



Test Report: KNX-40E

1280mA KNX Power Supply

■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

Component Stress Test

■ SAFETY & E.M.C. TEST

Safety Test

E.M.C. Test

■ RELIABILITY TEST

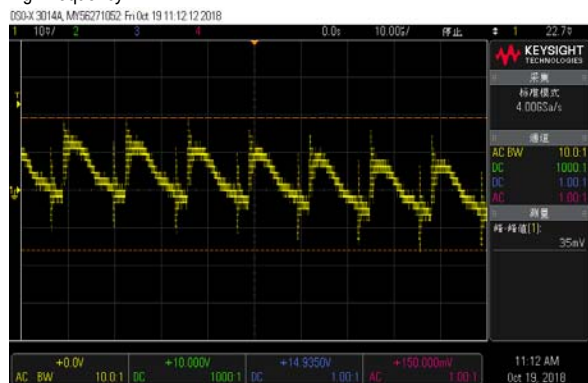
Environment Test

DESIGN VERIFY TEST

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OUTPUT VOLTAGE RANGE	30V	I/P: 230VAC O/P: 0~100% LOAD Ta: 25℃	30.13V
2	OVER/UNDERSHOOT TEST	$\pm 5\%$	I/P: 230VAC O/P: FULL LOAD/NO LOAD Ta: 25℃	2.66%
3	SHORT CIRCUIT CURRENT	$\leq 2.8A$	I/P: 230 VAC O/P: OUTPUT SHORT	2.72A
4	RIPPLE & NOISE (Max)	100mVp-p	I/P: 230VAC O/P: FULL LOAD Ta: 25℃	47mVp-p

high frequency :



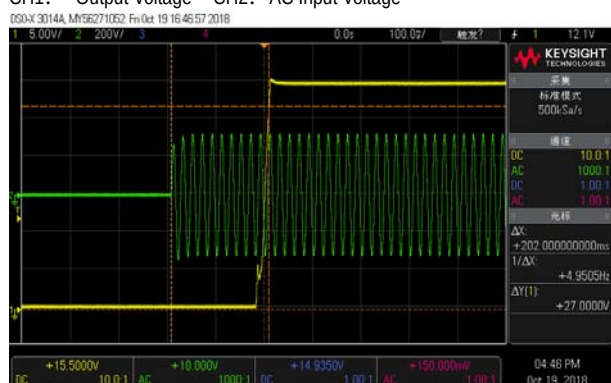
low frequency :



5	SET UP TIME(Max)	230VAC/ 1000ms	I/P: 230 VAC O/P: FULL LOAD Ta: 25℃	230VAC/ 202 ms
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INPUT=230VAC/50HZ @ FULL LOAD

CH1: Output Voltage CH2: AC Input Voltage



6	RISE TIME (Max)	230VAC/ 50ms	I/P: 230 VAC O/P: FULL LOAD Ta: 25°C	230VAC/ 25.2 ms
INPUT=230VAC/50HZ @ FULL LOAD CH1: Output Voltage 				
7	DYNAMIC LOAD	V1: 3000 mVp-p	I/P: 230VAC O/P: (1)FULL / Min LOAD 50%DUTY / 120HZ (2)FULL / Min LOAD 50%DUTY / 1KHZ Ta: 25°C	(1) 414mVp-p (2) 306mVp-p
FULL /50% LOAD 50%DUTY / 120HZ  FULL /50% LOAD 50%DUTY / 1KHZ 				

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	INPUT VOLTAGE RANGE	180VAC~264VAC	I/P: TESTING O/P: FULL LOAD Ta: 25°C	177 V~ 300V
			I/P: (1)LOW-LINE-3V=177 V HIGH-LINE+15%=300 V O/P: FULL/MIN LOAD ON: 30 Sec OFF: 30 Sec 10MIN (POWER ON/OFF NO DAMAGE)	TEST: OK
2	INPUT FREQUENCY RANGE	47HZ ~63 HZ NO DAMAGE	I/P: 180 VAC ~264 VAC O/P: FULL~NO LOAD Ta: 25°C	TEST: OK

