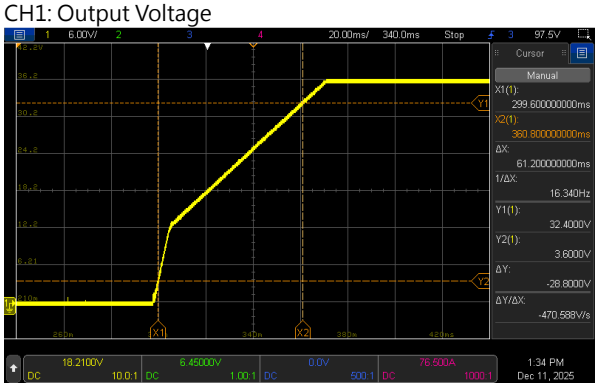
CH1: Output Voltage CH3: AC Input Voltage



8	RISE TIME (Max)	230VAC/150ms 115VAC/150ms	I/P： 277 VAC I/P： 230 VAC I/P： 115 VAC O/P：FULL LOAD Ta：25℃	277VAC/61.2 ms 230VAC/ 61.4ms 115VAC/ 61.4ms

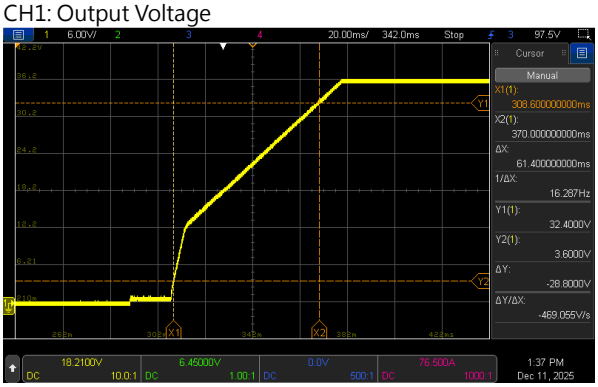
INPUT=277VAC/50HZ @ FULL LOAD

