



SPECIFICATION FOR APPROVAL

INDEX

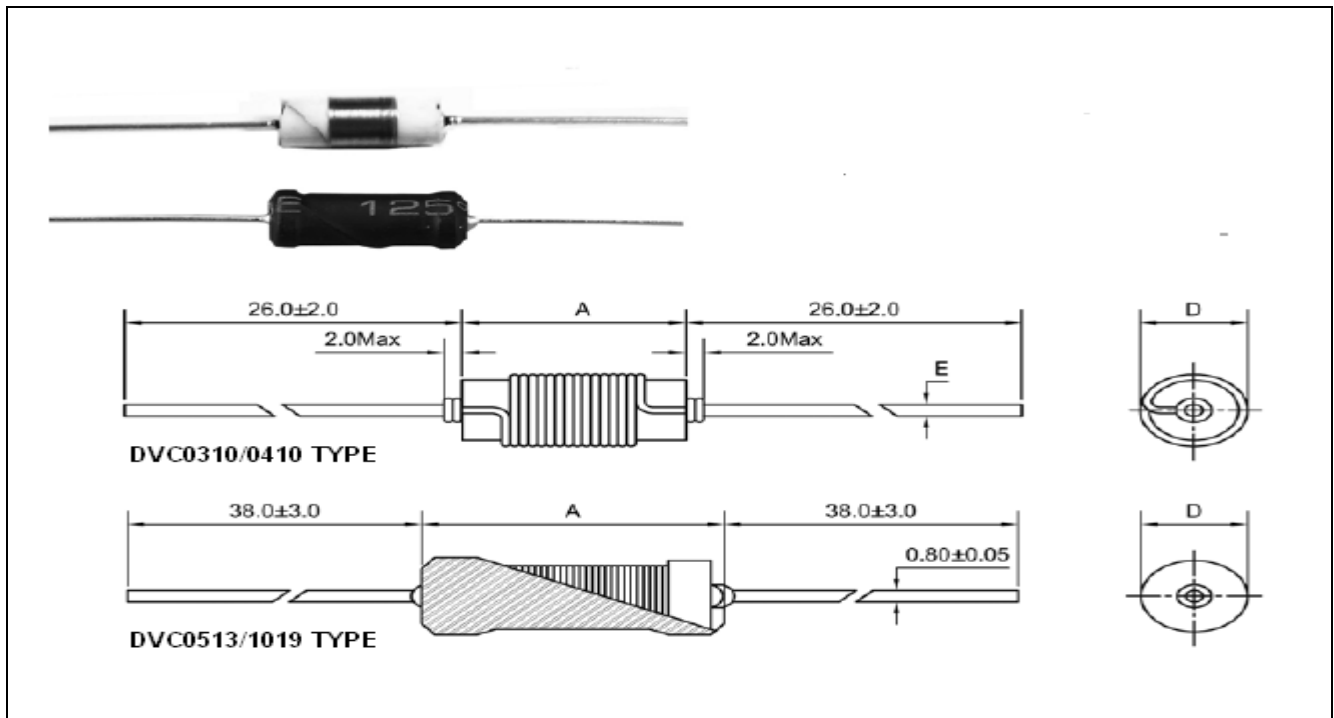
➤ COVER PAGE	
➤ INDEX	0
➤ SHAPES & DIMENSION	1
➤ PART NUMBER CODE	2
➤ REEL DIMENSIONS	3
➤ PACKAGING QUANTITY	3
➤ PRODUCT DETAIL	4-6
➤ RELIABILITY & TEST CONDITION	7-9
➤ SGS REPORT	



PRODUCT DETAIL

Electrical Characteristics		Test Instruments	
L	See P4~6	TEST FREQ: See P4~6	<ul style="list-style-type: none"> •CHENHWA 100 LCR METER •CHENHWA 502BC OHM METER •HP4284A WITH HP42841A CURRENT SOURCE •HC-D3M TEMP. & HUMIDITY CHAMBER
DCR	See P4~6	TEST LEVEL: 0.25V	
R.Current	See P4~6	Ope.Temp. -20°C~80°C	
Turns	See P4~6		

SHAPES AND DIMENSIONS :



P/N	Item /Spec.(mm)		
	A max	D max	E ±0.05
DVC0310	10.5	4.5	0.65
DVC0410	10.5	5.5	0.80
DVC0513	16.5	6.6	0.80
DVC1019	23.0	11.5	0.80

