

# TESTREPORT: Planet 3Now! Netzteilroundup 2006

<http://www.planet3dnow.de>

## Switch Mode Power Supply Testing Report

Test Program Name : Other\_EIN720AWT  
Serial No : Testing Data System Time : 2006/10/12 09:37:03  
AM  
Model Name : EIN720AWT Elapsed Time :  
LOT Number : Environment :  
Order Number : Inspector : Planet 3DNow!  
Customer : Test Result : FAIL

=====  
STEP.1(UUT Test seq.1) : Inrush Current Test -----  
PASS

Vin (V)= 230.00  
Fin (Hz)= 50.00  
UUT Off Time (s)= 0.00  
Turn On Phase = 90.00

Load Name	Loading (A/Ohm/V)
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+5V	1.500
+12V3	7.500
+12V1	7.500
-12V	0.500
+3.3V	1.750
+5VSB	3.000
+12V2	7.500

	Max	Min	Reading
Inrush Current (A)	60.00	*****	46.20

=====  
STEP.2(UUT Test seq.2) : Extra Timing Test (Set Up Time Min load) -----  
PASS

Vin (V)= 230.00  
Fin (Hz)= 50.00  
Delay Time (ms)= 1500.00

Before Measurement: TTL State 1 = 0000    TTL State 2 = 0000  
                                   Relay State 1 = 01    Relay State 2 = 00  
 After Measurements: TTL State 1 = 0000    TTL State 2 = 0000  
                                   Relay State 1 = 00    Relay State 2 = 00  
 Change State Delay: For TTL (ms) = 0    For Relay(ms) = 1000

Trigger: 1:TTL1R 2:TTL2R 3:TTL3R 4:TTL4R 5:CMPPAR 6:CMPPBR 7:SWR  
           8:TTL1F 9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

TTL Index	Trigger Level
1	2.60
2	2.60
3	2.60
4	2.60

Load Name	Loading (A/V/Ohm)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	2.000	10	5	4.750	5.250
+12V3	1.000	10	5	11.400	12.600
+12V1	1.000	10	5	11.400	12.600
-12V	0.500	10	5	-10.800	-13.200
+3.3V	0.500	10	5	3.140	3.460
+5VSB	2.000	10	5	4.750	5.250
+12V2	1.000	10	5	11.400	12.600

Load Name	ExtTime Max	ExtTime Min	ExtTime (ms)
+5V	500.00	*****	134.26
+12V3	500.00	*****	135.23
+12V1	*****	*****	135.22
-12V	*****	*****	-----
+3.3V	500.00	*****	133.21
+5VSB	*****	*****	132.64
+12V2	500.00	*****	135.27

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	134.26
0	*****	*****	135.23
0	*****	*****	135.22
0	*****	*****	-----
0	*****	*****	133.21
0	*****	*****	132.64
0	*****	*****	135.27

Ref ExtTime from which Load= 0		Max	Min	Reading
Tds	(ms)	*****	*****	132.64
Tdl	(ms)	*****	*****	135.27
Tdls	(ms)	*****		2.63

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 STEP.3(UUT Test seq.3) : Extra Timing Test(Set Up Time 20% Blance load) ---  
 PASS

Vin (V)= 230.00  
 Fin (Hz)= 50.00  
 Delay Time (ms)= 1500.00

Before Measurement: TTL State 1 = 0000 TTL State 2 = 0000  
 Relay State 1 = 01 Relay State 2 = 00  
 After Measurement: TTL State 1 = 0000 TTL State 2 = 0000  
 Relay State 1 = 00 Relay State 2 = 00  
 Change State Delay: For TTL (ms) = 0 For Relay(ms) = 1000

Trigger: 1:TTL1R 2:TTL2R 3:TTL3R 4:TTL4R 5:CMPPAR 6:CMPPBR 7:SWR  
 8:TTL1F 9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

TTL Index	Trigger Level
1	2.60
2	2.60
3	2.60
4	2.60

Load Name	Loading (A/V/Ohm)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	2.400	10	5	4.750	5.250
+12V3	1.980	10	5	11.400	12.600
+12V1	1.980	10	5	11.400	12.600
-12V	0.500	10	5	-10.800	-13.200
+3.3V	3.630	10	5	3.140	3.460
+5VSB	3.000	10	5	4.750	5.250
+12V2	1.980	10	5	11.400	12.600

Load Name	ExtTime Max	ExtTime Min	ExtTime (ms)
+5V	500.00	*****	317.62
+12V3	500.00	*****	318.50

+12V1	*****	*****	318.48
-12V	*****	*****	-----
+3.3V	500.00	*****	316.78
+5VSB	*****	*****	316.14
+12V2	500.00	*****	318.58

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	317.62
0	*****	*****	318.50
0	*****	*****	318.48
0	*****	*****	-----
0	*****	*****	316.78
0	*****	*****	316.14
0	*****	*****	318.58

Ref ExtTime	from which	Load= 0	
	Max	Min	Reading
Tds (ms)	*****	*****	316.14
Tdl (ms)	*****	*****	318.58
Tdls (ms)	*****		2.44

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STEP.4(UUT Test seq.4) : Extra Timing Test(Set Up Time 50% Load) -----  
PASS

Vin (V)= 230.00  
Fin (Hz)= 50.00  
Delay Time (ms)= 1500.00

Before Measurement: TTL State 1 = 0000 TTL State 2 = 0000  
Relay State 1 = 01 Relay State 2 = 00  
After Measurement: TTL State 1 = 0000 TTL State 2 = 0000  
Relay State 1 = 00 Relay State 2 = 00  
Change State Delay: For TTL (ms) = 0 For Relay(ms) = 1000

Trigger: 1:TTL1R 2:TTL2R 3:TTL3R 4:TTL4R 5:CMPPAR 6:CMPPBR 7:SWR  
8:TTL1F 9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

TTL Index	Trigger Level
1	2.60
2	2.60
3	2.60
4	1.00

Load Name	Loading (A/V/Ohm)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	1.500	10	5	4.750	5.250
+12V3	7.500	10	5	11.400	12.600
+12V1	7.500	10	5	11.400	12.600
-12V	0.500	10	5	-10.800	-13.200
+3.3V	1.750	10	5	3.140	3.460
+5VSB	3.000	10	5	4.750	5.250
+12V2	7.500	10	5	11.400	12.600

Load Name	ExtTime Max	ExtTime Min	ExtTime (ms)
+5V	500.00	*****	320.26
+12V3	500.00	*****	320.94
+12V1	*****	*****	320.84
-12V	*****	*****	-----
+3.3V	500.00	*****	319.21
+5VSB	*****	*****	318.39
+12V2	500.00	*****	321.84

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	320.26
0	*****	*****	320.94
0	*****	*****	320.84
0	*****	*****	-----
0	*****	*****	319.21
0	*****	*****	318.39
0	*****	*****	321.84

Ref	ExtTime (ms)	from which Load= 0	Max	Min	Reading
Tds	(ms)	*****	*****	*****	318.39
Tdl	(ms)	*****	*****	*****	321.84
Tdls	(ms)	*****	*****	*****	3.45

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STEP.5(UUT Test seq.5) : Extra Timing Test(Set Up Time 100% Load) -----  
FAIL

Vin (V)= 230.00  
Fin (Hz)= 50.00  
Delay Time (ms)= 1500.00

Before Measurement: TTL State 1 = 0000 TTL State 2 = 0000

Relay State 1 = 01    Relay State 2 = 00  
 After Measurement: TTL State 1 = 0000    TTL State 2 = 0000  
 Relay State 1 = 00    Relay State 2 = 00  
 Change State Delay: For TTL (ms) = 0    For Relay(ms) = 1000

Trigger: 1:TTL1R    2:TTL2R    3:TTL3R    4:TTL4R    5:CMPPAR    6:CMPPBR    7:SWR  
           8:TTL1F    9:TTL2F    10:TTL3F    11:TTL4F    12:CMPPAF    13:CMPPBF    14:SWF

TTL Index	Trigger Level
1	2.60
2	2.60
3	2.60
4	1.00

Load Name	Loading (A/V/Ohm)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	3.000	10	5	4.750	5.250
+12V3	15.000	10	5	11.400	12.600
+12V1	15.000	10	5	11.400	12.600
-12V	0.500	10	5	-10.800	-13.200
+3.3V	3.500	10	5	3.140	3.460
+5VSB	3.000	10	5	4.750	5.250
+12V2	15.000	10	5	11.400	12.600

Load Name	ExtTime Max	ExtTime Min	ExtTime (ms)
+5V	500.00	*****	319.07
+12V3	500.00	*****	319.93
+12V1	*****	*****	319.78
-12V	*****	*****	-----
+3.3V	500.00	*****	317.58
+5VSB	*****	*****	316.16
+12V2	500.00	*****	-----

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	319.07
0	*****	*****	319.93
0	*****	*****	319.78
0	*****	*****	-----
0	*****	*****	317.58
0	*****	*****	316.16
0	*****	*****	-----

Ref	ExtTime	from which	Load=	0
		Max	Min	Reading
Tds	(ms)	*****	*****	316.16
Tdl	(ms)	*****	*****	319.93
Tdls	(ms)	*****		3.77

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 STEP.6(UUT Test seq.6) : Extra Timing Test(Rise time Min load) -----  
 PASS

Vin (V)= 230.00  
 Fin (Hz)= 50.00  
 Delay Time (ms)= 1500.00

Before Measurement: TTL State 1 = 0000 TTL State 2 = 0000  
 Relay State 1 = 00 Relay State 2 = 01  
 After Measurement: TTL State 1 = 0000 TTL State 2 = 0000  
 Relay State 1 = 00 Relay State 2 = 00  
 Change State Delay: For TTL (ms) = 0 For Relay(ms) = 1000