CH1: Output Voltage



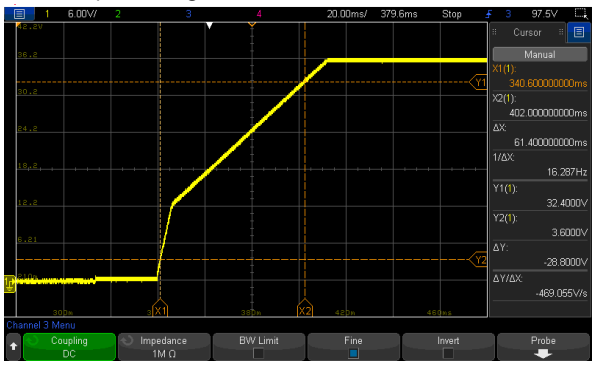
INPUT=115VAC/60HZ @ FULL LOAD

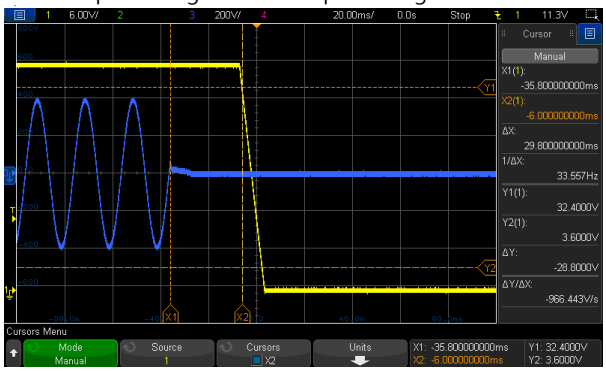
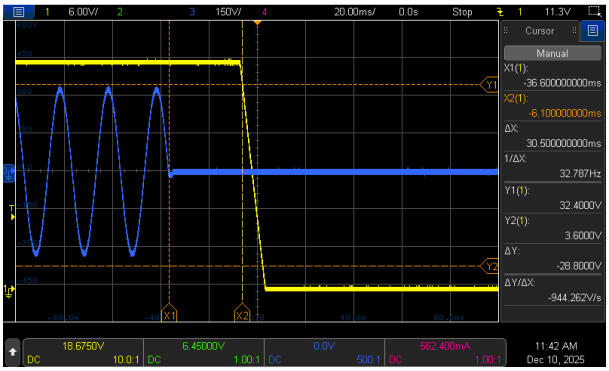
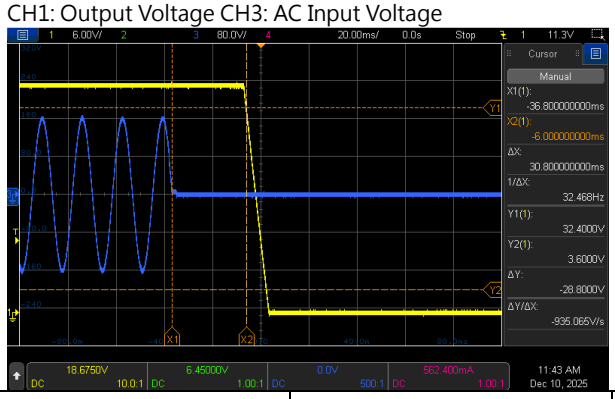
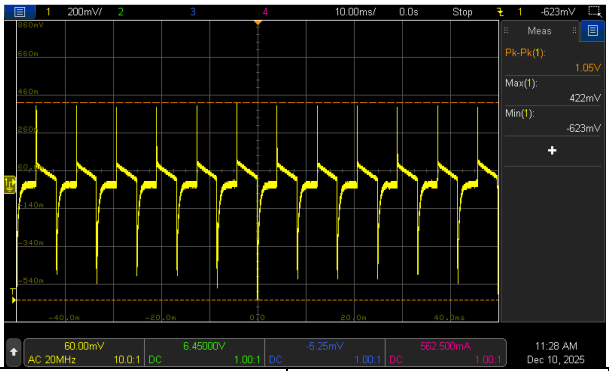
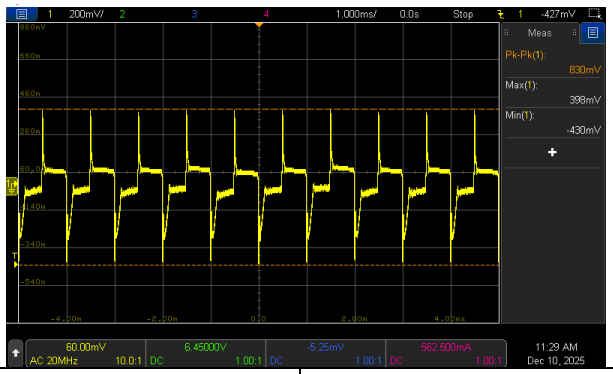
CH1: Output Voltage