Marking :



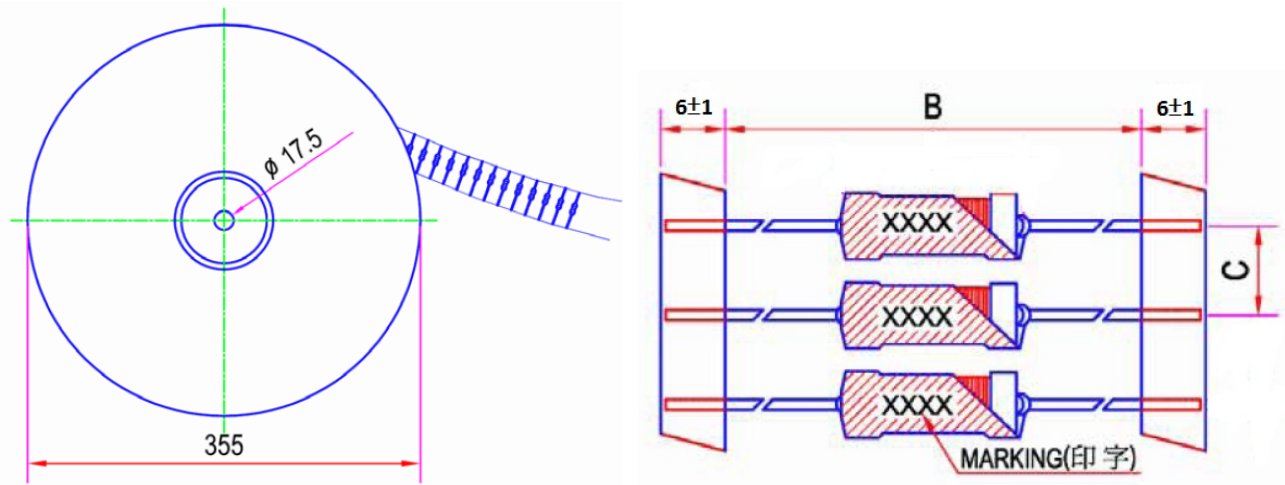
PART NUMBER CODE

DVC 0515 - 101 K A - UL
1 2 3 4 5 6

1. Series Name
2. Core style
3. Inductance (R=Decimal Point) Unit : μH
4. Inductance tolerance : “N” + 30% ; “M” + 20% ; “K” +10%.
5. Soldering : A=Lead Free
6. Tube



REEL DIMENSIONS :



ITEM	T5	T5X2
B	52.0±1.0 mm	52.0±1.0 mm
C	5.0±0.5 mm	10.0±0.5 mm

PACKAGING QUANTITY :

Packaging Quantity					
PART SIZE		DVC0310	DVC0410	DVC0513	DVC1019
Tape and Reel Package	Qty.(T5)	3000	3000	X	X
	Qty.(T5X2)	X	X	1000	X
	Qty.(carton)	15000	15000	5000	X
In BAG Package	Qty.(in bag)	500	500	250	50
	Qty.(case)	2000	2000	1000	200
	Qty.(inner box)	8000	8000	4000	800
	Qty.(carton)	16000	16000	8000	1600