Trigger: 1:TTL1R 2:TTL2R 3:TTL3R 4:TTL4R 5:CMPPAR 6:CMPPBR 7:SWR  
 8:TTL1F 9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

TTL Index	Trigger Level
1	2.60
2	2.60
3	2.60
4	2.60

Load Name	Loading (A/V/Ohm)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	2.000	6	5	4.750	0.500
+12V3	1.000	6	5	11.400	1.200
+12V1	1.000	6	5	11.400	1.200
-12V	0.500	6	5	-10.800	-1.200
+3.3V	0.500	6	5	3.140	0.330
+5VSB	2.000	6	5	4.750	0.500
+12V2	1.000	6	5	11.400	1.200

Load Name	ExtTime Max	ExtTime Min	ExtTime (ms)
+5V	20.00	0.10	2.19
+12V3	20.00	0.10	3.48
+12V1	*****	*****	3.47

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-12V          ***** ***** -----
+3.3V         20.00      0.10      1.70
+5VSB        ***** *****      1.17
+12V2        20.00      0.10      3.52

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Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	2.19
0	*****	*****	3.48
0	*****	*****	3.47
0	*****	*****	-----
0	*****	*****	1.70
0	*****	*****	1.17
0	*****	*****	3.52

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Ref ExtTime from which Load= 0
Max Min Reading
-----
Tds (ms) ***** ***** 1.17
Tdl (ms) ***** ***** 3.52
Tdls (ms) ***** ***** 2.34

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STEP.7(UUT Test seq.7) : Extra Timing Test(Rise time 20% Blance load) -----  
**PASS**

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Vin (V)= 230.00
Fin (Hz)= 50.00
Delay Time (ms)= 1500.00

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Before Measurement: TTL State 1 = 0000 TTL State 2 = 0000
                    Relay State 1 = 00 Relay State 2 = 01
After Measurement:  TTL State 1 = 0000 TTL State 2 = 0000
                    Relay State 1 = 00 Relay State 2 = 00
Change State Delay: For TTL (ms) = 0 For Relay(ms) = 1000

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Trigger: 1:TTL1R 2:TTL2R 3:TTL3R 4:TTL4R 5:CMPPAR 6:CMPPBR 7:SWR
         8:TTL1F 9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

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TTL Index	Trigger Level
1	2.60
2	2.60
3	2.60
4	2.60

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Load Loading Start End VcmpA VcmpB

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Name	(A/V/Ohm)	Trigger	Trigger	(V)	(V)
+5V	2.400	6	5	4.750	0.500
+12V3	1.980	6	5	11.400	1.200
+12V1	1.980	6	5	11.400	1.200
-12V	0.500	6	5	-10.800	-1.200
+3.3V	3.630	6	5	3.140	0.330
+5VSB	3.000	6	5	4.750	0.500
+12V2	1.980	6	5	11.400	1.200

Load Name	ExtTime Max	ExtTime Min	ExtTime (ms)
+5V	20.00	0.10	2.24
+12V3	20.00	0.10	3.45
+12V1	*****	*****	3.43
-12V	*****	*****	-----
+3.3V	20.00	0.10	1.85
+5VSB	*****	*****	1.15
+12V2	20.00	0.10	3.53

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	2.24
0	*****	*****	3.45
0	*****	*****	3.43
0	*****	*****	-----
0	*****	*****	1.85
0	*****	*****	1.15
0	*****	*****	3.53

Ref ExtTime from which Load= 0

	Max	Min	Reading
Tds (ms)	*****	*****	1.15
Tdl (ms)	*****	*****	3.53
Tdls (ms)	*****		2.37

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STEP.8(UUT Test seq.8) : Extra Timing Test(Rise time 50% Load) -----  
**PASS**

Vin (V)= 230.00  
 Fin (Hz)= 50.00  
 Delay Time (ms)= 1500.00

Before Measurement: TTL State 1 = 0000 TTL State 2 = 0000  
 Relay State 1 = 00 Relay State 2 = 01

After Measurement: TTL State 1 = 0000 TTL State 2 = 0000  
 Relay State 1 = 00 Relay State 2 = 00  
 Change State Delay: For TTL (ms) = 0 For Relay(ms) = 1000

Trigger: 1:TTL1R 2:TTL2R 3:TTL3R 4:TTL4R 5:CMPPAR 6:CMPPBR 7:SWR  
 8:TTL1F 9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

TTL Index	Trigger Level
1	2.60
2	2.60
3	2.60
4	2.60

Load Name	Loading (A/V/Ohm)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	1.500	6	5	4.750	0.500
+12V3	7.500	6	5	11.400	1.200
+12V1	7.500	6	5	11.400	1.200
-12V	0.500	6	5	-10.800	-1.200
+3.3V	1.750	6	5	3.140	0.330
+5VSB	3.000	6	5	4.750	0.500
+12V2	7.500	6	5	11.400	1.200

Load Name	ExtTime Max	ExtTime Min	ExtTime (ms)
+5V	20.00	0.10	2.86
+12V3	20.00	0.10	3.85
+12V1	*****	*****	3.74
-12V	*****	*****	-----
+3.3V	20.00	0.10	2.21
+5VSB	*****	*****	1.34
+12V2	20.00	0.10	4.33

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	2.86
0	*****	*****	3.85
0	*****	*****	3.74
0	*****	*****	-----
0	*****	*****	2.21
0	*****	*****	1.34
0	*****	*****	4.33

Ref ExtTime from which Load= 0

		Max	Min	Reading
Tds	(ms)	*****	*****	1.34
Tdl	(ms)	*****	*****	4.33
Tdls	(ms)	*****		2.98

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 STEP.9(UUT Test seq.9) : Extra Timing Test(Rise time 100% Load) -----  
 PASS

Vin (V)= 230.00  
 Fin (Hz)= 50.00  
 Delay Time (ms)= 1500.00

Before Measurement: TTL State 1 = 0000 TTL State 2 = 0000  
 Relay State 1 = 00 Relay State 2 = 01  
 After Measurement: TTL State 1 = 0000 TTL State 2 = 0000  
 Relay State 1 = 00 Relay State 2 = 00  
 Change State Delay: For TTL (ms) = 0 For Relay(ms) = 1000

Trigger: 1:TTL1R 2:TTL2R 3:TTL3R 4:TTL4R 5:CMPPAR 6:CMPPBR 7:SWR  
 8:TTL1F 9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

TTL Index	Trigger Level
1	2.60
2	2.60
3	2.60
4	2.60

Load Name	Loading (A/V/Ohm)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	3.000	6	5	4.750	0.500
+12V3	15.000	6	5	11.400	1.200
+12V1	15.000	6	5	11.400	1.200
-12V	0.500	6	5	-10.800	-1.200
+3.3V	3.500	6	5	3.140	0.330
+5VSB	3.000	6	5	4.750	0.500
+12V2	15.000	6	5	11.400	1.200

Load Name	ExtTime Max	ExtTime Min	ExtTime (ms)
+5V	20.00	0.10	4.00
+12V3	20.00	0.10	5.24
+12V1	*****	*****	5.09
-12V	*****	*****	-----

+3.3V	20.00	0.10	2.99
+5VSB	*****	*****	1.51
+12V2	20.00	0.10	8.28

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	4.00
0	*****	*****	5.24
0	*****	*****	5.09
0	*****	*****	-----
0	*****	*****	2.99
0	*****	*****	1.51
0	*****	*****	8.28

Ref ExtTime	from which	Load= 0		
	Max	Min		Reading
Tds (ms)	*****	*****		1.51
Tdl (ms)	*****	*****		8.28
Tdls (ms)	*****			6.77

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STEP.10(UUT Test seq.10) : Extra Timing Test(P.G Min load) -----  
PASS

Vin (V)= 230.00  
Fin (Hz)= 50.00  
Delay Time (ms)= 1500.00

Before Measurement: TTL State 1 = 0000 TTL State 2 = 0000  
Relay State 1 = 00 Relay State 2 = 01  
After Measurement: TTL State 1 = 0000 TTL State 2 = 0000  
Relay State 1 = 00 Relay State 2 = 00  
Change State Delay: For TTL (ms) = 0 For Relay(ms) = 1000

Trigger: 1:TTL1R 2:TTL2R 3:TTL3R 4:TTL4R 5:CMPPAR 6:CMPPBR 7:SWR  
8:TTL1F 9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

TTL Index	Trigger Level
1	2.60
2	2.60
3	2.60
4	2.60

Load Name	Loading (A/V/Ohm)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
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+5V	2.000	5	2	4.750	0.500
+12V3	1.000	5	2	11.400	1.200
+12V1	1.000	5	2	11.400	1.200
-12V	0.500	5	2	-10.800	-1.200
+3.3V	0.500	5	2	3.140	0.330
+5VSB	2.000	5	2	4.750	0.500
+12V2	1.000	5	2	11.400	1.200

Load Name	ExtTime Max	ExtTime Min	ExtTime (ms)
+5V	500.00	100.00	340.24
+12V3	500.00	100.00	339.31
+12V1	500.00	100.00	339.32
-12V	*****	*****	-----
+3.3V	500.00	100.00	341.12
+5VSB	*****	*****	341.67
+12V2	*****	*****	339.28

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	340.24
0	*****	*****	339.31
0	*****	*****	339.32
0	*****	*****	-----
0	*****	*****	341.12
0	*****	*****	341.67
0	*****	*****	339.28