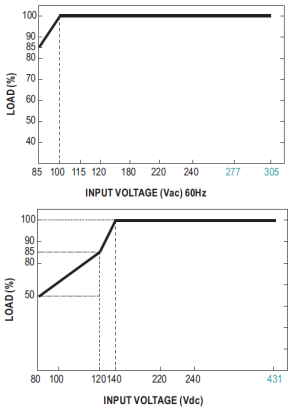
INPUT=230VAC/50HZ @ FULL LOAD

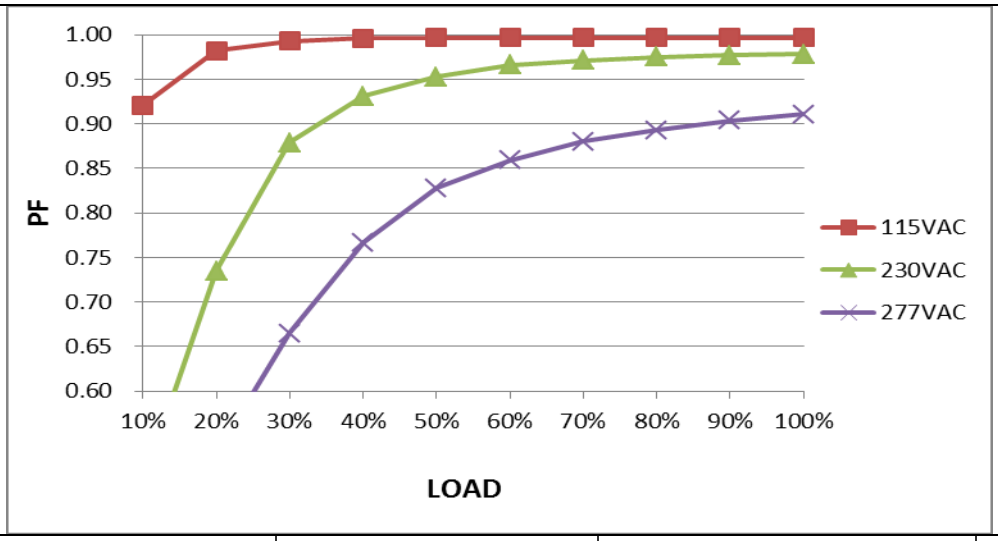
CH1: Output Voltage



<table>
<tr><td>9</td><td>HOLD UP TIME (Typ.)</td><td>230VAC/ 15ms
115VAC/ 15ms</td><td>I/P： 277 VAC
I/P： 230 VAC
I/P： 115 VAC
O/P：FULL LOAD
Ta：25℃</td><td>277VAC/ 29.8ms
230VAC/ 30.5ms
115VAC/ 30.8ms</td></tr>
<tr><td></td><td colspan="4">INPUT=277VAC/50HZ @ FULL LOAD
CH1: Output Voltage CH3: AC Input Voltage
 
INPUT=115VAC/60HZ @ FULL LOAD
CH1: Output Voltage CH3: AC Input Voltage
 
INPUT=230VAC/50HZ @ FULL LOAD
CH1: Output Voltage CH3: AC Input Voltage
  </td></tr>
<tr><td>10</td><td>DYNAMIC LOAD</td><td>V1: 3600mVp-p</td><td>I/P: 230VAC
O/P:
(1) FULL/ MIN LOAD 50%DUTY / 120HZ
(2) FULL/ MIN LOAD 50%DUTY / 1KHZ
Ta:25℃</td><td>1050mVp-p
830mVp-p</td></tr>
<tr><td></td><td colspan="4">FULL / MIN LOAD 50%DUTY / 120HZ
 
FULL / MIN LOAD 50%DUTY / 1KHZ
  </td></tr>
<tr><td>11</td><td>TRANSIENT RECOVERY TIME</td><td>V1: 3600mVp-p
<500us</td><td>I/P: 230VAC
O/P:40% LOAD CHANGE
50%DUTY/120HZ 1.25A/us</td><td>386mVp-p</td></tr>
</table>