3	AC CURRENT	0.5A/230VAC	I/P: 230 VAC O/P: FULL LOAD Ta: 25°C	I = 0.383 A/ 230VAC
4	LEAKAGE CURRENT	< 1mA / 240VAC	I/P: 277 VAC O/P: NO LOAD Ta: 25°C	L-FG: 0.0567 mA N-FG: 0.0563 mA
5	INRUSH CURRENT(Typ)	230V/ 60A COLD START (Twidth =1200 us measured at 50% Ipeak)COLD START at 230V	I/P: 237 VAC O/P: FULL LOAD Ta: 25°C	I = 42 A/ 230VAC T50=1140us

INPUT=230VAC/50HZ @ FULL LOAD

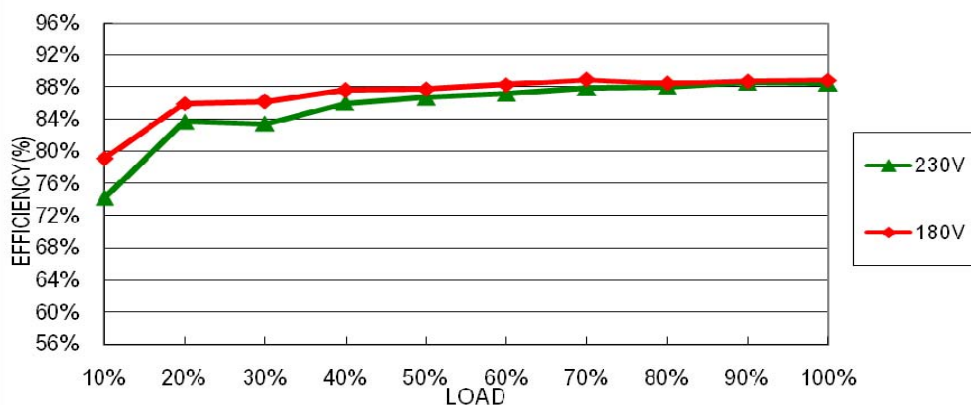
CH2: Input current CH1: AC Input Voltage

030-X-3014A_MYS6271052_Mon Oct 22 09:05:53 2018



6	EFFICIENCY(Typ)	86%	I/P: 230VAC O/P: FULL LOAD Ta: 25°C	88.44%
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EFFICIENCY vs LOAD



PROTECTION FUNCTION TEST

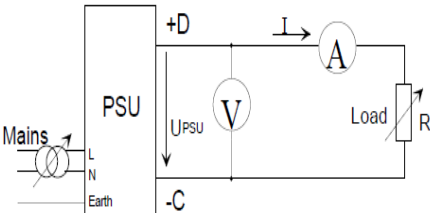
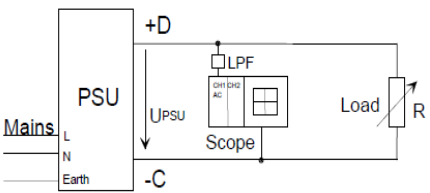
NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OVER LOAD PROTECTION	205%~ 235%	I/P: 180VAC I/P: 230VAC I/P: 264VAC O/P: TESTING Ta: 25°C	<u>212.5%</u> / 180VAC <u>212.5%</u> / 230VAC <u>212.5%</u> / 264VAC Constant current limiting, recovers automatically after fault condition is removed

2	OVER VOLTAGE PROTECTION	33V~35V	I/P: 230VAC O/P: NO LOAD Ta: 25°C	33.9V/ 230VAC Hiccup mode, recovers automatically after fault condition is removed
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COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	PWM Power Transistor	Q 1 Rated 13A/ 600V	I/P: High-Line +3V =267V O/P: (1) Full Load (2) Output Short (3) Full load continue Ta: 25°C	(1) 536 V (2) 412 V (3) 504 V
2	O/P Diode (MOSFET)	D100 Rated 20A/ 200V	I/P: High-Line +3V =267V O/P: (1) Full Load (2) Output Short (3) Full load continue Ta: 25°C	(1) 139 V (2) 127 V (3) 139 V
3	Input Capacitor	C5 Rated 120u/ 400V	I/P: High-Line +3V =267V O/P: (1) Full Load input on/off (2) NO LOAD input on /Off (3) Full Load /NO LOAD Change (4) Full load continue Ta: 25°C	(1) 367 V (2) 367 V (3) 367 V (4) 363 V
4	Control IC	U1 Rated 30V (MAX.)	I/P: High-Line +3V =267V O/P: (1) FULL LOAD (2) Output Short (3) O.L.P (4) O.V.P (5) No Load Vo(min). Low Line Ta: 25°C	(1) 25.2 V (2) 24.8 V (3) 25.4 V (4) 25.0 V (5) 17.3 V