Ref	ExtTime	from which	Load=	0	
	Max	Min			Reading
Tds	(ms)	*****	*****		339.28
Tdl	(ms)	*****	*****		341.67
Tdls	(ms)	*****			2.40

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STEP.11(UUT Test seq.11) : Extra Timing Test(P.G 20% Blance load) -----  
PASS

Vin (V)= 230.00  
Fin (Hz)= 50.00  
Delay Time (ms)= 1500.00

Before Measurement: TTL State 1 = 0000 TTL State 2 = 0000  
Relay State 1 = 00 Relay State 2 = 01  
After Measurement: TTL State 1 = 0000 TTL State 2 = 0000

Relay State 1 = 00    Relay State 2 = 00  
 Change State Delay: For TTL (ms) = 0    For Relay(ms) = 1000

Trigger: 1:TTL1R    2:TTL2R    3:TTL3R    4:TTL4R    5:CMPPAR    6:CMPPBR    7:SWR  
           8:TTL1F    9:TTL2F    10:TTL3F    11:TTL4F    12:CMPPAF    13:CMPPBF    14:SWF

TTL Index	Trigger Level
1	2.60
2	2.60
3	2.60
4	2.60

Load Name	Loading (A/V/Ohm)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	2.400	5	2	4.750	0.500
+12V3	1.980	5	2	11.400	1.200
+12V1	1.980	5	2	11.400	1.200
-12V	0.500	5	2	-10.800	-1.200
+3.3V	3.630	5	2	3.140	0.330
+5VSB	3.000	5	2	4.750	0.500
+12V2	1.980	5	2	11.400	1.200

Load Name	ExtTime Max	ExtTime Min	ExtTime (ms)
+5V	500.00	100.00	346.53
+12V3	500.00	100.00	345.66
+12V1	500.00	100.00	345.68
-12V	*****	*****	-----
+3.3V	500.00	100.00	347.36
+5VSB	*****	*****	348.01
+12V2	*****	*****	345.58

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	346.53
0	*****	*****	345.66
0	*****	*****	345.68
0	*****	*****	-----
0	*****	*****	347.36
0	*****	*****	348.01
0	*****	*****	345.58

Ref ExtTime from which Load= 0  
                           Max                   Min                   Reading

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Tds      (ms)  *****  *****  345.58
Tdl      (ms)  *****  *****  348.01
Tdls     (ms)  *****  *****  2.42
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STEP.12(UUT Test seq.12) : Extra Timing Test(P.G 50% Load) -----
PASS

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Vin      (V)= 230.00
Fin      (Hz)= 50.00
Delay Time (ms)= 1500.00

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Before Measurement: TTL State 1 = 0000  TTL State 2 = 0000
                   Relay State 1 = 00    Relay State 2 = 01
After Measurement:  TTL State 1 = 0000  TTL State 2 = 0000
                   Relay State 1 = 00    Relay State 2 = 00
Change State Delay: For TTL (ms) = 0     For Relay(ms) = 1000

```

```

Trigger: 1:TTL1R  2:TTL2R  3:TTL3R  4:TTL4R  5:CMPPAR  6:CMPPBR  7:SWR
          8:TTL1F  9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

```

TTL Index	Trigger Level
1	2.60
2	2.60
3	2.60
4	2.60

Load Name	Loading (A/V/Ohm)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	1.500	5	2	4.750	0.500
+12V3	7.500	5	2	11.400	1.200
+12V1	7.500	5	2	11.400	1.200
-12V	0.500	5	2	-10.800	-1.200
+3.3V	1.750	5	2	3.140	0.330
+5VSB	3.000	5	2	4.750	0.500
+12V2	7.500	5	2	11.400	1.200

Load Name	ExtTime Max	ExtTime Min	ExtTime (ms)
+5V	500.00	100.00	341.77
+12V3	500.00	100.00	341.12
+12V1	500.00	100.00	341.20
-12V	*****	*****	-----
+3.3V	500.00	100.00	342.82

```
+5VSB          *****  *****  343.65
+12V2          *****  *****  340.69
```

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	341.77
0	*****	*****	341.12
0	*****	*****	341.20
0	*****	*****	-----
0	*****	*****	342.82
0	*****	*****	343.65
0	*****	*****	340.69

```
Ref ExtTime from which Load= 0
```

	Max	Min	Reading
Tds (ms)	*****	*****	340.69
Tdl (ms)	*****	*****	343.65
Tdls (ms)	*****		2.96

```
=====
=====
```

```
STEP.13(UUT Test seq.13) : Extra Timing Test(P.G 100% Load) -----
PASS
```

```
Vin (V)= 230.00
Fin (Hz)= 50.00
Delay Time (ms)= 1500.00
```

```
Before Measurement: TTL State 1 = 0000  TTL State 2 = 0000
                    Relay State 1 = 00    Relay State 2 = 01
After Measurement:  TTL State 1 = 0000  TTL State 2 = 0000
                    Relay State 1 = 00    Relay State 2 = 00
Change State Delay: For TTL (ms) = 0    For Relay(ms) = 1000
```

```
Trigger: 1:TTL1R  2:TTL2R  3:TTL3R  4:TTL4R  5:CMPar  6:CMpBR  7:SWR
          8:TTL1F  9:TTL2F 10:TTL3F 11:TTL4F 12:CMpAF 13:CMpBF 14:SWF
```

TTL Index	Trigger Level
1	2.60
2	2.60
3	2.60
4	2.60

Load Name	Loading (A/V/Ohm)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
-----	-----	-----	-----	-----	-----



+5V	3.000	5	2	4.750	0.500
+12V3	15.000	5	2	11.400	1.200
+12V1	15.000	5	2	11.400	1.200
-12V	0.500	5	2	-10.800	-1.200
+3.3V	3.500	5	2	3.140	0.330
+5VSB	3.000	5	2	4.750	0.500
+12V2	15.000	5	2	11.400	1.200

Load Name	ExtTime Max	ExtTime Min	ExtTime (ms)
+5V	500.00	100.00	334.86
+12V3	500.00	100.00	334.02
+12V1	500.00	100.00	334.16
-12V	*****	*****	-----
+3.3V	500.00	100.00	336.36
+5VSB	*****	*****	337.79
+12V2	*****	*****	1797.53

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	334.86
0	*****	*****	334.02
0	*****	*****	334.16
0	*****	*****	-----
0	*****	*****	336.36
0	*****	*****	337.79
0	*****	*****	1797.53

Ref	ExtTime	from which	Load=	0	
	Max	Min			Reading
Tds	(ms)	*****	*****		334.02
Tdl	(ms)	*****	*****		1797.53
Tdls	(ms)	*****			1463.51

=====  
=====

STEP.14(UUT Test seq.14) : TTL & Relay Setup -----  
PASS

Delay Time (ms) = 1500  
TTL State 1 = 0000                    TTL State 2 = 0000  
Relay State 1 = 00                    Relay State 2 = 01  
TTL Change State Delay (ms) = 0  
Rley Change State Delay (ms) = 1000

=====  
=====

STEP.15(UUT Test seq.15) : Hold Up & Sequence Test (P.F Min load) -----  
**PASS**

Vin (V)= 230.00  
 Fin (Hz)= 50.00  
 Delay Time (ms)= 1500.00  
 On Phase Delay(ms)= 0.00  
 UUT Off Time (s)= 2.00

Trigger: 1:TTL1R 2:TTL2R 3:TTL3R 4:TTL4R 5:CMPPAR 6:CMPPBR 7:SWR  
 8:TTL1F 9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

TTL Index	Trigger Level
1	1.00
2	1.00
3	1.00
4	1.00

Load Name	Loading (A/Ohm/V)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	2.000	9	12	4.750	5.250
+12V3	1.000	9	12	11.400	12.600
+12V1	1.000	9	12	11.400	12.600
-12V	0.500	9	12	-10.800	-13.200
+3.3V	0.500	9	12	3.130	3.460
+5VSB	2.000	9	12	4.750	5.250
+12V2	1.000	9	12	11.400	12.600

Load Name	Tholdup Max	Tholdup Min	Tholdup (ms)
+5V	*****	1.00	49.53
+12V3	*****	1.00	33.85
+12V1	*****	1.00	34.02
-12V	*****	*****	-----
+3.3V	*****	1.00	51.31
+5VSB	*****	*****	54.30
+12V2	*****	*****	33.36

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	49.53
0	*****	*****	33.85
0	*****	*****	34.02
0	*****	*****	-----
0	*****	*****	51.31

```

0          *****  *****  54.30
0          *****  *****  33.36

```

Ref Tholdup from which Load = 0

		Max	Min	Reading
Tds	(ms)	*****	*****	33.36
Tdl	(ms)	*****	*****	54.30
Tdls	(ms)	*****		20.94

=====

STEP.16(UUT Test seq.16) : Hold Up & Sequence Test (P.F 20% Load) -----  
**PASS**

```

Vin          (V)= 230.00
Fin          (Hz)= 50.00
Delay Time   (ms)= 500.00
On Phase Delay(ms)= 0.00
UUT Off Time (s)= 2.00

```

```

Trigger: 1:TTL1R  2:TTL2R  3:TTL3R  4:TTL4R  5:CMPPAR  6:CMPPBR  7:SWR
          8:TTL1F  9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

```

TTL Index	Trigger Level
1	1.00
2	1.00
3	1.00
4	1.00

Load Name	Loading (A/Ohm/V)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	2.400	9	12	4.750	5.250
+12V3	1.980	9	12	11.400	12.600
+12V1	1.980	9	12	11.400	12.600
-12V	0.500	9	12	-10.800	-13.200
+3.3V	3.630	9	12	3.130	3.460
+5VSB	3.000	9	12	4.750	5.250
+12V2	1.980	9	12	11.400	12.600

Load Name	Tholdup Max	Tholdup Min	Tholdup (ms)
+5V	*****	1.00	30.85
+12V3	*****	1.00	19.37
+12V1	*****	1.00	19.60
-12V	*****	*****	-----