AXIAL LEADED FIXED INDUCTORS
DVC0310/0410 TYPE

Part No.	L (uH)	Q Min	TEST FREQ. (0.1V)	DCR (Ω) Max.	RATED CURRENT (mA)Max.	SRF (MHz) Min.
DVC0310-1R0MA	1.0	40	25.2	0.017	1800	160
DVC0310-2R2MA	2.2	20	7.96	0.025	1600	150
DVC0310-4R7MA	4.7	25	7.96	0.090	1400	135
DVC0310-100KA	10	20	7.96	0.220	1200	50
DVC0410-R15MA	0.15	70	25.2	0.018	1850	480
DVC0410-R18MA	0.18	70	25.2	0.022	1800	450
DVC0410-R22MA	0.22	70	25.2	0.025	1740	400
DVC0410-R27MA	0.27	70	25.2	0.029	1680	380
DVC0410-R33MA	0.33	70	25.2	0.032	1610	300
DVC0410-R39MA	0.39	70	25.2	0.035	1540	280
DVC0410-R47MA	0.47	70	25.2	0.039	1430	260
DVC0410-R56MA	0.56	70	25.2	0.049	1320	210
DVC0410-R68MA	0.68	70	25.2	0.078	1200	190
DVC0410-R82MA	0.82	70	25.2	0.090	1130	180
DVC0410-1R0MA	1.0	70	25.2	0.105	1020	165
DVC0410-1R2KA	1.2	55	7.96	0.063	1580	150
DVC0410-1R5KA	1.5	55	7.96	0.071	1500	135
DVC0410-1R8KA	1.8	55	7.96	0.078	1450	125
DVC0410-2R2KA	2.2	55	7.96	0.088	1380	115
DVC0410-2R7KA	2.7	55	7.96	0.098	1320	105
DVC0410-3R3KA	3.3	60	7.96	0.205	870	90
DVC0410-3R9KA	3.9	60	7.96	0.225	840	85
DVC0410-4R7KA	4.7	60	7.96	0.25	800	80
DVC0410-5R6KA	5.6	60	7.96	0.28	750	70
DVC0410-6R8KA	6.8	60	7.96	0.31	710	65
DVC0410-8R2KA	8.2	55	7.96	0.35	680	60
DVC0410-100KA	10	55	7.96	0.39	640	40
DVC0410-120KA	12	65	2.52	0.67	450	40
DVC0410-150KA	15	65	2.52	0.76	430	40
DVC0410-180KA	18	70	2.52	0.85	410	36
DVC0410-220KA	22	70	2.52	0.96	390	33
DVC0410-270KA	27	70	2.52	1.10	360	31
DVC0410-330KA	33	65	2.52	1.24	345	29
DVC0410-390KA	39	65	2.52	1.37	330	26
DVC0410-470KA	47	60	2.52	1.55	315	23
DVC0410-560KA	56	55	2.52	1.95	300	20



AXIAL LEADED FIXED INDUCTORS

DVC0513 TYPE

Part No.	L	DCR	I sat.	Suggested Rated
	(uH)	(Ω) Max.	(DC Amps) Max	Current (AC Amps) Ref
DVC0513-3R9KA	3.9	0.019	7.3	1.28
DVC0513-4R7KA	4.7	0.022	6.3	1.28
DVC0513-5R6KA	5.6	0.024	5.6	1.28
DVC0513-6R8KA	6.8	0.026	5.3	1.28
DVC0513-8R2KA	8.2	0.028	4.5	1.28
DVC0513-100KA	10	0.033	4.1	1.28
DVC0513-120KA	12	0.037	3.6	1.28
DVC0513-150KA	15	0.040	3.3	1.28
DVC0513-180KA	18	0.044	3.0	1.28
DVC0513-220KA	22	0.050	2.7	1.28
DVC0513-270KA	27	0.058	2.5	1.28
DVC0513-330KA	33	0.075	2.2	1.008
DVC0513-390KA	39	0.094	2.0	0.804
DVC0513-470KA	47	0.109	1.8	0.804
DVC0513-560KA	56	0.140	1.7	0.804
DVC0513-680KA	68	0.145	1.5	0.804
DVC0513-820KA	82	0.152	1.4	0.804
DVC0513-101KA	100	0.208	1.2	0.632
DVC0513-121KA	120	0.283	1.1	0.508
DVC0513-151KA	150	0.340	1.0	0.508
DVC0513-181KA	180	0.362	0.95	0.508
DVC0513-221KA	220	0.430	0.86	0.508
DVC0513-271KA	270	0.557	0.77	0.400
DVC0513-331KA	330	0.665	0.70	0.400
DVC0513-391KA	390	0.772	0.64	0.400
DVC0513-471KA	470	1.15	0.59	0.315
DVC0513-561KA	560	1.27	0.54	0.315
DVC0513-681KA	680	1.61	0.49	0.250
DVC0513-821KA	820	1.96	0.44	0.200
DVC0513-102KA	1000	2.30	0.40	0.200
DVC0513-122KA	1200	2.65	0.35	0.200
DVC0513-152KA	1500	3.45	0.33	0.158
DVC0513-182KA	1800	4.03	0.29	0.158
DVC0513-222KA	2200	4.48	0.27	0.158
DVC0513-272KA	2700	5.90	0.24	0.125
DVC0513-332KA	3300	6.56	0.22	0.125
DVC0513-392KA	3900	8.63	0.20	0.100
DVC0513-472KA	4700	10.5	0.18	0.100
DVC0513-562KA	5600	13.9	0.166	0.082
DVC0513-682KA	6800	16.3	0.151	0.082
DVC0513-822KA	8200	20.8	0.136	0.065
DVC0513-103KA	10000	26.4	0.125	0.050
DVC0513-123KA	12000	29.2	0.114	0.050
DVC0513-153KA	15000	42.5	0.098	0.039
DVC0513-183KA	18000	48.3	0.091	0.039