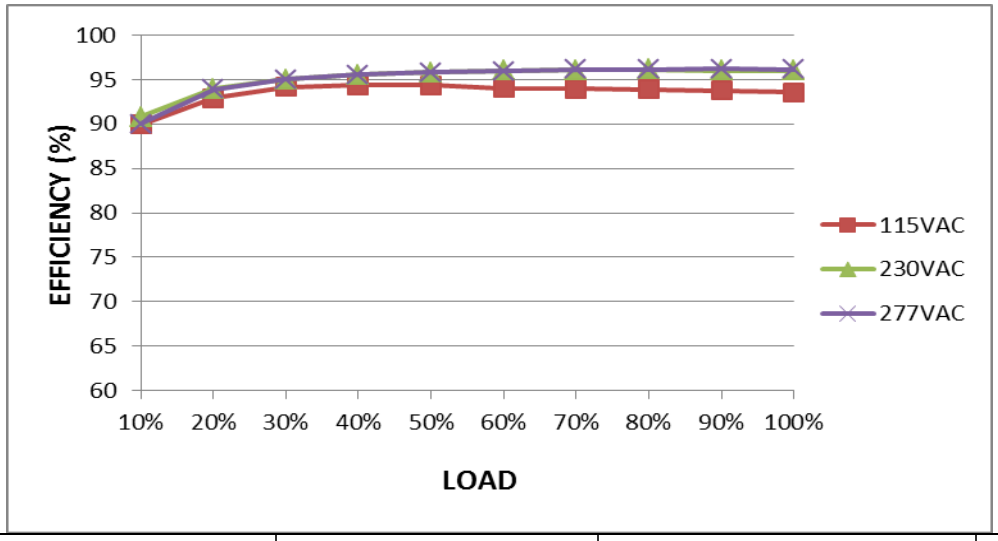
INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	INPUT VOLTAGE RANGE Note	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/ 50% LOAD (3) I/P: DC TESTING (L: - N: +) O/P: FULL / 85% LOAD/ 50% LOAD Ta:25℃	(1) 77.7V~305V/ FULL LOAD 77.5V~305V/ 85% LOAD (2) 74.9Vdc~431Vdc/FULL LOAD 74.9Vdc~431Vdc/85% LOAD 74.9Vdc~431Vdc/50% LOAD (3) 74.9 Vdc~431Vdc/FULL LOAD 74.9Vdc~431Vdc/85% LOAD 74.9Vdc~431Vdc/50% LOAD
			I/P: HIGH-LINE+10V=315V O/P:FULL/MIN LOAD (PLEASE CHECK DERATING CURVE) ON: 30 Sec OFF: 30 Sec 10MIN (POWER ON/OFF NO DAMAGE)	TEST：OK
		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℃	TEST：OK
3	INPUT CURRENT (Typ.)	277V/ 2.5A 230V/ 3A 115V/ 6A	I/P： 277 VAC I/P： 230 VAC I/P： 115 VAC O/P：FULL LOAD Ta：25℃	I =1.9419A/ 277VAC I =2.2121A/ 230VAC I =4.476A/ 115VAC
4	LEAKAGE CURRENT	＜1mA@240Vac ＜1.5mA@277Vac	I/P：240VAC/60HZ I/P：277VAC/60HZ O/P：Min LOAD Ta：25℃	0.41mA@240Vac 0.478mA@277Vac
5	NO LOAD CONSUMPTION	Remote Power OFF: 1W@115Vac & 230Vac & 277Vac Remote Power ON: 3W@115Vac & 230Vac & 277Vac	I/P：115VAC I/P：230VAC I/P：277VAC O/P：NO LOAD Ta：25℃	TEST： Remote Power OFF / Remote Power ON 115VAC 0.584W 2.27W 230VAC 0.738W 2.29W 277VAC 0.827W 2.29W
6	POWER FACTOR (Typ.)	0.9/277VAC 0.95/ 230VAC 0.98/115VAC	I/P： 277VAC I/P： 230 VAC I/P： 115 VAC O/P：FULL LOAD Ta：25℃	PF=0.9236/277VAC PF=0.9792/230VAC PF=0.9974/115VAC
	P.F vs LOAD			



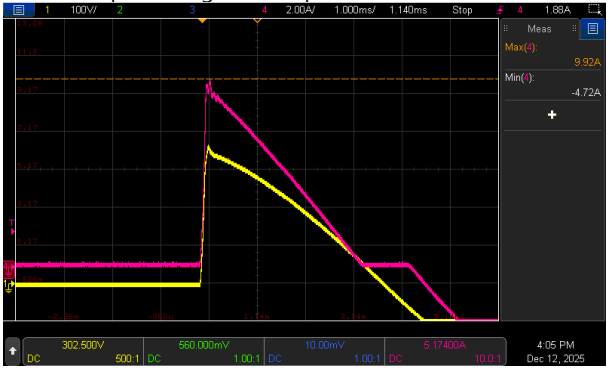
7	EFFICIENCY(Typ.)	95.5%	I/P:230 VAC O/P:FULL LOAD Ta:25℃	96.18%

EFFICIENCY vs LOAD

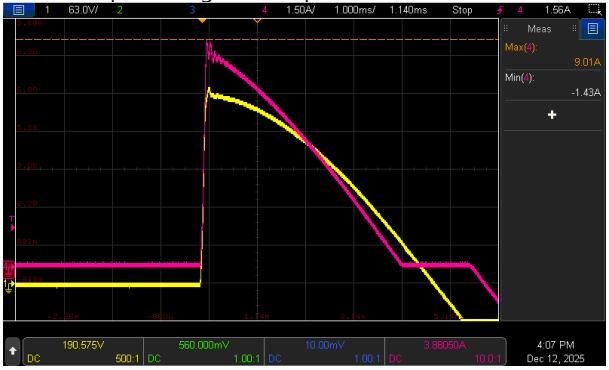


8	INRUSH CURRENT(Typ.)	277V/15A 230V/10A 115V/6A COLD START	I/P： 277 VAC I/P： 230 VAC I/P： 115 VAC O/P：FULL LOAD Ta：25℃	I =9.92A / 277VAC I =9.01A / 230VAC I =4.6A / 115VAC T50=2335us/230V