```

+3.3V          *****      1.00      34.47
+5VSB          *****      *****      38.64
+12V2          *****      *****      18.65

```

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	30.85
0	*****	*****	19.37
0	*****	*****	19.60
0	*****	*****	-----
0	*****	*****	34.47
0	*****	*****	38.64
0	*****	*****	18.65

```

Ref Tholdup from which Load = 0

```

	Max	Min	Reading
Tds (ms)	*****	*****	18.65
Tdl (ms)	*****	*****	38.64
Tdls (ms)	*****	*****	19.99

```

=====
====

```

```

STEP.17(UUT Test seq.17) : Hold Up & Sequence Test (P.F 50% Load) -----
PASS

```

```

Vin          (V)= 230.00
Fin          (Hz)= 50.00
Delay Time   (ms)= 500.00
On Phase Delay(ms)= 0.00
UUT Off Time (s)= 2.00

```

```

Trigger: 1:TTL1R  2:TTL2R  3:TTL3R  4:TTL4R  5:CMPPAR  6:CMPPBR  7:SWR
          8:TTL1F  9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

```

TTL Index	Trigger Level
1	1.00
2	1.00
3	1.00
4	1.00

Load Name	Loading (A/Ohm/V)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	1.500	9	12	4.750	5.250
+12V3	7.500	9	12	11.400	12.600
+12V1	7.500	9	12	11.400	12.600

-12V	0.500	9	12	-10.800	-13.200
+3.3V	1.750	9	12	3.130	3.460
+5VSB	3.000	9	12	4.750	5.250
+12V2	7.500	9	12	11.400	12.600

Load Name	Tholdup Max	Tholdup Min	Tholdup (ms)
+5V	20.00	0.10	14.63
+12V3	20.00	0.10	6.78
+12V1	*****	*****	7.16
-12V	*****	*****	-----
+3.3V	20.00	0.10	18.74
+5VSB	*****	*****	22.07
+12V2	20.00	0.10	5.19

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	14.63
0	*****	*****	6.78
0	*****	*****	7.16
0	*****	*****	-----
0	*****	*****	18.74
0	*****	*****	22.07
0	*****	*****	5.19

Ref Tholdup from which Load = 0

	Max	Min	Reading
Tds (ms)	*****	*****	5.19
Tdl (ms)	*****	*****	22.07
Tdls (ms)	*****	*****	16.88

=====

STEP.18(UUT Test seq.18) : Hold Up & Sequence Test(100% Blance load) -----  
FAIL

Vin (V)= 230.00  
 Fin (Hz)= 50.00  
 Delay Time (ms)= 500.00  
 On Phase Delay(ms)= 0.00  
 UUT Off Time (s)= 2.00

Trigger: 1:TTL1R 2:TTL2R 3:TTL3R 4:TTL4R 5:CMPPAR 6:CMPPBR 7:SWR  
 8:TTL1F 9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

TTL Trigger  
 Index Level

```

-----
1      1.00
2      1.00
3      1.00
4      1.00

```

Load Name	Loading (A/Ohm/V)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	3.000	9	12	4.750	5.250
+12V3	15.000	9	12	11.400	12.600
+12V1	15.000	9	12	11.400	12.600
-12V	0.500	9	12	-10.800	-13.200
+3.3V	3.500	9	12	3.130	3.460
+5VSB	3.000	9	12	4.750	5.250
+12V2	15.000	9	12	11.400	12.600

Load Name	Tholdup Max	Tholdup Min	Tholdup (ms)
+5V	20.00	0.10	7.64
+12V3	20.00	0.10	2.57
+12V1	*****	*****	3.12
-12V	*****	*****	-----
+3.3V	20.00	0.10	12.44
+5VSB	*****	*****	15.20
+12V2	20.00	0.10	-----

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	7.64
0	*****	*****	2.57
0	*****	*****	3.12
0	*****	*****	-----
0	*****	*****	12.44
0	*****	*****	15.20
0	*****	*****	-----

Ref Tholdup from which Load = 0

	Max	Min	Reading
Tds (ms)	*****	*****	2.57
Tdl (ms)	*****	*****	15.20
Tdls (ms)	*****		12.64

```

=====
====
STEP.19(UUT Test seq.19) : TTL & Relay Setup -----

```

PASS

```

Delay Time (ms) = 1500
TTL State 1     = 0000      TTL State 2     = 0000
Relay State 1   = 00       Relay State 2   = 01
TTL Change State Delay (ms) = 0
Rley Change State Delay (ms) = 1000

```

=====  
=====

STEP.20(UUT Test seq.20) : Cycle Dropout Test\_2 -----

PASS

```

Vin      (V)= 230.00
Fin      (Hz)= 50.00
Delay Time (ms)= 3000.00   Drop Start Phase (ms)= 0.00
Drop Time (ms)= 21.00     Drop Recovery Time(ms)= 100.00

```

Load	Loading	Vpk Max	Vpk Min	Vpk High
Vpk Low				
Name	(A/Ohm/V)	(V)	(V)	
(V)	(V)			
+5V	2.400	5.250	4.800	<5.250 >4.800
+12V3	1.980	12.600	11.640	<12.600 >11.640
+12V1	1.980	12.600	11.600	<12.600 >11.600
-12V	0.500	-13.200	-10.800	<-13.200 >-10.800
+3.3V	3.630	3.470	3.140	<3.470 >3.140
+5VSB	3.000	5.250	4.750	<5.250 >4.750
+12V2	1.980	12.600	11.640	<12.600 >11.640

=====  
=====

STEP.21(UUT Test seq.21) : TTL & Relay Setup -----

PASS

```

Delay Time (ms) = 1500
TTL State 1     = 0000      TTL State 2     = 0000
Relay State 1   = 00       Relay State 2   = 01
TTL Change State Delay (ms) = 0
Rley Change State Delay (ms) = 1000

```

=====  
=====

STEP.22(UUT Test seq.22) : Cycle Dropout Test\_2(50% Load) -----

PASS

```

Vin      (V)= 230.00
Fin      (Hz)= 50.00
Delay Time (ms)= 3000.00   Drop Start Phase (ms)= 0.00
Drop Time (ms)= 21.00     Drop Recovery Time(ms)= 100.00

```

Load	Loading	Vpk Max	Vpk Min	Vpk High
------	---------	---------	---------	----------

Vpk Low Name (V)	(A/Ohm/V) (V)	(V)	(V)	(V)	(V)
+5V	1.500	5.250	4.800	<5.250	>4.800
+12V3	7.500	12.600	11.640	<12.600	>11.640
+12V1	7.500	12.600	11.600	<12.600	>11.600
-12V	0.500	-13.200	-10.800	<-13.200	>-10.800
+3.3V	1.750	3.470	3.140	<3.470	>3.140
+5VSB	3.000	5.250	4.750	<5.250	>4.750
+12V2	7.500	12.600	11.640	<12.600	>11.640

=====  
STEP.23(UUT Test seq.23) : TTL & Relay Setup -----  
**PASS**

Delay Time (ms) = 1500  
TTL State 1 = 0000                      TTL State 2 = 0000  
Relay State 1 = 00                      Relay State 2 = 01  
TTL Change State Delay (ms) = 0  
Rley Change State Delay (ms) = 1000

=====  
STEP.24(UUT Test seq.24) : Cycle Dropout Test\_2(100% Load) -----  
**FAIL**

Vin (V) = 230.00  
Fin (Hz) = 50.00  
Delay Time (ms) = 3000.00              Drop Start Phase (ms) = 0.00  
Drop Time (ms) = 21.00                  Drop Recovery Time(ms) = 100.00

Load Vpk Low Name (V)	Loading (A/Ohm/V) (V)	(V)	Vpk Max (V)	Vpk Min (V)	Vpk High (V)
+5V	3.000	5.250	4.800	<5.250	>4.800
+12V3	15.000	12.600	11.640	<12.600	>11.640
+12V1	15.000	12.600	11.600	>12.600	<11.600
-12V	0.500	-13.200	-10.800	<-13.200	>-10.800
+3.3V	3.500	3.470	3.140	<3.470	>3.140
+5VSB	3.000	5.250	4.750	<5.250	>4.750
+12V2	15.000	12.600	11.640	<12.600	<11.640

=====  
STEP.25(UUT Test seq.25) : TTL & Relay Setup -----  
**PASS**

Delay Time (ms) = 1500



```

TTL State 1      = 0000      TTL State 2      = 0000
Relay State 1    = 00        Relay State 2    = 01
TTL Change State Delay (ms) = 0
Rley Change State Delay (ms) = 1000

```

=====

```

====
STEP.26(UUT Test seq.26) : Hold Up & Sequence Test(Hold up time/AC OFF->4.7
PASS

```

```

Vin          (V)= 230.00
Fin          (Hz)= 50.00
Delay Time   (ms)= 2000.00
On Phase Delay(ms)= 0.00
UUT Off Time (s)= 2.00

```