※PSU TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERD ICT
1	OUTPUT VOLTAGE	 Figure 5: Test Setup U/I	I/P: 180VAC/230 VAC/264VAC O/P: NO LOAD/FULL LOAD Ta: 25°C	180VAC 1、30.11V /180VAC/NO LOAD 2、30.13V /180VAC/FULL LOAD 230VAC 1、30.13V /230VAC/NO LOAD 2、30.11V/230VAC/FULL LOAD 264VAC 1、30.11V /264VAC/NO LOAD 2、30.13V/264AC/FULL LOAD	PASS
2	OUTPUT VOLTAGE RIPPLE		I/P: 180VAC/230 VAC/264VAC O/P: NO LOAD-- FULL LOAD Ta: 25°C	1、29mVp-p(Max)/180VAC/FULL LOAD 2、31mVp-p(Max)/230VAC/FULL LOAD 3、31mVp-p(Max)/264VAC/FULL LOAD	PASS

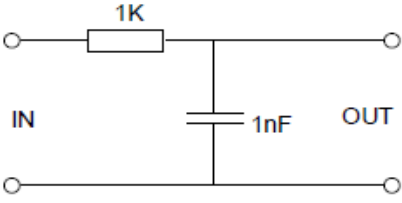
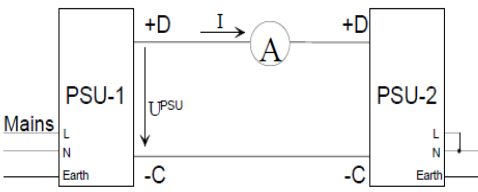
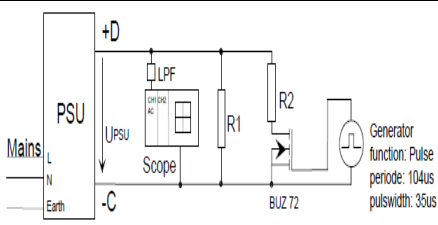
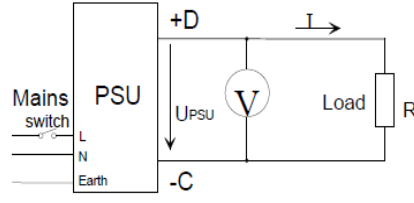
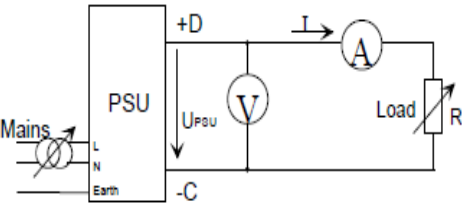
		 Figure 4: Lowpass Filter (fg = 159 kHz)			
3	TWO PARALLEL PSUS, LEAKAGE CURRENT	 Figure 7: Test Set-up of two parallel PSUs, Leakage Current	I/P: 180VAC/230 VAC/264VAC O/P: NO LOAD Ta: 25°C	PSU-1 on: 1、 <u>5.35</u> mA /180VAC 2、 <u>5.37</u> mA /230VAC 3、 <u>5.35</u> mA /264VAC PSU-2 on: 1、 <u>8.13</u> mA /180VAC 2、 <u>8.14</u> mA /230VAC 3、 <u>8.16</u> mA /264VAC	PASS
4	PSU'S DYNAMIC BEHAVIOR	 Figure 8: Test Setup for Dynamic Behaviour	I/P: 180VAC/230VAC/264VAC O/P: R2=140 Ω Ta: 25°C	1、43mVp-p / 180VAC 2、50 mVp-p / 230VAC 3、42 mVp-p / 264VAC	PASS
5	PSU'S HOLD-UP TIME	 Figure 9: Test Setup for Hold Up Time	I/P: 180VAC/230VAC O/P: FULL LOAD/ NO LOAD Ta: 25°C	1、268ms / 230VAC / FULL LOAD 2、45s / 230VAC /NO LOAD 3、158ms / 180VAC / FULL LOAD 138 4、25.6s / 180VAC /NO LOAD	PASS
6	U/I CHARACTERISTIC	 Figure 5: Test Setup U/I	I/P: 180VAC/230 VAC/264VAC O/P: (1)NO LOAD(J) (2)FULLLOAD(1.28A) (3)OVERLOAD INDICATION(1.6A)(K) (4) OVERLOAD (H) (5)18V(I) (6) 10V(G) (7) SHORT (L) Ta: 25°C	230VAC 1、30.1V/0A / 230VAC/NO LOAD 2、30.12V/1.275A/230VAC/FULL LOAD 3、30V/1.6A/230VAC/ OVERLOAD INDICATION 4、29V/2.747A/ 230VAC/ OVERLOAD 5、18V/2.73A/230VAC/ 18V 6、10V/2.73A/230VAC/ 10V 7、2.72A/ 230VAC/ SHORT 180VAC 1、30.11V/0A /180VAC/NO LOAD 2、30.12V/1.27A/180VAC/FULL LOAD 3、30.12V/1.6A/180VAC/ OVERLOAD INDICATION 4、29V/2.72A/180VAC/ OVERLOAD 5、18V/2.72A/180VAC/ 18V 6、10V/2.72A/180VAC/ 10V	PASS

