DRJ120-24-1

RELIABILITY DATA

信頼性データ

TDK-Lambda

INDEX

※ 試験結果は、代表データでありますが、全ての製品はほぼ同等な特性を示します。
従いまして、以下の結果は参考値とお考え願います。

Test results are typical data. Nevertheless the following results are considered to be reference data because all units have nearly the same characteristics.

1．MTBF計算値　Calculated Values of MTBF

部品ストレス解析法**MTBF　Parts stress reliability prediction MTBF**

MODEL ： DRJ120-24-1

(1) 算出方法　**Calculating Method**

Telcordiaの部品ストレス解析法(*1)で算出されています。
故障率λ_{SS}は、それぞれの部品ごとに電気ストレスと動作温度によって決定されます。
Calculated based on parts stress reliability prediction of Telcordia (*1).
Individual failure rate λ_{SS} is calculated by the electric stress and temperature rise of the each part.

*1: Telcordia (Bellcore) “Reliability Prediction Procedure for Electronic Equipment”
(Document number SR-332, Issue3)

＜算出式＞

$$MTBF = \frac{1}{\lambda_{equip}} = \frac{1}{\pi_E \sum_{i=1}^{m} (N_i \cdot \lambda_{ssi})} \times 10^9 \text{ 時間 (Hours)}$$

$$\lambda_{ssi} = \lambda_{Gi} \cdot \pi_{Qi} \cdot \pi_{Si} \cdot \pi_{Ti}$$

λ_{equip} ：全機器故障率（FITs） Total equipment failure rate (FITs = Failures in 10^9 hours)

λ_{Gi} ：i 番目の部品に対する基礎故障率　Generic failure rate for the ith part

π_{Qi} ：i 番目の部品に対する品質ファクタ　Quality factor for the ith part

π_{Si} ：i 番目の部品に対するストレスファクタ　Stress factor for the ith part

π_{Ti} ：i 番目の部品に対する温度ファクタ　Temperature factor for the ith part

m ：異なる部品の数　Number of different part types

N_i ：i 番目の部品の個数　Quantity of ith part type

π_E ：機器の環境ファクタ　Equipment environmental factor

(2) MTBF値 **MTBF Values**

条件 Conditions

・入力電圧 : 230VAC
Input voltage

・出力電圧、電流 : 24VDC, 100%
Output voltage & current

・環境ファクタ : GB (Ground, Benig
Environmental factor

・取付方法 : 標準取付 A
Mounting method : Standard mounting A

MTBF(Ta=25°C)	≒	**1,291,932**	時間 **(Hours)**
MTBF(Ta=40°C)	≒	**489,490**	時間 **(Hours)**

2．部品ディレーティング　**Components Derating**

MODEL ： DRJ120-24-1

(1) 算出方法　**Calculating Method**

(a) 測定方法　Measuring method

・取付方法 : 標準取付 : A Mounting method　Standard mounting : A	・周囲温度 : 55°C Ambient temperature
・入力電圧 : 115, 230VAC Input voltage	・出力電圧、電流 : 24V, 5A (100%) Output voltage & current

(b) 半導体　Semiconductors

ケース温度、消費電力、熱抵抗より使用状態の接合点温度を求め
最大定格、接合点温度との比較を求めました。
Compared with maximum junction temperature and actual one which is calculated based on case temperature, power dissipation and thermal impedance.

(c) IC、抵抗、コンデンサ等　IC, Resistors, Capacitors, etc.

周囲温度、使用状態、消費電力など、個々の値は設計基準内に入っています。
Ambient temperature, operating condition, power dissipation and so on are within derating criteria.