```

Trigger: 1:TTL1R  2:TTL2R  3:TTL3R  4:TTL4R  5:CMPPAR  6:CMPPBR  7:SWR
          8:TTL1F  9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

```

TTL Index	Trigger Level
1	3.50
2	3.50
3	3.50
4	1.00

Load Name	Loading (A/Ohm/V)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	2.400	8	12	4.740	5.250
+12V3	1.980	8	12	11.400	12.600
+12V1	1.980	8	12	11.400	12.600
-12V	0.500	8	12	-10.800	-13.200
+3.3V	3.630	8	12	3.130	3.460
+5VSB	3.000	8	12	4.750	5.250
+12V2	1.980	8	12	11.400	12.600

Load Name	Tholdup Max	Tholdup Min	Tholdup (ms)
+5V	*****	21.00	120.63
+12V3	*****	21.00	109.00
+12V1	*****	*****	109.23
-12V	*****	*****	-----
+3.3V	*****	21.00	124.25
+5VSB	*****	*****	128.43
+12V2	*****	21.00	108.17

```

Ref Load      Td      Td      Td

```

No.	Max	Min	(ms)
0	*****	*****	120.63
0	*****	*****	109.00
0	*****	*****	109.23
0	*****	*****	-----
0	*****	*****	124.25
0	*****	*****	128.43
0	*****	*****	108.17

Ref Tholdup from which Load = 0

	Max	Min	Reading
Tds (ms)	*****	*****	108.17
Tdl (ms)	*****	*****	128.43
Tdls (ms)	*****		20.26

=====

=====  
STEP.27(UUT Test seq.27) : Hold Up & Sequence Test(Hold up time/AC OFF->P.F  
PASS

Vin (V)= 230.00  
Fin (Hz)= 50.00  
Delay Time (ms)= 2000.00  
On Phase Delay(ms)= 0.00  
UUT Off Time (s)= 2.00

Trigger: 1:TTL1R 2:TTL2R 3:TTL3R 4:TTL4R 5:CMPPAR 6:CMPPBR 7:SWR  
8:TTL1F 9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

TTL Index	Trigger Level
1	3.50
2	3.50
3	3.50
4	1.00

Load Name	Loading (A/Ohm/V)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	2.400	8	9	4.700	5.250
+12V3	1.980	8	9	11.400	12.600
+12V1	1.980	8	9	11.400	12.600
-12V	0.500	8	9	-10.800	-13.200
+3.3V	3.630	8	9	3.000	3.460
+5VSB	3.000	8	9	4.750	5.250
+12V2	1.980	8	9	11.400	12.600

Load Name	Tholdup Max	Tholdup Min	Tholdup (ms)
+5V	*****	21.00	89.40
+12V3	*****	21.00	89.40
+12V1	*****	*****	89.40
-12V	*****	*****	89.40
+3.3V	*****	21.00	89.40
+5VSB	*****	*****	89.40
+12V2	*****	21.00	89.40

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	89.40
0	*****	*****	89.40
0	*****	*****	89.40
0	*****	*****	89.40
0	*****	*****	89.40
0	*****	*****	89.40
0	*****	*****	89.40

Ref Tholdup from which Load = 0

	Max	Min	Reading
Tds (ms)	*****	*****	89.40
Tdl (ms)	*****	*****	89.40
Tdls (ms)	*****		0.00

```

=====
====
STEP.28(UUT Test seq.28) : TTL & Relay Setup -----
PASS
Delay Time (ms) = 1500
TTL State 1 = 0000      TTL State 2 = 0000
Relay State 1 = 00      Relay State 2 = 01
TTL Change State Delay (ms) = 0
Rley Change State Delay (ms) = 1000
=====

```

```

====
STEP.29(UUT Test seq.29) : Hold Up & Sequence Test(Hold up time/AC OFF->4.7
PASS
Vin (V)= 230.00
Fin (Hz)= 50.00
Delay Time (ms)= 2000.00
On Phase Delay(ms)= 0.00
UUT Off Time (s)= 2.00

```

Trigger: 1:TTL1R 2:TTL2R 3:TTL3R 4:TTL4R 5:CMPPAR 6:CMPPBR 7:SWR  
 8:TTL1F 9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

TTL Index	Trigger Level
1	3.50
2	3.50
3	3.50
4	1.00

Load Name	Loading (A/Ohm/V)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	1.500	8	12	4.740	5.250
+12V3	7.500	8	12	11.400	12.600
+12V1	7.500	8	12	11.400	12.600
-12V	0.500	8	12	-10.800	-13.200
+3.3V	1.750	8	12	3.130	3.460
+5VSB	3.000	8	12	4.750	5.250
+12V2	7.500	8	12	11.400	12.600

Load Name	Tholdup Max	Tholdup Min	Tholdup (ms)
+5V	*****	21.00	50.14
+12V3	*****	21.00	42.22
+12V1	*****	*****	42.58
-12V	*****	*****	-----
+3.3V	*****	21.00	54.23
+5VSB	*****	*****	57.56
+12V2	*****	21.00	40.49

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	50.14
0	*****	*****	42.22
0	*****	*****	42.58
0	*****	*****	-----
0	*****	*****	54.23
0	*****	*****	57.56
0	*****	*****	40.49

Ref Tholdup from which Load = 0  
 Max Min Reading

Tds (ms)	*****	*****	40.49
Tdl (ms)	*****	*****	57.56

Tdls (ms) \*\*\*\*\* 17.07

=====  
=====

STEP.30(UUT Test seq.30) : Hold Up & Sequence Test(Hold up time/AC OFF->P.F  
PASS

Vin (V)= 230.00  
Fin (Hz)= 50.00  
Delay Time (ms)= 2000.00  
On Phase Delay(ms)= 0.00  
UUT Off Time (s)= 2.00

Trigger: 1:TTL1R 2:TTL2R 3:TTL3R 4:TTL4R 5:CMPPAR 6:CMPPBR 7:SWR  
8:TTL1F 9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

TTL Index	Trigger Level
1	3.50
2	3.50
3	3.50
4	1.00

Load Name	Loading (A/Ohm/V)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	1.500	8	9	4.700	5.250
+12V3	7.500	8	9	11.400	12.600
+12V1	7.500	8	9	11.400	12.600
-12V	0.500	8	9	-10.800	-13.200
+3.3V	1.750	8	9	3.000	3.460
+5VSB	3.000	8	9	4.750	5.250
+12V2	7.500	8	9	11.400	12.600

Load Name	Tholdup Max	Tholdup Min	Tholdup (ms)
+5V	*****	21.00	35.38
+12V3	*****	21.00	35.38
+12V1	*****	*****	35.38
-12V	*****	*****	35.38
+3.3V	*****	21.00	35.38
+5VSB	*****	*****	35.38
+12V2	*****	21.00	35.38

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	35.38

```

0          *****      *****      35.38
0          *****      *****      35.38
0          *****      *****      35.38
0          *****      *****      35.38
0          *****      *****      35.38
0          *****      *****      35.38

```

Ref Tholdup from which Load = 0

		Max	Min	Reading
Tds	(ms)	*****	*****	35.38
Tdl	(ms)	*****	*****	35.38
Tdls	(ms)	*****		0.00

=====  
=====

STEP.31(UUT Test seq.31) : TTL & Relay Setup -----  
PASS

```

Delay Time (ms) = 1500
TTL State 1     = 0000      TTL State 2     = 0000
Relay State 1   = 00       Relay State 2   = 01
TTL Change State Delay (ms) = 0
Rley Change State Delay (ms) = 1000

```

=====  
=====

STEP.32(UUT Test seq.32) : Hold Up & Sequence Test(Hold up time/AC OFF->4.7  
FAIL