Figure 2: TP1 PSU U/I Characteristic (drawing not in scale!)

The letters in the above figure denote the following (see also requirements in clause 2.6):

- A = upper voltage limit
- B = lower voltage limit
- C = maximum current limit
- D = knee point
- E = nominal current: up to E the minimum hold up time of the PSU is ensured.
- F = 0 V current
- G/I = knee point
- H = overload indication
- J = activation of overload protection
- K = normal operation range

IN/mA	A	B	C	D	E	F	G	I	K
160			1 A	0,35 A	0,16 A	0,1 A	10 V	18 V	0,30 A
320			1,0 A	0,70 A	0,32 A	0,2 A	10 V	18 V	0,50 A
640		item 1 of clause 2.6	1,5 A	1,2 A	0,64 A	0,4 A	10 V	18 V	0,90 A
960			2,35 A	1,6 A	0,96 A	0,6 A	10 V	18 V	1,3 A
1280			3,0 A	1,9 A	1,28 A	0,8 A	10 V	18 V	1,6 A

Figure 3: U/I Characteristic - values for different types of TP1 PSU

7、2.72A/ 180VAC/ SHORT

264VAC

1、30.11V/0A /264VAC/NO LOAD

2、30.13V/1.273A/ 264VAC/FULL

LOAD

3、30.13V/1.6A/264VAC/OVERLOAD

INDICATION

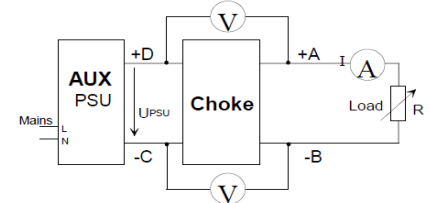
4、29V/2.72A/264VAC/OVERLOAD

5、18V/2.72A/ 264VAC/ 18V

6、10V/2.72A/ 264VAC/ 10V

7、2.72A/ 264VAC/ SHORT

※CHOKE TEST

1	STATIC PARAMETER S	 Figure 13: Test Setup Voltage Drop	I/P:180VAC/230 VAC/264VAC O/P: NO LOAD- FULL LOAD Ta: 25°C	1、Ucb= 0.692/ Uda= 0.695/ 180VAC 2、Ucb= 0.692 / Uda= 0.695/ 230VAC 3、Ucb= 0.691/ Uda= 0.694/ 264VAC	PASS
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2	DYNAMIC PARAMETER S	Figure 14: Test Setup for Dynamic Behaviour Figure 15: Voltage and Current of Choke (S1 = open) <table><thead><tr><th>Point</th><th>Voltage</th></tr></thead><tbody><tr><td>A</td><td>30 V (± 5%)</td></tr><tr><td>B</td><td>24.2 V (± 5%)</td></tr><tr><td>C</td><td>24.4 V (± 5%)</td></tr><tr><td>D</td><td>34 V (± 5%)</td></tr><tr><td>current IP</td><td>105mA (± 10%)</td></tr></tbody></table> Figure 16: Electrical Data of Choke (S1 = open) Figure 17: Voltage and Current of Choke (S1 = close) <table><thead><tr><th>Point</th><th>Voltage</th></tr></thead><tbody><tr><td>A</td><td>29.5 V (± 5%)</td></tr><tr><td>B</td><td>24.3 V (± 5%)</td></tr><tr><td>C</td><td>25.4 V (± 5%)</td></tr><tr><td>D</td><td>36 V (± 5%)</td></tr><tr><td>current IP</td><td>105mA (± 10%)</td></tr></tbody></table> Figure 18: Electrical Data of Choke (S1 = close)	Point	