(d) 熱抵抗算出方法　Calculating method of thermal impedance

$$\theta j-c = \frac{Tj(max) - Tc}{Pj(max)}$$

Tc　：ディレーティングの始まるケース温度　一般に25°C
Case Temperature at Start Point of Derating；25°C in General

Pj(max)　：最大接合点(チャネル)損失
(Pch(max))　Maximum Junction (channel) Dissipation

Tj(max)　：最大接合点(チャネル)温度
(Tch(max))　Maximum Junction (channel) Temperature

θj-c　：接合点(チャネル)からケースまでの熱抵抗
(θch-c)　Thermal Impedance between Junction (channel) and Case

(2) 部品ディレーティング表 **Component Derating List**

部品番号 Location No.	Vin = 115VAC Load = 100% Ta = 55°C		
Q1, Q2 IPD60R400CE INFINEON	Tjmax = 150°C, Pd = 1.17W, Tj = Tc + θj-c × Pd = 101.7°C, D.F. = 67.8%	θj-c = 1.12°C/W ΔTc = 45.4°C	 Tc = 100.4°C
Q3 IPD60R400CE INFINEON	Tjmax = 150°C, Pd = 2.12W, Tj = Tc + θj-c × Pd = 98.9°C, D.F. = 65.9%	θj-c = 1.12°C/W ΔTc = 41.5°C	 Tc = 96.5°C
Q4 IPD60R400CE INFINEON	Tjmax = 150°C, Pd = 2.35W, Tj = Tc + θj-c × Pd = 100.6°C, D.F. = 67.1%	θj-c = 1.12°C/W ΔTc = 43.0°C	 Tc = 98.0°C
Q200 TPH8R80ANH TOSHIBA	Tjmax = 150°C, Pd = 0.46W, Tj = Tc + θj-c × Pd = 98.0°C, D.F. = 65.4%	θj-c = 2.04°C/W ΔTc = 42.1°C	 Tc = 97.1°C
Q201 TPH8R80ANH TOSHIBA	Tjmax = 150°C, Pd = 0.30W, Tj = Tc + θj-c × Pd = 97.8°C, D.F. = 65.2%	θj-c = 2.04°C/W ΔTc = 42.2°C	 Tc = 97.2°C
D1 S5MBHM4G TAIWAN SEMI	Tjmax = 150°C, Pd = 1.24W, Tj = Tc + θj-c × Pd = 96.5°C, D.F. = 64.4%	θj-c = 9.70°C/W ΔTc = 29.5°C	 Tc = 84.5°C
D2 S5MBHM4G TAIWAN SEMI	Tjmax = 150°C, Pd = 1.24W, Tj = Tc + θj-c × Pd = 95.5°C, D.F. = 63.7%	θj-c = 9.70°C/W ΔTc = 28.5°C	 Tc = 83.5°C
D3 S5MBHM4G TAIWAN SEMI	Tjmax = 150°C, Pd = 1.24W, Tj = Tc + θj-c × Pd = 95.8°C, D.F. = 63.9%	θj-c = 9.70°C/W ΔTc = 28.8°C	 Tc = 83.8°C
D4 S5MBHM4G TAIWAN SEMI	Tjmax = 150°C, Pd = 1.24W, Tj = Tc + θj-c × Pd = 97.7°C, D.F. = 65.2%	θj-c = 9.70°C/W ΔTc = 30.7°C	 Tc = 85.7°C
D6 STTH506B-TR ST	Tjmax = 175°C, Pd = 0.68W, Tj = Tc + θj-c × Pd = 99.7°C, D.F. = 57.0%	θj-c = 3.50°C/W ΔTc = 42.3°C	 Tc = 97.3°C

(2) 部品ディレーティング表 **Component Derating List**

部品番号 Location No.	Vin = 115VAC Load = 100% Ta = 55°C		
A100 TEA1716T NXP	Tjmax = 150°C, Pd = 0.26W, Tj = Tc + θj-c × Pd = 108.1°C, D.F. = 72.1%	θj-c = 90°C/W ΔTc = 29.7°C	 Tc = 84.7°C
A200 TEA1995T NXP	Tjmax = 150°C, Pd = 0.12W, Tj = Tc + θj-c × Pd = 114.7°C, D.F. = 76.5%	θj-c = 90°C/W ΔTc = 48.9°C	 Tc = 103.9°C
A201 TL431BQDBZR NEX PERIA	Tjmax = 150°C, Pd = 0.03W, Tj = Tc + θj-c × Pd = 83.9°C, D.F. = 55.9%	θj-c = 50°C/W ΔTc = 27.4°C	 Tc = 82.4°C
PC100 EL816M(K)-V EVER LIGHT	Tjmax = 125°C, Pd = 0.00W, Tj = Tc + θj-c × Pd = 76.9°C, D.F. = 61.5%	θj-c = 172°C/W ΔTc = 21.9°C	 Tc = 76.9°C
PC101 EL816M(K)-V EVER LIGHT	Tjmax = 125°C, Pd = 0.01W, Tj = Tc + θj-c × Pd = 84.2°C, D.F. = 67.4%	θj-c = 172°C/W ΔTc = 27.5°C	 Tc = 82.5°C
PC200 EL816M(K)-V EVER LIGHT	Tjmax = 125°C, Pd = 0.02W, Tj = Tc + θj-c × Pd = 85.5°C, D.F. = 68.4%	θj-c = 172°C/W ΔTc = 27.1°C	 Tc = 82.1°C