```

Vin          (V)= 230.00
Fin          (Hz)= 50.00
Delay Time   (ms)= 2000.00
On Phase Delay(ms)= 0.00
UUT Off Time (s)= 2.00

```

Trigger: 1:TTL1R 2:TTL2R 3:TTL3R 4:TTL4R 5:CMPPAR 6:CMPPBR 7:SWR  
8:TTL1F 9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

TTL Index	Trigger Level
1	3.50
2	3.50
3	3.50
4	1.00

Load Name	Loading (A/Ohm/V)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	3.000	8	12	4.740	5.250

+12V3	15.000	8	12	11.400	12.600
+12V1	15.000	8	12	11.400	12.600
-12V	0.500	8	12	-10.800	-13.200
+3.3V	3.500	8	12	3.130	3.460
+5VSB	3.000	8	12	4.750	5.250
+12V2	15.000	8	12	11.400	12.600

Load Name	Tholdup Max	Tholdup Min	Tholdup (ms)
-----	-----	-----	-----
+5V	*****	21.00	25.15
+12V3	*****	21.00	<u>20.04</u>
+12V1	*****	*****	20.58
-12V	*****	*****	-----
+3.3V	*****	21.00	29.99
+5VSB	*****	*****	32.72
+12V2	*****	21.00	<u>-----</u>

Ref Load No.	Td Max	Td Min	Td (ms)
-----	-----	-----	-----
0	*****	*****	25.15
0	*****	*****	20.04
0	*****	*****	20.58
0	*****	*****	-----
0	*****	*****	29.99
0	*****	*****	32.72
0	*****	*****	-----

Ref Tholdup	from which Load =	0	
-----	Max	Min	Reading
-----	-----	-----	-----
Tds (ms)	*****	*****	20.04
Tdl (ms)	*****	*****	32.72
Tdls (ms)	*****		12.69

=====  
STEP.33(UUT Test seq.33) : Hold Up & Sequence Test(Hold up time/AC OFF->P.F  
FAIL

Vin (V)= 230.00  
Fin (Hz)= 50.00  
Delay Time (ms)= 2000.00  
On Phase Delay(ms)= 0.00  
UUT Off Time (s)= 2.00

Trigger: 1:TTL1R 2:TTL2R 3:TTL3R 4:TTL4R 5:CMPPAR 6:CMPPBR 7:SWR  
8:TTL1F 9:TTL2F 10:TTL3F 11:TTL4F 12:CMPPAF 13:CMPPBF 14:SWF

TTL Index	Trigger Level
1	3.50
2	3.50
3	3.50
4	1.00

Load Name	Loading (A/Ohm/V)	Start Trigger	End Trigger	VcmpA (V)	VcmpB (V)
+5V	3.000	8	9	4.700	5.250
+12V3	15.000	8	9	11.400	12.600
+12V1	15.000	8	9	11.400	12.600
-12V	0.500	8	9	-10.800	-13.200
+3.3V	3.500	8	9	3.000	3.460
+5VSB	3.000	8	9	4.750	5.250
+12V2	15.000	8	9	11.400	12.600

Load Name	Tholdup Max	Tholdup Min	Tholdup (ms)
+5V	*****	21.00	<u>17.47</u>
+12V3	*****	21.00	<u>17.47</u>
+12V1	*****	*****	17.47
-12V	*****	*****	17.47
+3.3V	*****	21.00	<u>17.47</u>
+5VSB	*****	*****	17.47
+12V2	*****	21.00	<u>17.47</u>

Ref Load No.	Td Max	Td Min	Td (ms)
0	*****	*****	17.47
0	*****	*****	17.47
0	*****	*****	17.47
0	*****	*****	17.47
0	*****	*****	17.47
0	*****	*****	17.47
0	*****	*****	17.47

Ref Tholdup from which Load = 0			
	Max	Min	Reading
Tds (ms)	*****	*****	17.47
Tdl (ms)	*****	*****	17.47
Tdls (ms)	*****		0.00

=====



====

STEP.34(UUT Test seq.34) : TTL & Relay Setup -----

PASS

Delay Time (ms) = 1500  
 TTL State 1 = 0000                      TTL State 2 = 0000  
 Relay State 1 = 00                      Relay State 2 = 01  
 TTL Change State Delay (ms) = 0  
 Rley Change State Delay (ms) = 1000

=====

====

STEP.35(UUT Test seq.35) : INPUTO/OUTPUT(Vpp) (Min load) ---- (5'128) -----

PASS

Vin                      (V)= 230.00  
 Fin                      (Hz)= 50.00  
 Delay Time              (ms)= 2000.00

Load Name	Loading (A/Ohm/V)
+5V	2.000
+12V3	1.000
+12V1	1.000
-12V	0.500
+3.3V	0.500
+5VSB	2.000
+12V2	1.000

	Max	Min	Reading
Vinrms (V)	*****	*****	230.53
Iinrms (A)	4.00	*****	0.42
Iinpk+ (A)	*****	*****	0.70
Iinpk- (A)	*****	*****	0.70
Pin (W)	*****	*****	86.17
Pout (W)	*****	*****	63.91
PF (0~1)	*****	*****	0.8810
Eff (%)	*****	*****	74.17

Load Name	Vout Max	Vout Min	Vout (V)	Iout Max	Iout Min	Iout (A)
+5V	5.250	4.800	5.012	*****	*****	1.987
+12V3	12.600	11.640	12.358	*****	*****	0.988
+12V1	12.600	11.600	12.368	*****	*****	0.998
-12V	-13.200	-10.800	-11.150	*****	*****	0.499
+3.3V	3.470	3.140	3.378	*****	*****	0.493
+5VSB	5.250	4.750	5.065	*****	*****	1.980
+12V2	12.600	11.640	12.360	*****	*****	0.983

LOAD NAME	Vpp Max	Vpp Min
+5V	0.050	0.007
+12V3	0.120	0.013
+12V1	0.120	0.010
-12V	0.120	0.011
+3.3V	0.050	0.012
+5VSB	0.050	0.020
+12V2	0.120	0.016

=====  
 STEP.36(UUT Test seq.36) : INPUTO/OUTPUT(Vpp) (20% Blance load) ---- (4'927)  
 PASS

Vin (V)= 230.00  
 Fin (Hz)= 50.00  
 Delay Time (ms)= 2000.00

Load Name	Loading (A/Ohm/V)
+5V	2.400
+12V3	1.980
+12V1	1.980
-12V	0.500
+3.3V	3.630
+5VSB	3.000
+12V2	1.980

		Max	Min	Reading
Vinrms (V)	*****	*****	*****	230.48
Iinrms (A)	4.00	*****	*****	0.68
Iinpk+ (A)	*****	*****	*****	1.07
Iinpk- (A)	*****	*****	*****	1.08
Pin (W)	*****	*****	*****	146.62
Pout (W)	*****	*****	*****	117.85
PF (0~1)	*****	*****	*****	0.9380
Eff (%)	*****	*****	*****	80.38

Load Name	Vout Max	Vout Min	Vout (V)	Iout Max	Iout Min	Iout (A)
+5V	5.250	4.800	5.012	*****	*****	2.394
+12V3	12.600	11.640	12.337	*****	*****	1.978
+12V1	12.600	11.600	12.363	*****	*****	1.974
-12V	-13.200	-10.800	-11.233	*****	*****	0.499
+3.3V	3.470	3.140	3.342	*****	*****	3.628

+5VSB	5.250	4.750	5.012	*****	*****	2.983
+12V2	12.600	11.640	12.345	*****	*****	1.972

LOAD NAME	Vpp Max	Vpp Min
+5V	0.050	0.008
+12V3	0.120	0.014
+12V1	0.120	0.013
-12V	0.120	0.010
+3.3V	0.050	0.014
+5VSB	0.050	0.020
+12V2	0.120	0.016

=====  
STEP.37(UUT Test seq.37) : INPUT/OUTPUT (Vpp) (50% Load) ---- (5'047) -----  
PASS

Vin (V)= 230.00  
Fin (Hz)= 50.00  
Delay Time (ms)= 2000.00

Load Name	Loading (A/Ohm/V)
+5V	1.500
+12V3	7.500
+12V1	7.500
-12V	0.500
+3.3V	1.750
+5VSB	3.000
+12V2	7.500

		Max	Min	Reading
Vinrms (V)	*****	*****	*****	230.31
Iinrms (A)	4.00	*****	*****	1.60
Iinpk+ (A)	*****	*****	*****	2.48
Iinpk- (A)	*****	*****	*****	2.48
Pin (W)	*****	*****	*****	359.37
Pout (W)	*****	*****	*****	310.53
PF (0~1)	*****	*****	*****	0.9760
Eff (%)	*****	*****	*****	86.41

Load Name	Vout Max	Vout Min	Vout (V)	Iout Max	Iout Min	Iout (A)
+5V	5.250	4.800	5.010	*****	*****	1.494
+12V3	12.600	11.640	12.255	*****	*****	7.500
+12V1	12.600	11.600	12.350	*****	*****	7.494

-12V	-13.200	-10.800	-11.462	*****	*****	0.499
+3.3V	3.470	3.140	3.348	*****	*****	1.753
+5VSB	5.250	4.750	4.992	*****	*****	2.983
+12V2	12.600	11.640	12.285	*****	*****	7.496

LOAD NAME	Vpp Max	Vpp Min
+5V	0.050	0.009
+12V3	0.120	0.018
+12V1	0.120	0.016
-12V	0.120	0.014
+3.3V	0.050	0.013
+5VSB	0.050	0.018
+12V2	0.120	0.027

=====  
=====

STEP.38(UUT Test seq.38) : INPUT/OUTPUT(Vpp) (100% Load) ---- (4'917) -----  
PASS

Vin (V)= 230.00  
Fin (Hz)= 50.00  
Delay Time (ms)= 2000.00

Load Name	Loading (A/Ohm/V)
+5V	3.000
+12V3	15.000
+12V1	15.000
-12V	0.500
+3.3V	3.500
+5VSB	3.000
+12V2	15.000

	Max	Min	Reading
Vinrms (V)	*****	*****	230.03
Iinrms (A)	4.00	*****	3.08
Iinpk+ (A)	*****	*****	4.73
Iinpk- (A)	*****	*****	4.72
Pin (W)	*****	*****	699.52
Pout (W)	*****	*****	596.94
PF (0~1)	*****	*****	0.9860
Eff (%)	*****	*****	85.34

Load Name	Vout Max	Vout Min	Vout (V)	Iout Max	Iout Min	Iout (A)
+5V	5.250	4.800	4.990	*****	*****	2.994

+12V3	12.600	11.640	12.137	*****	*****	15.002
+12V1	12.600	11.600	12.330	*****	*****	14.993
-12V	-13.200	-10.800	-11.685	*****	*****	0.499
+3.3V	3.470	3.140	3.313	*****	*****	3.493
+5VSB	5.250	4.750	4.957	*****	*****	2.983
+12V2	12.600	11.640	12.193	*****	*****	14.998

LOAD NAME	Vpp Max	Vpp Min
+5V	0.050	0.018
+12V3	0.120	0.048
+12V1	0.120	0.045
-12V	0.120	0.024
+3.3V	0.050	0.015
+5VSB	0.050	0.027
+12V2	0.120	0.086

=====  
STEP.39(UUT Test seq.39) : TTL & Relay Setup -----  
**PASS**

Delay Time (ms) = 1500  
TTL State 1 = 0000                    TTL State 2 = 0000  
Relay State 1 = 00                    Relay State 2 = 01  
TTL Change State Delay (ms) = 0  
Rley Change State Delay (ms) = 1000

=====  
STEP.40(UUT Test seq.40) : Overshoot Voltage Test\_2(A2/C) -----  
**FAIL**

Vin (V) = 230.00  
Fin (Hz) = 50.00  
On Phase Delay(ms) = 3.97  
UUT Off Time (s) = 1.00

Load Name	Loading (A/Ohm/V)	Vout Max	Vout Min	Vout (V)	Vpk Max	Vpk (V)
+5V	2.000	5.500	*****	5.012	5.500	<5.500
+12V3	1.000	13.200	*****	12.358	13.200	<13.200
+12V1	1.000	13.200	*****	12.368	*****	0.000
-12V	0.500	-13.200	*****	-11.148	-13.200	<-13.200
+3.3V	0.500	3.630	*****	3.375	3.630	<3.630
+5VSB	2.000	5.500	*****	5.068	5.500	>5.500
+12V2	1.000	13.200	*****	12.363	13.200	<13.200

=====  
=====

STEP.41(UUT Test seq.41) : TTL & Relay Setup(A/No Load) -----

PASS

Delay Time (ms) = 1500  
 TTL State 1 = 0000                      TTL State 2 = 0000  
 Relay State 1 = 00                      Relay State 2 = 01  
 TTL Change State Delay (ms) = 0  
 Rley Change State Delay (ms) = 1000

=====  
 =====

STEP.42(UUT Test seq.42) : INPUTO/OUTPUT(Vpp) (A/No Load) ---- (4'977) ----

PASS

Vin                      (V)= 230.00  
 Fin                      (Hz)= 50.00  
 Delay Time (ms)= 2000.00

Load Name	Loading (A/Ohm/V)
+5V	0.000
+12V3	0.000
+12V1	0.000
-12V	0.000
+3.3V	0.000
+5VSB	0.000
+12V2	0.000

	Max	Min	Reading
Vinrms (V)	*****	*****	230.59
Iinrms (A)	*****	*****	0.13
Iinpk+ (A)	*****	*****	0.22
Iinpk- (A)	*****	*****	0.23
Pin (W)	*****	*****	10.21
Pout (W)	*****	*****	0.11
PF (0~1)	*****	*****	0.3310
Eff (%)	*****	*****	1.03

Load Name	Vout Max	Vout Min	Vout (V)	Iout Max	Iout Min	Iout (A)
+5V	5.500	4.500	5.030	*****	*****	0.000
+12V3	13.200	10.800	12.377	*****	*****	0.007
+12V1	13.200	10.800	12.370	*****	*****	0.000
-12V	-13.200	-10.800	-11.238	*****	*****	0.000
+3.3V	3.630	2.970	3.350	*****	*****	0.002
+5VSB	5.500	4.500	5.157	*****	*****	0.001
+12V2	13.200	10.800	12.380	*****	*****	0.000

LOAD NAME	Vpp Max	Vpp Min
+5V	*****	0.009
+12V3	*****	0.019
+12V1	*****	0.017
-12V	*****	0.007
+3.3V	*****	0.010
+5VSB	*****	0.040
+12V2	*****	0.020

=====  
STEP.43(UUT Test seq.1) : TTL & Relay Setup -----

PASS  
Delay Time (ms) = 1500  
TTL State 1 = 0000                    TTL State 2 = 0000  
Relay State 1 = 00                    Relay State 2 = 01  
TTL Change State Delay (ms) = 0  
Rley Change State Delay (ms) = 2000

=====  
STEP.44(UUT Test seq.2) : Voltage Regulation Test(20% Balance Load) -----  
PASS

Vin-1 (V)= 264.00                    Fin-1 (Hz)= 50.00  
Vin-2 (V)= 180.00                    Fin-2 (Hz)= 50.00  
Delay Time (ms)= 3000.00

Load Name	Loading-1 (A/Ohm/V)	Loading-2 (A/Ohm/V)
+5V	2.400	2.400
+12V3	1.980	1.980
+12V1	1.980	1.980
-12V	0.500	0.500
+3.3V	3.630	3.630
+5VSB	3.000	3.000
+12V2	1.980	1.980

Load Name	Vout-1 Max	Vout-1 Min	Vout-1 (V)	Vout-2 Max	Vout-2 Min	Vout-2 (V)
+5V	5.250	4.800	5.012	5.250	4.800	5.012
+12V3	12.600	11.640	12.340	12.600	11.640	12.340
+12V1	12.600	11.600	12.363	12.600	11.600	12.363
-12V	-13.200	-10.800	-11.233	-13.200	-10.800	-11.235
+3.3V	3.470	3.140	3.348	3.470	3.140	3.345
+5VSB	5.250	4.750	5.012	5.250	4.750	5.012
+12V2	12.600	11.640	12.347	12.600	11.640	12.347

Load Name	dVout Max	dVout Min	dVout (V)
+5V	*****	*****	0.000
+12V3	*****	*****	0.000
+12V1	*****	*****	0.000
-12V	*****	*****	0.002
+3.3V	*****	*****	-0.002
+5VSB	*****	*****	0.000
+12V2	*****	*****	0.000

=====  
=====

STEP.45(UUT Test seq.3) : Voltage Regulation Test(20% Balance Load) -----  
PASS

Vin-1 (V)= 264.00 Fin-1 (Hz)= 50.00  
 Vin-2 (V)= 230.00 Fin-2 (Hz)= 50.00  
 Delay Time (ms)= 3000.00

Load Name	Loading-1 (A/Ohm/V)	Loading-2 (A/Ohm/V)
+5V	2.000	2.000
+12V3	1.000	1.000
+12V1	1.000	1.000
-12V	0.500	0.500
+3.3V	0.500	0.500
+5VSB	2.000	2.000
+12V2	1.000	1.000

Load Name	Vout-1 Max	Vout-1 Min	Vout-1 (V)	Vout-2 Max	Vout-2 Min	Vout-2 (V)
+5V	5.250	4.800	5.012	5.250	4.800	5.012
+12V3	12.600	11.640	12.358	12.600	11.640	12.358
+12V1	12.600	11.600	12.368	12.600	11.600	12.368
-12V	-13.200	-10.800	-11.160	-13.200	-10.800	-11.160
+3.3V	3.470	3.140	3.378	3.470	3.140	3.378
+5VSB	5.250	4.750	5.068	5.250	4.750	5.068
+12V2	12.600	11.640	12.363	12.600	11.640	12.363

Load Name	dVout Max	dVout Min	dVout (V)
+5V	*****	*****	0.000
+12V3	*****	*****	0.000
+12V1	*****	*****	0.000
-12V	*****	*****	0.000