Voltage	A	30 V (± 5%)	B	24.2 V (± 5%)	C	24.4 V (± 5%)	D	34 V (± 5%)	current IP	105mA (± 10%)	Point	Voltage	A	29.5 V (± 5%)	B	24.3 V (± 5%)	C	25.4 V (± 5%)	D	36 V (± 5%)	current IP	105mA (± 10%)	I/P:180VAC/180 VAC/264VAC O/P: OPEN /CLOSE Ta: 25°C	S1 OPEN <table><tr><td>180VAC</td><td>230VAC</td><td>264VAC</td></tr><tr><td>A=30.62 V</td><td>A= 30.62V</td><td>A=30.62V</td></tr><tr><td>B=24.18 V</td><td>B= 24.19V</td><td>B= 24.19V</td></tr><tr><td>C= 24.31V</td><td>C= 24.31V</td><td>C=24.361V</td></tr><tr><td>D= 33.50V</td><td>D= 33.50V</td><td>D= 33.50V</td></tr><tr><td>Ip= 111.75mA</td><td>Ip = 111.75mA</td><td>Ip=111.75mA</td></tr></table> S1 CLOSE <table><tr><td>180VAC</td><td>230VAC</td><td>264VAC</td></tr><tr><td>A= 29.87V</td><td>A= 29.87V</td><td>A=29.87V</td></tr><tr><td>B= 24.31V</td><td>B= 24.30V</td><td>B= 24.31V</td></tr><tr><td>C= 25.5V</td><td>C= 25.44V</td><td>C=25.50V</td></tr><tr><td>D= 35.4V</td><td>D= 35.38V</td><td>D= 35.38V</td></tr><tr><td>Ip= 117.5mA</td><td>Ip = 117.5mA</td><td>Ip=117.5mA</td></tr></table>	180VAC	230VAC	264VAC	A=30.62 V	A= 30.62V	A=30.62V	B=24.18 V	B= 24.19V	B= 24.19V	C= 24.31V	C= 24.31V	C=24.361V	D= 33.50V	D= 33.50V	D= 33.50V	Ip= 111.75mA	Ip = 111.75mA	Ip=111.75mA	180VAC	230VAC	264VAC	A= 29.87V	A= 29.87V	A=29.87V	B= 24.31V	B= 24.30V	B= 24.31V	C= 25.5V	C= 25.44V	C=25.50V	D= 35.4V	D= 35.38V	D= 35.38V	Ip= 117.5mA	Ip = 117.5mA	Ip=117.5mA	PASS
Point	Voltage																																																																
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Ip= 117.5mA	Ip = 117.5mA	Ip=117.5mA																																																															
3	RESET	Figure 19: Test Setup	I/P:180VAC/180 VAC/264VAC O/P: R=3.3 Ω I≈3A Ta: 25°C	Upsu <table><tr><td>180VAC</td><td>230VAC</td><td>264VAC</td></tr><tr><td>30.1V</td><td>30.1V</td><td>30.1V</td></tr></table> Uaux <table><tr><td>180VAC</td><td>230VAC</td><td>264VAC</td></tr><tr><td>0.001V</td><td>0.001V</td><td>0.011V</td></tr></table> LED color: Red	180VAC	230VAC	264VAC	30.1V	30.1V	30.1V	180VAC	230VAC	264VAC	0.001V	0.001V	0.011V	PASS																																																
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0.001V	0.001V	0.011V																																																															