AXIAL LEADED FIXED INDUCTORS

DVC1019 TYPE

Part No.	L	DCR	I sat.	Suggested Rated
	(uH)	(Ω) Max.	(DC Amps) Max	Current (AC Amps) Ref
DVC1019-3R9KA-UL	3.9	0.007	15.5	4.0
DVC1019-4R7KA-UL	4.7	0.008	13.9	4.0
DVC1019-6R8KA-UL	6.8	0.011	11.6	4.0
DVC1019-100KA-UL	10	0.017	8.70	4.0
DVC1019-150KA-UL	15	0.022	7.34	4.0
DVC1019-220KA-UL	22	0.026	6.07	4.0
DVC1019-270KA-UL	27	0.027	5.36	4.0
DVC1019-330KA-UL	33	0.032	4.82	4.0
DVC1019-390KA-UL	39	0.033	4.36	4.0
DVC1019-470KA-UL	47	0.035	3.98	4.0
DVC1019-560KA-UL	56	0.037	3.66	3.2
DVC1019-680KA-UL	68	0.047	3.31	2.5
DVC1019-820KA-UL	82	0.060	3.10	2.0
DVC1019-101KA-UL	100	0.090	2.79	1.6
DVC1019-121KA-UL	120	0.113	2.54	1.6
DVC1019-151KA-UL	150	0.129	2.22	1.6
DVC1019-181KA-UL	180	0.150	1.98	1.6
DVC1019-221KA-UL	220	0.162	1.89	1.6
DVC1019-271KA-UL	270	0.208	1.63	1.6
DVC1019-331KA-UL	330	0.212	1.51	1.6
DVC1019-391KA-UL	390	0.281	1.39	1.6
DVC1019-471KA-UL	470	0.380	1.24	1.2
DVC1019-561KA-UL	560	0.420	1.17	1.0
DVC1019-681KA-UL	680	0.548	1.05	1.0
DVC1019-821KA-UL	820	0.655	0.97	0.8
DVC1019-102KA-UL	1000	0.844	0.87	0.8
DVC1019-122KA-UL	1200	1.04	0.79	0.6
DVC1019-152KA-UL	1500	1.18	0.70	0.6
DVC1019-182KA-UL	1800	1.56	0.64	0.6
DVC1019-222KA-UL	2200	2.00	0.58	0.5
DVC1019-272KA-UL	2700	2.06	0.53	0.4
DVC1019-332KA-UL	3300	2.53	0.47	0.4
DVC1019-392KA-UL	3900	2.75	0.43	0.4
DVC1019-472KA-UL	4700	3.19	0.39	0.4
DVC1019-562KA-UL	5600	3.92	0.359	0.315
DVC1019-682KA-UL	6800	5.69	0.322	0.250
DVC1019-822KA-UL	8200	6.32	0.293	0.250
DVC1019-103KA-UL	10000	7.30	0.266	0.250
DVC1019-153KA-UL	15000	10.5	0.214	0.200
DVC1019-223KA-UL	22000	21.8	0.180	0.125
DVC1019-333KA-UL	33000	25.7	0.146	0.125
DVC1019-473KA-UL	47000	36.1	0.122	0.100
DVC1019-683KA-UL	68000	57.3	0.101	0.082
DVC1019-104KA-UL	100000	89.7	0.081	0.065



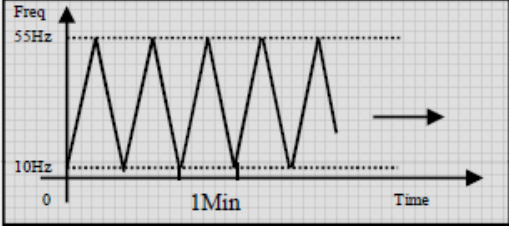
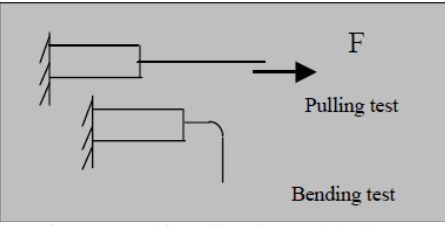
RELIABILITY AND TEST CONDITION