```

+3.3V          *****  *****  0.000
+5VSB          *****  *****  0.000
+12V2          *****  *****  0.000

```

=====

=====  
STEP.46(UUT Test seq.46) : TTL & Relay Setup -----

PASS

```

Delay Time (ms) = 1500
TTL State 1     = 0000      TTL State 2     = 0000
Relay State 1   = 00       Relay State 2   = 01
TTL Change State Delay (ms) = 0
Rley Change State Delay (ms) = 1000

```

=====

=====  
STEP.47(UUT Test seq.47) : Voltage Regulation Test (50% Load) -----

PASS

```

Vin-1          (V)= 264.00      Fin-1          (Hz)= 50.00
Vin-2          (V)= 180.00      Fin-2          (Hz)= 50.00
Delay Time     (ms)= 3000.00

```

Load Name	Loading-1 (A/Ohm/V)	Loading-2 (A/Ohm/V)
+5V	1.500	1.500
+12V3	7.500	7.500
+12V1	7.500	7.500
-12V	0.500	0.500
+3.3V	1.750	1.750
+5VSB	3.000	3.000
+12V2	7.500	7.500

Load Name	Vout-1 Max	Vout-1 Min	Vout-1 (V)	Vout-2 Max	Vout-2 Min	Vout-2 (V)
+5V	5.250	4.800	5.012	5.250	4.800	5.010
+12V3	12.600	11.640	12.262	12.600	11.640	12.262
+12V1	12.600	11.600	12.352	12.600	11.600	12.352
-12V	-13.200	-10.800	-11.460	-13.200	-10.800	-11.460
+3.3V	3.470	3.140	3.350	3.470	3.140	3.348
+5VSB	5.250	4.750	4.995	5.250	4.750	4.995
+12V2	12.600	11.640	12.285	12.600	11.640	12.285

Load Name	dVout Max	dVout Min	dVout (V)
+5V	*****	*****	-0.002
+12V3	*****	*****	0.000
+12V1	*****	*****	0.000

```

-12V          *****  *****  0.000
+3.3V         *****  ***** -0.002
+5VSB         *****  *****  0.000
+12V2         *****  *****  0.000

```

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=====
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```

STEP.48(UUT Test seq.48) : Voltage Regulation Test (50% Load) -----  
**PASS**

```

Vin-1      (V)=  264.00      Fin-1      (Hz)=   50.00
Vin-2      (V)=  230.00      Fin-2      (Hz)=   50.00
Delay Time (ms)=  500.00

```

Load Name	Loading-1 (A/Ohm/V)	Loading-2 (A/Ohm/V)
+5V	3.000	3.000
+12V3	15.000	15.000
+12V1	15.000	15.000
-12V	0.500	0.500
+3.3V	3.500	3.500
+5VSB	3.000	3.000
+12V2	15.000	15.000

Load Name	Vout-1 Max	Vout-1 Min	Vout-1 (V)	Vout-2 Max	Vout-2 Min	Vout-2 (V)
+5V	5.250	4.800	4.992	5.250	4.800	4.992
+12V3	12.600	11.640	12.130	12.600	11.640	12.130
+12V1	12.600	11.600	12.328	12.600	11.600	12.328
-12V	-13.200	-10.800	-11.682	-13.200	-10.800	-11.677
+3.3V	3.470	3.140	3.315	3.470	3.140	3.315
+5VSB	5.250	4.750	4.960	5.250	4.750	4.957
+12V2	12.600	11.640	12.190	12.600	11.640	12.190

Load Name	dVout Max	dVout Min	dVout (V)
+5V	*****	*****	0.000
+12V3	*****	*****	0.000
+12V1	*****	*****	0.000
-12V	*****	*****	-0.005
+3.3V	*****	*****	0.000
+5VSB	*****	*****	-0.002
+12V2	*****	*****	0.000