SAFETY & E.M.C. TEST

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	WITHSTAND VOLTAGE	I/P-O/P: 4.2KVAC/min I/P-FG: 2.0KVAC/min	I/P-O/P: 4.7 KVAC/min I/P-FG: 2.5 KVAC/min Ta: 25°C	I/P-O/P: 1.18 mA I/P-FG: 0.93 mA NO DAMAGE



2	ISOLATION RESISTANCE	EN62368 I/P-O/P: 500VDC > 100M Ω I/P-FG: 500VDC > 100M Ω	I/P-O/P: 500 VDC I/P-FG: 500 VDC Ta: 25°C	I/P-O/P: 9999M Ω I/P-FG: 9999 M Ω NO DAMAGE
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E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	HARMONIC	EN61000-3-2	I/P: 230VAC/50HZ O/P: FULL LOAD Ta: 25°C	PASS
2	CONDUCTION	EN50491-5-2	I/P: 230 VAC/50HZ O/P: FULL LOAD Ta: 25°C	PASS Test by certified Lab
3	RADIATION	EN50491-5-2	I/P: 230 VAC/50HZ O/P: FULL LOAD Ta: 25°C	PASS Test by certified Lab
4	E.S.D	EN61000-4-2 HEAVY INDUSTRY AIR: 8KV Contact: 4KV	I/P: 230 VAC/50HZ O/P: FULL LOAD Ta: 25°C	CRITERIA A
5	E.F.T	EN61000-4-4 HEAVY INDUSTRY INPUT: 2KV	I/P: 230VAC/50HZ O/P: FULL LOAD Ta: 25°C	CRITERIA A
6	SURGE	EN61000-4-5 HEAVY INDUSTRY L-N: 1.1KV L,N-PE: 2.2KV	I/P: 230VAC/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: KNX-40E-1280 1. ROOM AMBIENT BURN-IN: 2 HRS I/P: 230VAC O/P: FULL LOAD Ta=29.6℃ 2. HIGH AMBIENT BURN-IN: 2 HRS I/P: 230VAC O/P: FULL LOAD Ta=51.2℃ <table><tr><th>NO</th><th>Position</th><th>ROOM AMBIENT Ta=29.6℃</th><th>HIGH AMBIENT Ta=51.2℃</th></tr><tr><td>1</td><td>RTH1</td><td>65.6℃</td><td>80.8℃</td></tr><tr><td>2</td><td>LF1</td><td>72.7℃</td><td>89.8℃</td></tr><tr><td>3</td><td>BD1</td><td>71.2℃</td><td>87.7℃</td></tr><tr><td>4</td><td>C6</td><td>70.0℃</td><td>86.1℃</td></tr><tr><td>5</td><td>Q1</td><td>85.9℃</td><td>104.9℃</td></tr><tr><td>6</td><td>C35</td><td>75.4℃</td><td>93.1℃</td></tr><tr><td>7</td><td>U1</td><td>72.9℃</td><td>91.4℃</td></tr><tr><td>8</td><td>T1</td><td>93.4℃</td><td>106.4℃</td></tr><tr><td>9</td><td>D100</td><td>88.4℃</td><td>103.9℃</td></tr><tr><td>10</td><td>C105</td><td>76.8℃</td><td>91.6℃</td></tr><tr><td>11</td><td>C106</td><td>65.7℃</td><td>81.3℃</td></tr><tr><td>12</td><td>Q101</td><td>58.8℃</td><td>73.6℃</td></tr><tr><td>13</td><td>Q102</td><td>56.2℃</td><td>71.7℃</td></tr><tr><td>14</td><td>L100</td><td>63.8℃</td><td>79.2℃</td></tr><tr><td>15</td><td>U100</td><td>60.9℃</td><td>80.5℃</td></tr><tr><td>16</td><td>U600</td><td>66.5℃</td><td>83.6℃</td></tr><tr><td>17</td><td>RTH3</td><td>71.5℃</td><td>88.8℃</td></tr></table>			NO	Position	ROOM AMBIENT Ta=29.6℃	HIGH AMBIENT Ta=51.2℃	1	RTH1	65.6℃	80.8℃	2	LF1	72.7℃	89.8℃	3	BD1	71.2℃	87.7℃	4	C6	70.0℃	86.1℃	5	Q1	85.9℃	104.9℃	6	C35	75.4℃	93.1℃	7	U1	72.9℃	91.4℃	8	T1	93.4℃	106.4℃	9	D100	88.4℃	103.9℃	10	C105	76.8℃	91.6℃	11	C106	65.7℃	81.3℃	12	Q101	58.8℃	73.6℃	13	Q102	56.2℃	71.7℃	14	L100	63.8℃	79.2℃	15	U100	60.9℃	80.5℃	16	U600	66.5℃	83.6℃	17	RTH3	71.5℃	88.8℃
NO	Position	ROOM AMBIENT Ta=29.6℃	HIGH AMBIENT Ta=51.2℃																																																																									
1	RTH1	65.6℃	80.8℃																																																																									
2	LF1	72.7℃	89.8℃																																																																									
3	BD1	71.2℃	87.7℃																																																																									
4	C6	70.0℃	86.1℃																																																																									
5	Q1	85.9℃	104.9℃																																																																									
6	C35	75.4℃	93.1℃																																																																									
7	U1	72.9℃	91.4℃																																																																									
8	T1	93.4℃	106.4℃																																																																									
9	D100	88.4℃	103.9℃																																																																									
10	C105	76.8℃	91.6℃																																																																									
11	C106	65.7℃	81.3℃																																																																									
12	Q101	58.8℃	73.6℃																																																																									
13	Q102	56.2℃	71.7℃																																																																									
14	L100	63.8℃	79.2℃																																																																									
15	U100	60.9℃	80.5℃																																																																									
16	U600	66.5℃	83.6℃																																																																									
17	RTH3	71.5℃	88.8℃																																																																									
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P: 264VAC/180VAC O/P: FULL LOAD Ta= -35℃	TEST: OK																																																																								
3	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ONCONTROL 45℃ 95 %R.H NO DAMAGE	I/P: 264VAC O/P: FULL LOAD Ta=45℃ HUMIDITY= 95 %R.H	TEST: OK																																																																								
5	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																																																																									
6	THERMAL SHOCK TEST	-30℃ ~ +45℃	1. Thermal shock Temperature: -35℃ ~ +50℃ 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: 15cyle:230VAC/ FULL LOAD AC on 3 sec/AC off 1 sec TEST 1cyle:230VAC/ FULL LOAD Burn In Test TEST: OK																																																																									