INPUT=277VAC/50HZ @ FULL LOAD
CH1: AC Input Voltage CH4: Input current

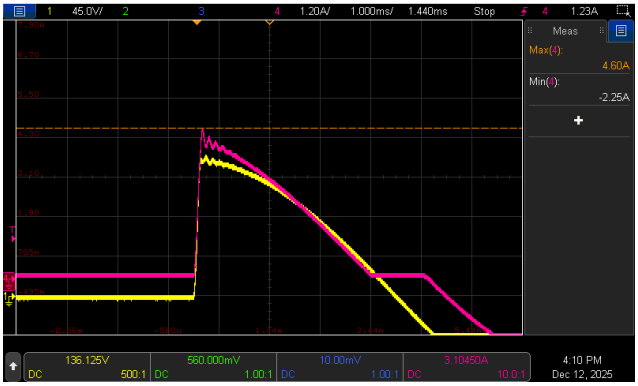


INPUT=230VAC/50HZ @ FULL LOAD
CH1: AC Input Voltage CH4: Input current

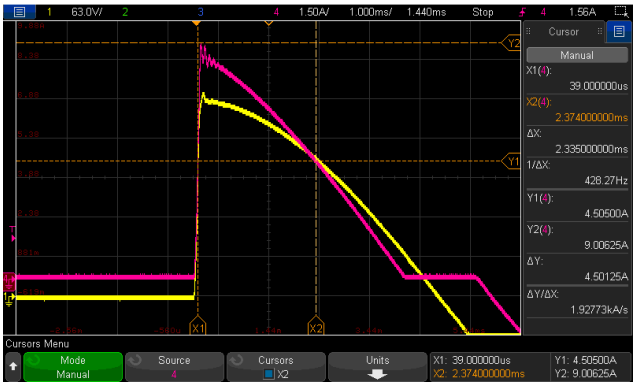


INPUT=115VAC/ 60HZ @ FULL LOAD

CH1: AC Input Voltage CH4: Input current

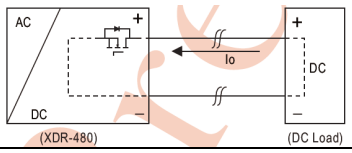


T50@230VAC：

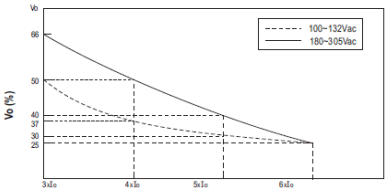
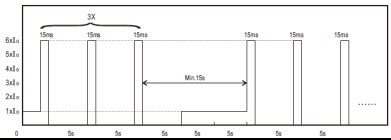


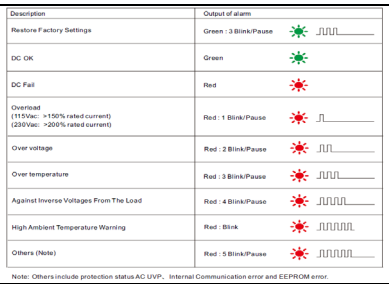
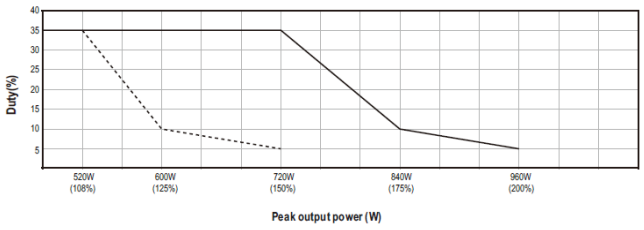
PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OVER LOAD PROTECTION	Protection type: 105%~200% rated output power for more than 5 sec then constant current limiting at rate current without shutdown when Vo=30%~100%； Hiccup mode when Vo<30% rated voltage	I/P: 305VAC I/P: 230VAC I/P: 100VAC O/P:TESTING Ta:25℃	OLP 第一段： 127.82%/305VAC 127.82%/230VAC 127.82%/100VAC Protection type: 105%~200% rated output power for more than 5 sec then constant current limiting at rate current without shutdown when Vo=30%~100%； Hiccup mode when Vo<30% rated voltage
2	OVER VOLTAGE PROTECTION	43V~50V Protection type: Shut down o/p voltage, re-power on to recover	I/P: 305VAC I/P: 85VAC O/P:MIN LOAD Ta:25℃	46.5V/ 305VAC 46.2V/ 85VAC 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 when Vo<30% rated voltage , recovers automatically after fault condition is removed	I/P: 305VAC I/P: 85VAC O/P:FULL LOAD	NO DAMAGE PROTECTION TYPE： Hiccup mode when Vo<30% rated voltage ,recovers automatically after fault condition is removed