```

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STEP.49(UUT Test seq.49) : TTL & Relay Setup -----

PASS

```

Delay Time (ms) = 1500
TTL State 1     = 0000      TTL State 2     = 0000
Relay State 1   = 00       Relay State 2   = 01
TTL Change State Delay (ms) = 0
Rley Change State Delay (ms) = 1000

```

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STEP.50(UUT Test seq.50) : Voltage Regulation Test(100% Load) -----

PASS

```

Vin-1      (V)= 264.00      Fin-1      (Hz)= 50.00
Vin-2      (V)= 180.00      Fin-2      (Hz)= 50.00
Delay Time (ms)= 3000.00

```

Load Name	Loading-1 (A/Ohm/V)	Loading-2 (A/Ohm/V)
+5V	3.000	3.000
+12V3	15.000	15.000
+12V1	15.000	15.000
-12V	0.500	0.500
+3.3V	3.500	3.500
+5VSB	3.000	3.000
+12V2	15.000	15.000

Load Name	Vout-1 Max	Vout-1 Min	Vout-1 (V)	Vout-2 Max	Vout-2 Min	Vout-2 (V)
+5V	5.250	4.800	4.992	5.250	4.800	4.992
+12V3	12.600	11.640	12.120	12.600	11.640	12.125
+12V1	12.600	11.600	12.325	12.600	11.600	12.328
-12V	-13.200	-10.800	-11.675	-13.200	-10.800	-11.675
+3.3V	3.470	3.140	3.315	3.470	3.140	3.313
+5VSB	5.250	4.750	4.957	5.250	4.750	4.957
+12V2	12.600	11.640	12.188	12.600	11.640	12.190

Load Name	dVout Max	dVout Min	dVout (V)
+5V	*****	*****	0.000
+12V3	*****	*****	0.005
+12V1	*****	*****	0.003
-12V	*****	*****	0.000
+3.3V	*****	*****	-0.002
+5VSB	*****	*****	0.000
+12V2	*****	*****	0.002

=====

====

STEP.51(UUT Test seq.51) : Voltage Regulation Test (100% Load) -----

PASS

Vin-1 (V)= 264.00 Fin-1 (Hz)= 50.00  
 Vin-2 (V)= 230.00 Fin-2 (Hz)= 50.00  
 Delay Time (ms)= 3000.00

Load Name	Loading-1 (A/Ohm/V)	Loading-2 (A/Ohm/V)
+5V	3.000	3.000
+12V3	15.000	15.000
+12V1	15.000	15.000
-12V	0.500	0.500
+3.3V	3.500	3.500
+5VSB	3.000	3.000
+12V2	15.000	15.000

Load Name	Vout-1 Max	Vout-1 Min	Vout-1 (V)	Vout-2 Max	Vout-2 Min	Vout-2 (V)
+5V	5.250	4.800	4.990	5.250	4.800	4.990
+12V3	12.600	11.640	12.120	12.600	11.640	12.130
+12V1	12.600	11.600	12.328	12.600	11.600	12.328
-12V	-13.200	-10.800	-11.675	-13.200	-10.800	-11.677
+3.3V	3.470	3.140	3.315	3.470	3.140	3.313
+5VSB	5.250	4.750	4.957	5.250	4.750	4.957
+12V2	12.600	11.640	12.188	12.600	11.640	12.190

Load Name	dVout Max	dVout Min	dVout (V)
+5V	*****	*****	0.000
+12V3	*****	*****	0.010
+12V1	*****	*****	0.000
-12V	*****	*****	0.002
+3.3V	*****	*****	-0.002
+5VSB	*****	*****	0.000
+12V2	*****	*****	0.002

====

STEP.52(UUT Test seq.4) : TTL & Relay Setup -----

PASS

Delay Time (ms) = 1500  
 TTL State 1 = 0000 TTL State 2 = 0000  
 Relay State 1 = 00 Relay State 2 = 00  
 TTL Change State Delay (ms) = 0  
 Rley Change State Delay (ms) = 1500

=====  
 =====

STEP.53(UUT Test seq.5) : INPUT0/OUTPUT(Vpp) (5VS 0.1A) ---- (4'977) -----  
FAIL

Vin (V)= 230.00  
 Fin (Hz)= 50.00  
 Delay Time (ms)= 2000.00

Load Name	Loading (A/Ohm/V)
+5V	0.000
+12V3	0.000
+12V1	0.000
-12V	0.000
+3.3V	0.000
+5VSB	0.100
+12V2	0.000

		Max	Min	Reading
Vinrms (V)	*****	*****	*****	230.59
Iinrms (A)	*****	*****	*****	0.14
Iinpk+ (A)	*****	*****	*****	0.23
Iinpk- (A)	*****	*****	*****	0.23
Pin (W)	*****	*****	*****	10.89
Pout (W)	*****	*****	*****	0.54
PF (0~1)	*****	*****	*****	0.3480
Eff (%)	*****	50.00	*****	<u>4.99</u>

Load Name	Vout Max	Vout Min	Vout (V)	Iout Max	Iout Min	Iout (A)
+5V	5.250	4.800	5.030	*****	*****	0.000
+12V3	12.600	11.640	12.377	*****	*****	0.007
+12V1	12.600	11.600	12.373	*****	*****	0.000
-12V	-13.200	-10.800	-11.245	*****	*****	0.000
+3.3V	3.470	3.140	3.350	*****	*****	0.002
+5VSB	5.250	4.750	5.153	*****	*****	0.086
+12V2	12.600	11.640	12.380	*****	*****	0.000

LOAD NAME	Vpp Max	Vpp Min
+5V	0.050	0.009
+12V3	0.120	0.020
+12V1	0.120	0.017
-12V	0.120	0.008

```

+3.3V          0.050      0.010
+5VSB          0.050      0.040
+12V2          0.120      0.020

```

=====  
=====

STEP.54(UUT Test seq.6) : INPUTO/OUTPUT(Vpp) (5VS 0.5A) ---- (4'977) -----

FAIL

```

Vin           (V)=    230.00
Fin           (Hz)=     50.00
Delay Time    (ms)=   2000.00

```

Load Name	Loading (A/Ohm/V)
+5V	0.000
+12V3	0.000
+12V1	0.000
-12V	0.000
+3.3V	0.000
+5VSB	0.500
+12V2	0.000

	Max	Min	Reading
Vinrms (V)	*****	*****	230.59
Iinrms (A)	*****	*****	0.14
Iinpk+ (A)	*****	*****	0.23
Iinpk- (A)	*****	*****	0.24
Pin (W)	*****	*****	13.66
Pout (W)	*****	*****	2.60
PF (0~1)	*****	*****	0.4110
Eff (%)	*****	50.00	<u>19.05</u>

Load Name	Vout Max	Vout Min	Vout (V)	Iout Max	Iout Min	Iout (A)
+5V	5.250	4.800	5.028	*****	*****	0.000
+12V3	12.600	11.640	12.380	*****	*****	0.007
+12V1	12.600	11.600	12.373	*****	*****	0.000
-12V	-13.200	-10.800	-11.240	*****	*****	0.000
+3.3V	3.470	3.140	3.350	*****	*****	0.002
+5VSB	5.250	4.750	5.137	*****	*****	0.482
+12V2	12.600	11.640	12.380	*****	*****	0.002

LOAD NAME	Vpp Max	Vpp Min
+5V	0.050	0.010
+12V3	0.120	0.020

```

+12V1      0.120    0.018
-12V       0.120    0.008
+3.3V      0.050    0.010
+5VSB      0.050    0.040
+12V2      0.120    0.021

```

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STEP.55(UUT Test seq.7) : INPUTO/OUTPUT(Vpp) (5VS  3.0A) ---- (4'917) -----
PASS

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```

Vin      (V)= 230.00
Fin      (Hz)= 50.00
Delay Time (ms)= 2000.00

```

```

Load      Loading
Name      (A/Ohm/V)
-----
+5V       0.000
+12V3     0.000
+12V1     0.000
-12V      0.000
+3.3V     0.000
+5VSB     3.000
+12V2     0.000

```

```

          Max      Min      Reading
-----
Vinrms   (V)      *****      *****      230.58
Iinrms   (A)      *****      *****      0.20
Iinpk+   (A)      *****      *****      0.34
Iinpk-   (A)      *****      *****      0.34
Pin      (W)      *****      *****      30.15
Pout     (W)      *****      *****      15.12
PF       (0~1)    *****      *****      0.6380
Eff      (%)     *****      50.00      50.17

```

```

Load      Vout      Vout      Vout      Iout      Iout      Iout
Name      Max      Min      (V)      Max      Min      (A)
-----
+5V       5.250    4.800    5.028    *****      *****      0.000
+12V3     12.600   11.640   12.373    *****      *****      0.007
+12V1     12.600   11.600   12.370    *****      *****      0.000
-12V      -13.200  -10.800  -11.257    *****      *****      0.000
+3.3V     3.470    3.140    3.348    *****      *****      0.002
+5VSB     5.250    4.750    5.030    *****      *****      2.983
+12V2     12.600   11.640   12.375    *****      *****      0.002

```

```

LOAD      Vpp      Vpp
NAME      Max      Min
-----

```

+5V	0.050	0.010
+12V3	0.120	0.020
+12V1	0.120	0.017
-12V	0.120	0.009
+3.3V	0.050	0.010
+5VSB	0.050	0.041
+12V2	0.120	0.021

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