1280mA KNX Power Supply

KNX-40E series

7	VIBRATION TEST	10~ 500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes	1 Carton & 1 Set (1) Waveform: Sine Wave (2) Frequency: 10~500Hz (3) Sweep Time: 12min/sweep cycle (4) Acceleration: 3G (5) Test Time: 72min in each axis (X.Y.Z) (6) Ta: 25℃ TEST: OK
8	CAPACITOR LIFE CYCLE	KNX-40E-1280: SUPPOSE C105 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= 50 ℃ LIFE TIME (3) I/P: 230VAC O/P: 75% LOAD Ta= 50 ℃ LIFE TIME (3) I/P: 230VAC O/P: 50% LOAD Ta= 50 ℃ LIFE TIME	(1) 141924 HRS (2) 29425 HRS (3) 46510 HRS (4) 114322 HRS
9	MTBF	Conducted by Parts Stress Analysis Prediction ≥487.4K hrs min. Telcordia SR-332 (Bellcore) ≥215.6K hrs min. MIL-HDBK-217F (25℃)	
10	Ongoing Reliability Test	I/P: 230VAC O/P: FULL LOAD TA=45℃ Demonstration Mean Time Between Failure : 30,000 hours	

TEST RESULT	TESTER	REVIEW	APPROVAL
PASS	WUWQ/ZHOUB	WENF	LIUWY