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℃	TEST : ok

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℃	TEST: OK
2	REMOTE CONTROL	Power ON: Pin9 and Pin10 Short or keep 4~5Vdc Power OFF: Pin9 and Pin10 Open or keep < 0.5Vdc	I/P:230VAC O/P:FULL LOAD Ta:25℃	TEST: OK
3	PULSE CURRENT CAPABLILTY	 Peak current voltage dip <table><tr><th>Load</th><th>100~132Vac Vo(%)</th><th>180~305Vac Vo(%)</th><th>Time</th></tr><tr><td>3xIo</td><td>50</td><td>66</td><td>100ms</td></tr><tr><td>4xIo</td><td>37</td><td>50</td><td>70ms</td></tr><tr><td>5xIo</td><td>30</td><td>40</td><td>40ms</td></tr><tr><td>6xIo</td><td>25</td><td>25</td><td>15ms</td></tr></table>	I/P: 180VAC I/P: 100VAC O/P: TESTING Ta:25℃	**180VAC :** <table><tr><th>Load</th><th>Iout_Time(ms)</th></tr><tr><td>3xIo</td><td>109</td></tr><tr><td>4xIo</td><td>110</td></tr><tr><td>5xIo</td><td>53</td></tr><tr><td>6xIo</td><td>28</td></tr></table> **100VAC :** <table><tr><th>Load</th><th>Iout_Time(ms)</th></tr><tr><td>3xIo</td><td>109</td></tr><tr><td>4xIo</td><td>109.4</td></tr><tr><td>5xIo</td><td>51.4</td></tr><tr><td>6xIo</td><td>26.2</td></tr></table>
4	PULSE CURRENT CAPABLILTY		I/P:230VAC O/P: TESTING Ta:25℃	TEST : OK
5	LED Status Indictors	**LED :**	I/P:230VA0C O/P: TESTING Ta:25℃	TEST : OK

				
6	PARALLEL	Up to 1920W (3+1), please refer to Function Manual for more details	I/P: TESTING O/P: TESTING LOAD Ta:25℃	TEST : OK
7	PEAK Power	I/P: 100/200VAC O/P:  -------100VAC ———200VAC		TEST : OK

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: 45A/ 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℃	Q5 VDS: (1) 474V (2) 523V (3) 474V (4) 474V (5) 474V (6) 474V (7) 523V (8) 487V	Q6 VDS: (1) 467V (2) 474V (3) 458V (4) 461V (5) 458V (6) 458V (7) 490V (8) 477V
2	P.F.C Transistor (D to S) or (C to E) Peak Voltage	Q1/Q2 : Rated: 31A/ 600V	AC ON/OFF I/P: High-Line +3V =308V VDS: O/P: (1)Full Load (2)Output Short (3) Dynamic Load Full Load/	VDS: (1) 431V (2) 444V (3) 431V (4) 431V (5) 431V	