(2) 部品ディレーティング表 **Component Derating List**

部品番号 Location No.	Vin = 230VAC	Load = 100%	Ta = 55°C
Q1, Q2 IPD60R400CE INFINEON	Tjmax = 150°C, Pd = 0.48W, Tj = Tc + θj-c × Pd = 93.1°C, D.F. = 62.1%	θj-c = 1.12°C/W ΔTc = 37.6°C	Tc = 92.6°C
Q3 IPD60R400CE INFINEON	Tjmax = 150°C, Pd = 2.12W, Tj = Tc + θj-c × Pd = 93.0°C, D.F. = 62.0%	θj-c = 1.12°C/W ΔTc = 35.6°C	Tc = 90.6°C
Q4 IPD60R400CE INFINEON	Tjmax = 150°C, Pd = 2.35W, Tj = Tc + θj-c × Pd = 94.3°C, D.F. = 62.9%	θj-c = 1.12°C/W ΔTc = 36.7°C	Tc = 91.7°C
Q200 TPH8R80ANH TOSHIBA	Tjmax = 150°C, Pd = 0.46W, Tj = Tc + θj-c × Pd = 95.9°C, D.F. = 64.0%	θj-c = 2.04°C/W ΔTc = 40.0°C	Tc = 95.0°C
Q201 TPH8R80ANH TOSHIBA	Tjmax = 150°C, Pd = 0.30W, Tj = Tc + θj-c × Pd = 95.5°C, D.F. = 63.7%	θj-c = 2.04°C/W ΔTc = 39.9°C	Tc = 94.9°C
D1 S5MBHM4G TAIWAN SEMI	Tjmax = 150°C, Pd = 0.66W, Tj = Tc + θj-c × Pd = 82.6°C, D.F. = 55.1%	θj-c = 9.70°C/W ΔTc = 21.2°C	Tc = 76.2°C
D2 S5MBHM4G TAIWAN SEMI	Tjmax = 150°C, Pd = 0.66W, Tj = Tc + θj-c × Pd = 81.4°C, D.F. = 54.3%	θj-c = 9.70°C/W ΔTc = 20.0°C	Tc = 75.0°C
D3 S5MBHM4G TAIWAN SEMI	Tjmax = 150°C, Pd = 0.66W, Tj = Tc + θj-c × Pd = 81.3°C, D.F. = 54.2%	θj-c = 9.70°C/W ΔTc = 19.9°C	Tc = 74.9°C
D4 S5MBHM4G TAIWAN SEMI	Tjmax = 150°C, Pd = 0.66W, Tj = Tc + θj-c × Pd = 81.9°C, D.F. = 54.6%	θj-c = 9.70°C/W ΔTc = 20.5°C	Tc = 75.5°C
D6 STTH506B-TR ST	Tjmax = 175°C, Pd = 0.63W, Tj = Tc + θj-c × Pd = 95.9°C, D.F. = 54.8%	θj-c = 3.50°C/W ΔTc = 38.7°C	Tc = 93.7°C

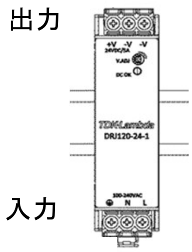
(2) 部品ディレーティング表　**Component Derating List**