Environmental tests conditions (DIP wire wound Inductor)

Item (項目)	Required Characteristics (要求)	Test Method/Condition (測試方法)
<p>High temperature Storage test</p> <p>Reference documents: MIL-STD-202G Method 108A</p> <p>高溫儲存試驗</p>	<p>1.No case deformation or change in appearance. 2.$\Delta L/L \leq 10\%$ 3.$\Delta DCR/DCR \leq 10\%$</p> <p>N : The High temperature, depend on the spec. N : 高溫設定，依據產品規格設定</p> <p>1.無明顯的外觀缺陷 2.感值變化不超過 10% 3.直流電阻變化不超過 10%</p>	<p>Temperature: $N \pm 2^\circ\text{C}$ Time : 96 ± 2 hours Tested not less than 1 hour, nor more than 2 hours at room temperature.</p> <p>溫度: $N \pm 2^\circ\text{C}$, 時間: 96 ± 2, 小時 樣品在室溫下放置 1 小時, 不超過 2 小時必須測試。</p>
<p>Low temperature Storage test</p> <p>Reference documents: IEC 68-2-1A 6.1 6.2</p> <p>低溫儲存試驗</p>	<p>1.No case deformation or change in appearance. 2.$\Delta L/L \leq 10\%$ 3.$\Delta DCR/DCR \leq 10\%$</p> <p>M : The Low temperature, depend on the spec. M : 低溫設定，依據產品規格設定</p> <p>1.無明顯的外觀缺陷 2.感值變化不超過 10% 3.直流電阻變化不超過 10%</p>	<p>Temperature: $M \pm 2^\circ\text{C}$ Time : 96 ± 2 hours Tested not less than 1 hour, nor more than 2 hours at room temperature.</p> <p>溫度: $M \pm 2^\circ\text{C}$, 時間: 96 ± 2, 小時 樣品在室溫下放置 1 小時, 不超過 2 小時必須測試。</p>
<p>Humidity test</p> <p>Reference documents: MIL-STD-202G Method 103B</p> <p>濕度測試</p>	<p>1.No case deformation or change in appearance. 2.$\Delta L/L \leq 10\%$ 3.$\Delta DCR/DCR \leq 10\%$</p> <p>1.無明顯的外觀缺陷 2.感值變化不超過 10% 3.直流電阻變化不超過 10%</p>	<p>Temperature: $40 \pm 2^\circ\text{C}$, Humidity: $93 \pm 3\% \text{RH}$ Time : 96 ± 2 hours Tested not less than 1 hour, nor more than 2 hours at room temperature.</p> <p>溫度: $40 \pm 2^\circ\text{C}$, 濕度: $93 \pm 3\% \text{RH}$ 時間 : 96 ± 2 hours 樣品在室溫下放置 1 小時, 不超過 2 小時必須測試。</p>
<p>Thermal shock test</p> <p>Reference documents: MIL-STD-202G Method 107G</p> <p>熱衝擊測試</p>	<p>1.No case deformation or change in appearance. 2.$\Delta L/L \leq 10\%$ 3.$\Delta DCR/DCR \leq 10\%$</p> <p>N : The High temperature, depend on the spec. M : The Low temperature, depend on the spec. For T: weight $\leq 28\text{g}$: 15Min; $28\text{g} \leq \text{weight} \leq 136\text{g}$: 30Min</p> <p>1.無明顯的外觀缺陷 2.感值變化小於 10% 3.直流電阻變化小於 10%</p>	<p>First $M^\circ\text{C}$ for T time, next $N^\circ\text{C}$ for T time as 1 cycle. Go through 20 cycles.</p> <p>從 $M^\circ\text{C}$ 作用 T 分鐘, 然後溫度衝擊到 $N^\circ\text{C}$ 作用 T 分鐘, 作為一個循環, 共作用 20 次。</p>



Physical characteristic tests conditions (DIP wire wound Inductor)