			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℃	(6) 425V (7) 466V (8) 447V
3	P.F.C DIODE	D1 : Rated: 10A/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 (4) Dynamic Load 100% Load/ Min. Load 50%Duty/120Hz (5) Peak Load Ta:25℃	(1) 416V (2) 463V (3) 425V (4) 422V (5) 441V
4	Diode Peak Voltage	Q100/Q103: Rated: 120V/86A	AC ON/OFF I/P: High-Line +3V =308 V VO=Vomax O/P: (1)Full Load11.43 (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.45.72 (8).NO LOAD (9) Peak Load22.86 V VO=Vonormal O/P: (1) Full Load Ta:25℃	Q101: VO=Vomax VDS: (1) 101.1V (2) 101.5V (3) 102.2V (4) 102.2V (5) 102.2V (6) 102.2V (7) 99.3V (8) 92.8V (9) 101.5V VO=Vonormal (1) 86.8V Q103: VO=Vomax VDS: (1) 97.1V (2) 99.3V (3) 98.6V (4) 98.6V (5) 96.4V (6) 96.4V (7) 97.9V (8) 91.4V (9) 97.9V VO=Vonormal (1) 91.2V
5	AUX Transistor (D to S) or (C to E) Peak Voltage	U2：SC1144D1 Rated: 725V/654mA	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	VDS: (1) 567V (2) 571V (3) 571V (4) 571V (5) 571V (6) 567V (7) 574V (8) 574V

			(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℃		
6	AUX Clamp Diode Peak Voltage	D 19：D1P6 Rated：1A/ 600V	AC ON/OFF I/P：High-Line +3V = 308V O/P： (1) Dynamic Load 90%Duty/1KHz (2) Full load continue Ta：25℃	(1) 553V (2) 521V	
7	AUX Diode Peak Voltage	D200：ES1J Rated：1A/600V D22：ES1J Rated：1A/600V	AC ON/OFF I/P: High-Line +3V =308 V 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 Ta:25℃	D200: VDS: (1) 84.1V (2) 83.5V (3) 82.9V (4) 83.5V (5) 82.9V (6) 82.9V (7) 85.9V (8) 83.5V (9) 85.3V	D22: VDS: (1) 100.9V (2) 101.6V (3) 100.2V (4) 101.6V (5) 100.2V (6) 100.2V (7) 103.1V (8) 100.2V (9) 102.3V
8	Input Capacitor Voltage	C5：RHB151M2WBKF2235 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℃	(1) 439V (2) 449V (3) 436V (4) 423V (5) 446V (6) 429V	
9	Control IC Voltage Test	PFC/PWM IC U1： Rated：12.5V~ 27.9V O/P IC U101： Rated：4.75V~38V IC U404： Rated：3V~36V AUX IC U2： Rated：5.65V~6.8V	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℃	U1 (1) 14.7V (2) 14.7V (3) 14.7V (4) 14.7V (5) 14.7V U101 (1) 15.6V (2) 16.0V (3) 15.6V (4) 15.4V	U2 (1) 6.46V (2) 6.48V (3) 6.48V (4) 6.54 V (5) 6.40V U9 (1) 3.307V (2) 3.307V (3) 3.307V (4) 3.307V

		MCU IC U9 : Rated : 2V~3.6V Level: 3.2835~3.3165V MCU IC U306: Rated : 2.4V~ 3.6V Level: 3.2835~3.3165V		(5) 15.4V U404 (1) 6.3V (2) 6.25V (3) 6.16V (4) 5.63V (5) 5.87V	(5) 3.307V U306 (1) 3.303V (2) 3.303V (3) 3.303V (4) 3.303V (5) 3.303V

■ 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℃	I/P-O/P: 3.15mA I/P-FG: 2.57mA O/P-FG: 3.08mA O/P-DC OK: 0.005mA 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℃	I/P-O/P: 50GΩ I/P-FG: 50GΩ O/P-FG: 50GΩ NO DAMAGE
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100mΩ	40A /2min Ta:25℃	4mΩ

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	HARMONIC	BS EN/EN61000-3-2 CLASS A	I/P:230VAC/50HZ O/P:FULL LOAD Ta:25℃	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℃	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℃	PASS Test by certified Lab
4	E.S.D	BS EN/EN 61000-4-2 AIR : 15KV / Contact : 8KV	I/P : 230 VAC/50HZ O/P : FULL LOAD Ta : 25℃	CRITERIA A

5	E.F.T	BS EN/EN 61000-4-4 INPUT： 4KV	I/P： 230 VAC/50HZ O/P：FULL LOAD Ta：25℃	CRITERIA A
6	SURGE	BS E /EN 61000-4-5 L-N ：2KV L,N-PE：4KV	I/P： 230 VAC/50HZ O/P：FULL LOAD Ta：25℃	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-480-48 1. ROOM AMBIENT BURN-IN： 2HRS I/P： 230VAC O/P： FULL LOAD Ta=23.3℃ 2. HIGH AMBIENT BURN-IN： 2HRS I/P： 230VAC O/P： FULL LOAD Ta=60.1℃		