部品番号 Location No.	Vin = 230VAC　Load = 100%　Ta = 55°C		
A100 TEA1716T NXP	Tjmax = 150°C, Pd = 0.26W, Tj = Tc + θj-c × Pd = 105.9°C, D.F. = 70.6%	θj-c = 90°C/W ΔTc = 27.5°C	 Tc = 82.5°C
A200 TEA1995T NXP	Tjmax = 150°C, Pd = 0.12W, Tj = Tc + θj-c × Pd = 112.4°C, D.F. = 74.9%	θj-c = 90°C/W ΔTc = 46.6°C	 Tc = 101.6°C
A201 TL431BQDBZR NEX PERIA	Tjmax = 150°C, Pd = 0.03W, Tj = Tc + θj-c × Pd = 80.5°C, D.F. = 53.7%	θj-c = 50°C/W ΔTc = 24.0°C	 Tc = 79.0°C
PC100 EL816M(K)-V EVER LIGHT	Tjmax = 125°C, Pd = 0.00W, Tj = Tc + θj-c × Pd = 74.7°C, D.F. = 59.8%	θj-c = 172°C/W ΔTc = 19.7°C	 Tc = 74.7°C
PC101 EL816M(K)-V EVER LIGHT	Tjmax = 125°C, Pd = 0.01W, Tj = Tc + θj-c × Pd = 80.4°C, D.F. = 64.3%	θj-c = 172°C/W ΔTc = 23.7°C	 Tc = 78.7°C
PC200 EL816M(K)-V EVER LIGHT	Tjmax = 125°C, Pd = 0.02W, Tj = Tc + θj-c × Pd = 82.7°C, D.F. = 66.2%	θj-c = 172°C/W ΔTc = 24.3°C	 Tc = 79.3°C

3．主要部品温度上昇値　**Main Components Temperature Rise ΔT List**

MODEL : DRJ120-24-1

(1)　測定条件　**Measuring Conditions**

取付方法 Mounting Method (標準取付 : A) (Standard Mounting : A)	
入力電圧 Vin Input Voltage	115VAC / 230VAC
出力電圧 Vo Output Voltage	24VDC
出力電流 Io Output Current	5A (100%)

(2)　測定結果　**Measuring Results**

		ΔT Temperature Rise (°C)	
入力電圧　Vin Input Voltage		115VAC	230VAC
部品番号 Location No.	部品名 Part name	取付方向 Mounting A	
Q1	MOSFET	36.0	29.2
Q2	MOSFET	45.4	37.6
Q3	MOSFET	41.5	35.6
Q4	MOSFET	43.0	36.7
Q200	MOSFET	42.1	40.0
Q201	MOSFET	42.2	39.9
D1	DIODE	29.5	21.2
D2	DIODE	28.5	20.0
D3	DIODE	28.8	19.9
D4	DIODE	30.7	20.5
D6	DIODE	42.3	38.7
A100	IC	29.7	27.5
A200	IC	48.9	46.6
A201	IC	27.4	24.0
PC100	OPTO-COUPLER	21.9	19.7
PC101	OPTO-COUPLER	27.5	23.7
PC200	OPTO-COUPLER	27.1	24.3
L1	COIL	29.7	15.0
L3	CHOKE COIL	30.8	29.9
T1	TRANSFORMER	46.6	43.9
C10	E. CAP	28.8	23.4
C117	E. CAP	18.8	16.8
C209	E. CAP	22.5	20.5
C215	E. CAP	20.7	18.2

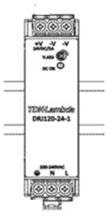
4．電解コンデンサ推定寿命計算値　**Electrolytic Capacitor Lifetime**

MODEL : DRJ120-24-1

空冷条件：自然空冷　**Cooling condition : Convection cooling**

取付方向 A
Mounting A

出力
Output



入力
Input

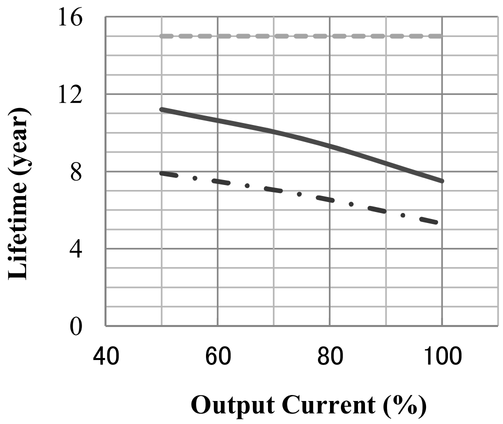
Conditions Ta 40°C : - - - - - - -
50°C : ————
55°C : -・-・-・-