Item (項目)	Required Characteristics (要求)	Test Method/Condition (測試方法)
Solderability test Reference documents: MIL-STD-202G Method 208H IPC J-STD-002B 可焊性測試	Terminals area must have 95% min. Solder coverage 端子必須有 95%以上著錫	<ul style="list-style-type: none"> ● Dip pads in flux then dip in solder pot at 245±5°C for 5 second. ● Solder: lead free ● Flux: rosin flux ● 端子侵入著焊劑，然後侵入 245±5°C 錫爐中 5 秒 ● 焊料：無鉛焊料 ● 助焊劑：松香助焊劑
Heat endurance of flow soldering Reference documents: MIL-STD-202G Method 210F 波峰焊耐熱試驗	<ul style="list-style-type: none"> ● No case deformation or change in appearance. ● $\Delta L/L \leq 10\%$ ● $\Delta DCR/DCR \leq 10\%$ ● 無明顯的外觀缺陷 ● 感值變化不超過 10% ● 直流電阻變化不超過 10% 	<ul style="list-style-type: none"> ● Dip pads in flux then dip in solder pot at 260±5°C for 10 second. ● Solder: lead free ● Flux: rosin flux ● 端子侵入著焊劑，然後侵入 260±5°C 錫爐中 10 秒 ● 焊料：無鉛焊料 ● 助焊劑：松香助焊劑
Vibration test Reference documents: MIL-STD-202G Method 201A 振動測試	<ul style="list-style-type: none"> ● No case deformation or change in appearance. ● $\Delta L/L \leq 10\%$ ● $\Delta DCR/DCR \leq 10\%$ ● 無明顯的外觀缺陷 ● 感值變化不超過 10% ● 直流電阻變化不超過 10% 	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.(total 6 hours)  用 10~55Hz 振動頻率 1.5mm 振幅沿 X,Y,Z 方向各振動 2 小時.(共 6 小時)
Drop test Reference documents: MIL-STD-202G Method 203C 落下試驗	<ul style="list-style-type: none"> ● No case deformation or change in appearance. ● $\Delta L/L \leq 10\%$ ● $\Delta DCR/DCR \leq 10\%$ ● 無明顯的外觀缺陷 ● 感值變化不超過 10% ● 直流電阻變化不超過 10% 	Packaged & Drop down from 1m with 981m/s ² (100G) attitude In 1 angle 1 ridges & 2 surfaces orientations. 將產品包裝後從 1 米高度自然落下至試驗板上 1 角 1 稜 2 面
Terminal strength Reference documents: IEC 68-2-21:1992 Test A & C 端子強度試驗	1.Terminal should not come out 2.Meet require test condition A&C For: Wire-leaded components-Test A&C For: Others leaded components-Test A 1.端子不會松脫 2.滿足要求的測試條件 A&C	A Pull Force:0.45kg;the force shall be applied gradually to the terminal and then maintained for 10 seconds. C. Wire-lead bend:0.23kg,The rate of bending shall be approximately 3 seconds per bend in each direction. The load shall be suspended at a point within 1/4 inch from the free end of the terminal.  A.拉力:0.45 公斤力,拉力逐漸到最大值維持 10 秒。 C.線腳彎曲:0.23 公斤力,每個方向彎曲 3 次.負載應該加在離端子末端 1/4 英寸處
Resistance to solvent test Reference documents: IEC 68-2-45:1993 耐溶劑性試驗	No case deformation or change in appearance, or obliteration of marking 無外觀破壞及標記破損	To dip parts into IPA solvent for 5±0.5Min, then drying them at room temp for 5Min,at last ,to brushing making 10 times. 在 IPA 溶劑中浸泡 5±0.5 分鐘,室溫下乾燥 5 分鐘,然後擦拭 10 次。



Electrical Characteristic test (DIP wire wound Inductor)

Item (項目)	Required Characteristics(要求)	Test Method / Condition (測試方法)
Electronic characteristic test of major products 主要產品電特性測試	Refer to catalogue of specific products 參照具體產品目錄頁	Refer to catalogue of specific products 參照具體產品目錄頁書
Overload test Reference documents: JIS C5311-6.13 過負荷試驗	1. During the test no smoke, no peculiar, smell, no fire 2. The characteristic is normal after test 1. 試驗過程中無冒煙,異味,著火等, 2. 試驗後產品特性正常	Apply twice as rated current for 5 minutes. 通兩倍額定電流 5 分鐘
Voltage resistance test Reference documents: MIL-STD-202G method 301 絕緣耐壓測試	1. During the test no breakdown 2. The characteristic is normal after test 1. 試驗過程中無擊穿, 2. 試驗後產品特性正常	Refer to product's specification 參照產品的具體規格