NO	Position	ROOM AMBIENT Ta=23.3℃	HIGH AMBIENT Ta=60.1℃
1	Q2	56.1℃	90.6℃
2	Q1	52.0℃	89.0℃
3	D1	56.3℃	93.3℃
4	R6	52.8℃	91.6℃
5	Q5	53.5℃	93.0℃
6	L2	47.0℃	85.5℃
7	RTH3	52.2℃	89.8℃
8	L1	51.9℃	89.4℃
9	C5	49.0℃	85.7℃
10	T2	47.5℃	86.5℃
11	Q103	55.1℃	94.1℃
12	Q100	53.1℃	91.9℃
13	RTH5	51.5℃	89.1℃
14	U2	50.1℃	88.2℃
15	U101	52.4℃	91.0℃
16	U1	57.0℃	96.2℃
17	U8	55.6℃	93.5℃
18	T1coil	74.8℃	114.0℃
19	T1core	50.0℃	102.3℃
20	LF2	50.0℃	87.6℃
21	U9	49.1℃	87.1℃
22	BD1	54.2℃	91.1℃

		<table><tr><th>NO</th><th>Position</th><th>ROOM AMBIENT Ta=23.3℃</th><th>HIGH AMBIENT Ta=60.1℃</th></tr><tr><td>23</td><td>LF100</td><td>48.9℃</td><td>89.4℃</td></tr><tr><td>24</td><td>C108</td><td>49.8℃</td><td>89.1℃</td></tr><tr><td>25</td><td>C105</td><td>49.8℃</td><td>88.3℃</td></tr><tr><td>26</td><td>C107</td><td>50.7℃</td><td>89.0℃</td></tr><tr><td>27</td><td>RG6</td><td>53.1℃</td><td>92.6℃</td></tr><tr><td>28</td><td>C109</td><td>47.2℃</td><td>87.6℃</td></tr><tr><td>29</td><td>J100</td><td>52.4℃</td><td>90.1℃</td></tr><tr><td>30</td><td>U4</td><td>49.9℃</td><td>87.5℃</td></tr></table>		
2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P： 230 VAC O/P：123%LOAD Ta：25℃	TEST：OK
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P： 305VAC/100VAC O/P： 80%/100 %LOAD Ta= -45℃/-35℃	TEST：OK
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 60℃/95 %R.H NO DAMAGE	I/P： 315VAC O/P：FULL LOAD Ta= 60℃ HUMIDITY= 95 %R.H	TEST：OK
5	TEMPERATURE COEFFICIENT	± 0.03 %/℃(0~60℃)	I/P： 230 VAC O/P：FULL LOAD	± 0.006%/℃(0~60℃)
6	STORAGE TEMPERATURE TEST	-40~85℃	1. Thermal shock Temperature： -45℃~ +90℃ 2. Temperature change rate ：25℃ / 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℃	1. Thermal shock Temperature： -35℃~ +65℃ 2. Temperature change rate ：25℃ / 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℃	
9	CAPACITOR LIFE CYCLE	SUPPOSE C109 IS THE MOST CRITICAL COMPONENT (1) I/P： 230VAC O/P：FULL LOAD Ta= 25℃ LIFE TIME (2) I/P： 230VAC O/P：FULL LOAD Ta= 60℃ LIFE TIME (3) I/P： 230VAC O/P：75% LOAD Ta= 60℃ LIFE TIME (4) I/P： 230VAC O/P：50% LOAD Ta= 60℃ LIFE TIME	(1) 1636230 HRS (2) 112685 HRS (3) 178025 HRS (4) 237845 HRS	
10	MTBF	Conducted by Parts Stress Analysis Prediction 1139.7K hrs min. Telcordia SR-332 (Bellcore) ; 154.5K hrs min. MIL-HDBK-217F (25℃)		

11	Ongoing Reliability Test	I/P：230VAC O/P：FULL LOAD TA=50℃ Demonstration Mean Time Between Failure : 50,000 hours

TEST RESULT	TESTER	REVIEW	APPROVAL
PASS	Hanxr	Liutt	Wangzd

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