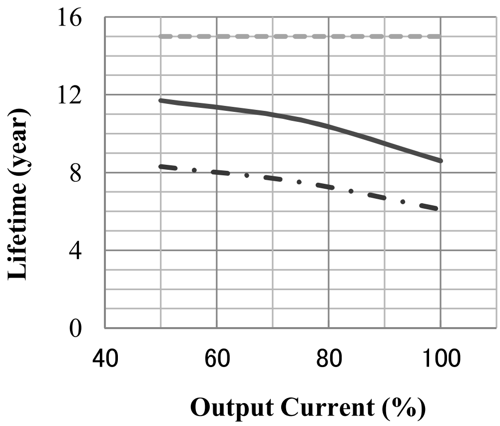
Vin=115VAC

Ta / Load	Lifetime (years)		
	40°C	50°C	55°C
50%	15.0	11.2	7.9
75%	15.0	9.7	6.8
100%	15.0	7.5	5.3

Vin=230VAC

Ta / Load	Lifetime (years)		
	40°C	50°C	55°C
50%	15.0	11.7	8.3
75%	15.0	10.7	7.5
100%	15.0	8.6	6.1





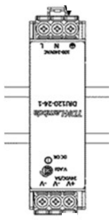
上記推定寿命は、弊社計算方法により算出した値であり、封口ゴムの劣化等の影響を含めておりません。
The lifetime is calculated based on our method and doesn't include the seal rubber degradation effect etc.

MODEL : DRJ120-24-1

空冷条件：自然空冷　**Cooling condition : Convection cooling**

取付方向 B
Mounting B

入力
Input



出力
Output

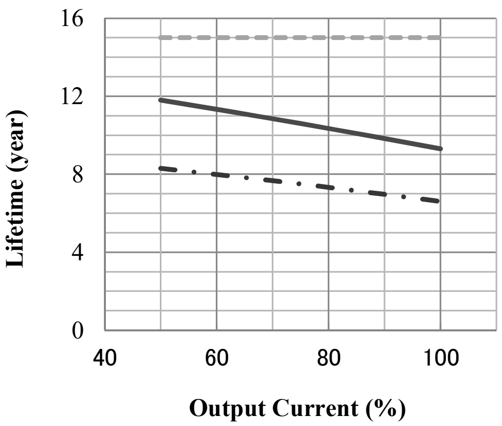
Conditions Ta 40°C : - - - - - - -
50°C : ———
55°C : - · - · - · -

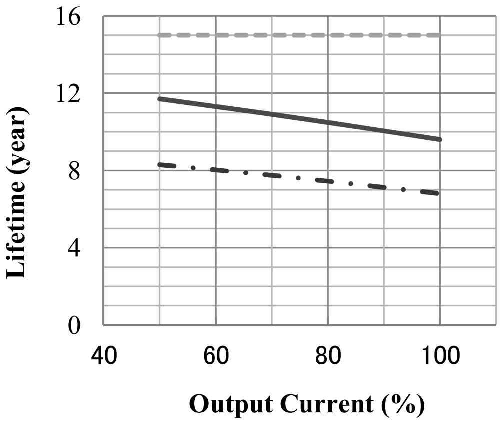
Vin=115VAC

Ta / Load	Lifetime (years)		
	40°C	50°C	55°C
50%	15.0	11.8	8.3
75%	15.0	10.6	7.5
100%	15.0	9.3	6.6

Vin=230VAC

Ta / Load	Lifetime (years)		
	40°C	50°C	55°C
50%	15.0	11.7	8.3
75%	15.0	10.7	7.6
100%	15.0	9.6	6.8





上記推定寿命は、弊社計算方法により算出した値であり、封口ｺﾞﾑの劣化等の影響を含めておりません。
The lifetime is calculated based on our method and doesn't include the seal rubber degradation effect etc.

MODEL : DRJ120-24-1

空冷条件：自然空冷 **Cooling condition : Convection cooling**

取付方向 C
Mounting C

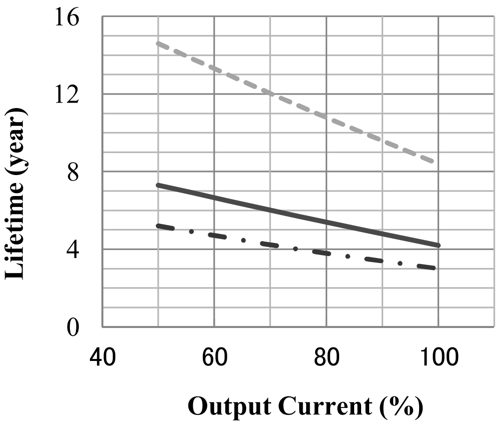
Conditions Ta 40°C : - - - - - - -
50°C : ————
55°C : -·-·-·-·-

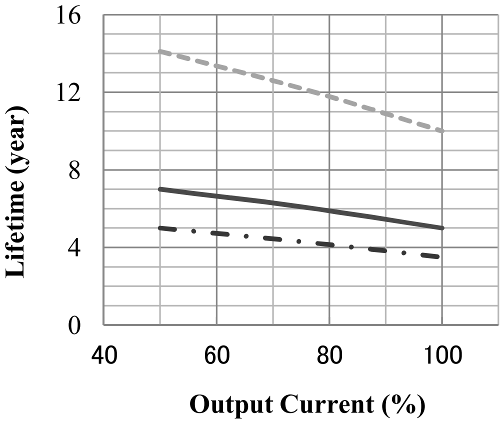
Vin=115VAC

Ta / Load	Lifetime (years)		
	40°C	50°C	55°C
50%	14.6	7.3	5.2
75%	11.4	5.7	4.0
100%	8.4	4.2	3.0

Vin=230VAC

Ta / Load	Lifetime (years)		
	40°C	50°C	55°C
50%	14.1	7.0	5.0
75%	12.2	6.1	4.3
100%	10.0	5.0	3.5





上記推定寿命は、弊社計算方法により算出した値であり、封口ゴムの劣化等の影響を含めておりません。
The lifetime is calculated based on our method and doesn't include the seal rubber degradation effect etc.

5．アブノーマル試験　Abnormal Test

MODEL : DRJ120-24-1

(1)　試験条件　Test Conditions

Input : 230VAC　　Output : 24V, 5A　Ta : 25°C

(2)　試験結果　Test Results

(Da : Damaged)

No.	Test position		Test mode		Test result													
					a	b	c	d	e	f	g	h	I	j	k	l	
	部品No. Location No.	試験端子 Test point	ショート Short	オープン Open	発火 Fire	発煙 Smoke	破裂 Burst	異臭 Smell	赤熱 Red hot	破損 Damaged	ヒューズ断 Fuse blown	OVP	OCP	出力断 No output	変化なし No change	その他 Others	記事 Note
1	Q1	D - S	○								○			○			
		D - G	○							○	○			○			Da : A100, Q1
		G - S	○													○	Input current increase.
		D		○												○	Input power increase.
		S		○												○	Input power increase.
		G		○												○	Input power increase.
2	Q3	D - S	○							○	○			○			Da : Q4
		D - G	○							○	○			○			Da : A100, Q3, Q4
		G - S	○											○			
		D		○										○			
		S		○						○	○			○			Da : A100, Q1, Q3, Q4, D100, D102, PC101, R118, R132, R133
		G		○						○	○			○			Da : Q3, Q4
3	Q4	D - S	○							○	○			○			Da : Q3
		D - G	○							○				○			Da : A100, Q3, Q4
		G - S	○											○			
		D		○										○			
		S		○										○			
		G		○						○	○			○			Da : Q3, Q4
4	Q200	D - S	○													○	Output voltage hiccup.
		D - G	○							○						○	Da : Q200, Output voltage hiccup.
		G - S	○													○	Input power increase.
		D		○												○	Output voltage hiccup.
		S		○												○	Output voltage hiccup.
		G		○												○	Input power increase.
5	Q201	D - S	○													○	Output voltage hiccup.
		D - G	○													○	Output voltage hiccup.
		G - S	○													○	Input power increase.
		D		○												○	Output voltage hiccup.
		S		○												○	Output voltage hiccup.
		G		○												○	Input power increase.

(Da : Damaged)

No.	Test position		Test mode		Test result												
	部品No. Location No.	Test point	ショート Short	オープン Open	a 発火 Fire	b 発煙 Smoke	c 破裂 Burst	d 異臭 Smell	e 赤熱 Red hot	f 破損 Damaged	g ヒューズ断 Fuse blown	h OVP	I OCP	j 出力断 No output	k 変化なし No change	l その他 Others	記事 Note
6	D1	A - K	○								○			○			
		A - K		○												○	Output voltage hiccup.
7	D3	A - K	○								○			○			
		A - K		○												○	Output voltage hiccup.
8	D200	A - K	○													○	Output voltage hiccup.
		A - K		○												○	Input power increase.
9	C10		○								○			○			
				○						○	○			○			Da : Q1
10	C17		○							○	○			○			Da : Q3
				○										○			
11	C117		○							○				○			Da : A100
				○											○		
12	C215		○										○			○	Output voltage hiccup.
				○												○	Output ripple increase.
13	PC101	1 - 2	○													○	Output voltage hiccup.
		3 - 4	○													○	Output voltage hiccup.
		1		○												○	Output voltage hiccup.
		2		○												○	Output voltage hiccup.
		3		○												○	Output voltage hiccup.
		4		○												○	Output voltage hiccup.
14	T1	1 - 2	○							○	○			○			Da : Q3, Q4
		2 - 3	○							○	○			○			Da : Q3, Q4
		3 - 4	○													○	Output voltage hiccup.
		5 - 6	○													○	Output voltage hiccup.
		6 - 7	○													○	Output voltage hiccup.
		7 - 8	○													○	Output voltage hiccup.
		8 - 9	○													○	Output voltage hiccup.
		1		○										○			
		2		○										○			
		3		○												○	Output voltage hiccup.
		4		○												○	Output voltage hiccup.
		5		○												○	Output voltage hiccup.
		6		○										○			
		7		○												○	Output voltage hiccup.
		8		○												○	Input power increase.
		9		○												○	Input power increase.

6．振動試験　Vibration Test

MODEL： DRJ120-24-1

(1) 振動試験種類　**Vibration Test Class**

掃引振動数耐久試験　Frequency variable endurance test

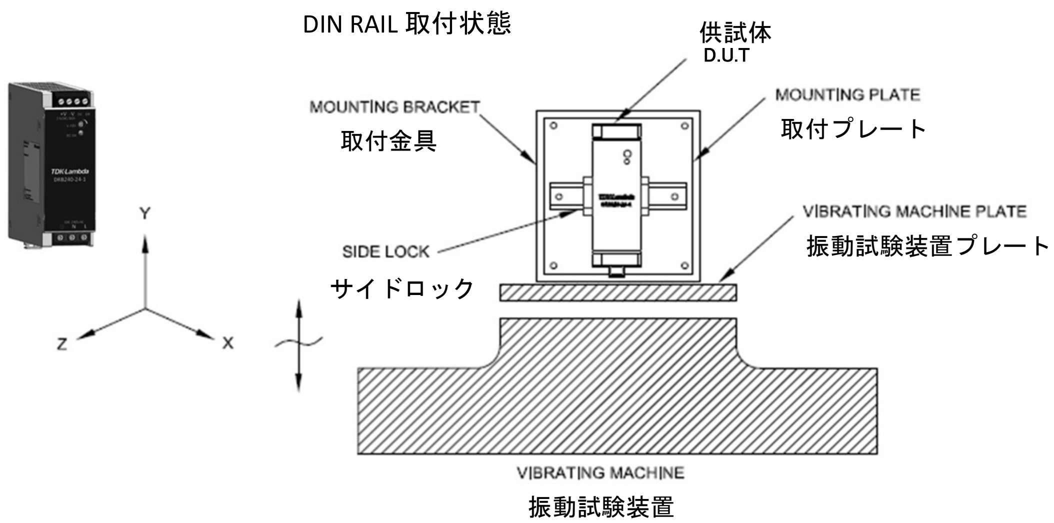
(2) 使用振動試験サイト　**Site Used**

外部試験サイト : Jiangsu Electronic Information Product Quality Supervision & Inspection intitute
Address: No. 100 Jinshu Road, Wuxi Jiangsu P. R. China

(3) 試験条件　**Test Conditions**

・周波数範囲 Sweep frequency	: 10～55Hz	・振動方向 Direction	: X, Y, Z
・掃引時間 Sweep time	: 1.0分間 1.0min	・試験時間 Sweep count	: 各方向共 1時間 1 hour each
・加速度 Acceleration	: 一定 19.6m/s^2 (2G) Constant	・非動作 Not Operating	

(4) 試験方法　**Test Method**



(5) 判定条件　**Acceptable Conditions**

1. 破壊しない事。
   Not to be broken.
2. 試験後の出力に異常がない事。
   No abnormal output after test.

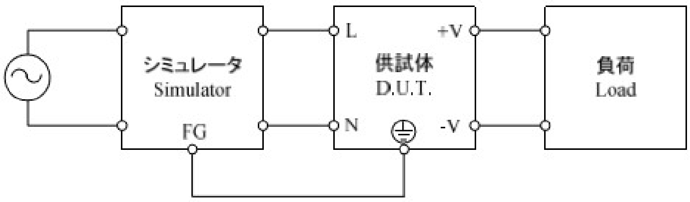
(6) 試験結果　**Test Results**

合格　**OK**

7．ノイズシミュレート試験　Noise Simulate Test

MODEL： DRJ120-24-1

(1) 試験回路及び測定器　**Test Circuit and Equipment**



シミュレー：INS-AX2-450TH　(NoiseKen)
Simulator

(2) 試験条件　**Test Conditions**

・入力電圧 Input voltage	: 100, 230VAC	・ノイズ電圧 Noise level	: 0～2kV
・出力電圧 Output Voltage	: 定格 Rated	・位相 Phase	: 0～360 deg
・出力電流 Output current	: 0%, 100%	・極性 Polarity	: ＋,－
・周囲温度 Ambient temperature	: 25°C	・印加モード Mode	: コモン、ノーマル Common, Normal
・パルス幅 Pulse width	: 50～1000ns	・トリガ選択 Trigger select	: Line

(3) 判定条件　**Acceptable Conditions**

1. 入力再投入を必要とする一時的な機能低下のない事。
   Must not have temporary function degradation that requires input restart.
2. 試験後の出力電圧は初期値から変動していない事。
   Output voltage must be within the regulation specification after the test.
3. 1、2に加えて、発煙・発火のない事。
   Along with 1 and 2, smoke and fire are not allowed.

(4) 試験結果　**Test Results**

合格　**OK**

8．熱衝撃試験　Thermal Shock Test

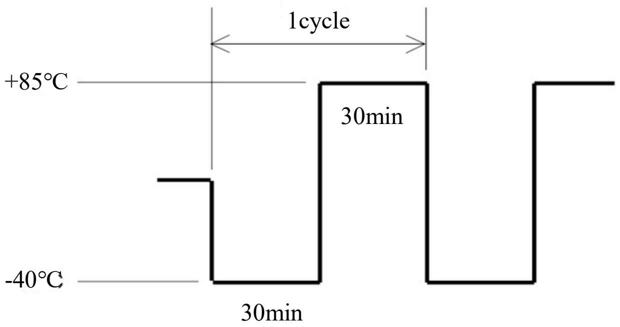
MODEL : DRJ120-24-1

(1) 使用計測器　**Equipment Used**

Thermal shock chamber　　: ESPEC

(2) 試験条件　**Test Conditions**

・電源周囲温度　: -40°C ⇔ +85°C
　Ambient Temperature
・試験時間　: 図参照
　Test Time　Refer to Dwg.
・試験サイクル　: 610 サイクル
　Test Cycle　610 Cycles
・非動作
　Not Operating



(3) 試験方法　**Test Method**

初期測定の後、供試品を試験槽に入れ、上記サイクルで試験を行う。
610サイクル後に、供試品を常温常湿下に1時間放置し、出力に異常がない事を確認する。

Before the test, check if there is no abnormal output and put the D.U.T in the testing chamber.
Then test it according to the above cycle. 610 cycles later, leave it for 1 hour at the room temperature and check to make sure that there is no abnormal output.

(4) 判定条件　**Acceptable Conditions**

試験後の出力に異常がない事。
No abnormal output after the test.

(5) 試験結果　**Test Results**

合格　**OK**