

TEST REPORT

Report No.: HCO0171B/2020
Page: 1 of 12
Date: December 14, 2020

VECOW CO., LTD.
3F., NO.10, JIANKANG RD., ZHONGHE DIST.,
NEW TAIPEI CITY, TAIWAN

The following merchandise was submitted and identified by the vendor as:

Product Description: GPC-1000 Series
Style/ Item No.: GPC-1000-Geforce RTX2080DELL U2711& Geforce RTX2080
TiacerCB280HK/ No.1
Quantity: Total 1 set
Testing Period: Oct. 29, 2020 to Nov. 2, 2020

We have tested the submitted sample(s) as requested and the following results were obtained:

Test Required: (According to client's test specification, please see following sheets in detail.)

1. High Temperature Test
2. Low Temperature Test
3. Random Vibration Test
4. Mechanical Shock Test

Test Results : -PLEASE SEE ATTACHED SHEETS-

* HCO0171A/2020, dated on December 1, 2020, is hereby canceled and replaced by HCO0171B/2020

Signed for and on behalf of
SGS TAIWAN Ltd.



Allen Wang
Asst. Supervisor

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1. High Temperature Test:

Test Equipment:

Name	Brand	Model	Serial No.
Programmable Temperature & Humidity Chamber	GIANT FORCE	GTH-225-40-CP-AR	MAA1807-009

Lab Environmental Conditions:

Ambient temperature: $(25 \pm 3) ^\circ\text{C}$

Ambient humidity: $(55 \pm 20) \% \text{RH}$

Test Location:

No.31, Wu Chyuan Road, New Taipei Industrial Park, WuKu District,
New Taipei City, Taiwan.

Test Method/ Specification:

Sample Condition: Operating (execute "Burn-In" and "FurMark")

Test Temperature: 60 °C

Test Humidity: 95 % RH

Test Duration: 16 hours

- Examine the appearance of specimen(s) by visual check and perform functional check after this test.
- Functional check: Connect the specimen with rated power, turn on the power of specimen then execute test program "Burn-In" and "FurMark" while performing functional check.

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Specimen:

Style/Item No.: GPC-1000-Geforce RTX2080DELL U2711& Geforce RTX2080
TiacerCB280HK / No.1

Quantity: Total 1 set

Test Result:

Style/ Item No.	Check Item	Appearance check (Visual check)	Functional check
GPC-1000-Geforce RTX2080DELL U2711& Geforce RTX2080 TiacerCB280HK / No.1		No visible damage	Normal

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2. Low Temperature Test:

Test Equipment:

Name	Brand	Model	Serial No.
Programmable Temperature & Humidity Chamber	GIANT FORCE	GTH-225-40-CP-AR	MAA1807-009

Lab Environmental Conditions:

Ambient temperature: $(25 \pm 3) ^\circ\text{C}$

Ambient humidity: $(55 \pm 20) \% \text{RH}$

Test Location:

No.31, Wu Chyuan Road, New Taipei Industrial Park, WuKu District, New Taipei City, Taiwan.

Test Method/ Specification:

Sample Condition: Operating (execute “Burn-In” and “FurMark”)

Test Temperature: -25 °C

Test Duration: 16 hours

- Examine the appearance of specimen(s) by visual check and perform functional check after this test.
- Functional check: Connect the specimen with rated power, turn on the power of specimen then execute test program “Burn-In” and “FurMark” while performing functional check.

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Specimen:

Style/Item No.: GPC-1000-Geforce RTX2080DELL U2711& Geforce RTX2080
TiacerCB280HK / No.1

Quantity: Total 1 set

Test Result:

Style/ Item No.	Check Item	Appearance check (Visual check)	Functional check
<u>GPC-1000-Geforce RTX2080DELL U2711& Geforce RTX2080 TiacerCB280HK / No.1</u>		No visible damage	Normal

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3. Random Vibration Test:

Test Equipment:

Name	Brand	Model	Serial No.
Vibration Tester	IMV	J260/SA7M	14101899
Controller	IMV	K2	14101899
Control Accelerometer	PCB	353B34	LW228240
Vibration Tester	King Design	EM-5000F2K-75N600	WR109237101
Controller	Crystal	spider	1001664
Control Accelerometer	WR	793-6	A4632

Lab Environmental Conditions:

Ambient temperature: $(25 \pm 3) ^\circ\text{C}$

Ambient humidity: $(55 \pm 20) \% \text{RH}$

Test Location: No.31, Wu Chyuan Road, New Taipei Industrial Park, WuKu District, New Taipei City, Taiwan

Test Method/ Specification:

Test method: MIL-STD-810G w/Change 1: 2014, Method 514.7, Procedure I, Table 514.7C-I Category 4 - Common carrier.

Sample condition: Operating (execute "Burn-In" and "FurMark")

Wave form: Random

Frequency: (10 ~ 500) Hz (Test Spectrums as shown in the following sheets in detail)

Direction: X, Y, Z axes (See photo 4 ~ 6)

Duration: 1 hour/ axis

- Examine the appearance of specimen(s) by visual check and perform functional check after this test.
- Functional check: Connect the specimen with rated power, turn on the power of specimen then execute test program "Burn-In" and "FurMark" while performing functional check.

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Test Method/ Specification--Continued:

Test Spectrums:

Vertical - Z axis		Transverse - X axis		Longitudinal - Y axis	
Frequency (Hz)	PSD (g ² /Hz)	Frequency (Hz)	PSD (g ² /Hz)	Frequency (Hz)	PSD (g ² /Hz)
10	0.01500	10	0.00013	10	0.00650
40	0.01500	20	0.00065	20	0.00650
500	0.00015	30	0.00065	120	0.00020
⇨ equivalent to 1.04 G _{rms}		78	0.00002	121	0.00300
		79	0.00019	200	0.00300
		120	0.00019	240	0.00150
		500	0.00001	340	0.00003
		⇨ equivalent to 0.20 G _{rms}		500	0.00015
		⇨ equivalent to 0.74 G _{rms}			

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Specimen:

Style/Item No.: GPC-1000-Geforce RTX2080DELL U2711& Geforce RTX2080
TiacerCB280HK / No.1

Quantity: Total 1 set

Test Result:

Style/ Item No.	Check Item	Appearance check (Visual check)	Functional check
<u>GPC-1000-Geforce RTX2080DELL U2711& Geforce RTX2080 TiacerCB280HK / No.1</u>		No visible damage	Normal

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4. Mechanical Shock Test:

Test Equipment:

Name	Brand	Model	Serial No.
Vibration Tester	IMV	J260/SA7M	14101899
Controller	IMV	K2	14101899
Control Accelerometer	PCB	353B34	LW228240
Vibration Tester	King Design	EM-5000F2K-75N600	WR109237101
Controller	Crystal	spider	1001664
Control Accelerometer	WR	793-6	A4632

Lab Environmental Conditions:

Ambient temperature: $(25 \pm 3) ^\circ\text{C}$

Ambient humidity: $(55 \pm 20) \% \text{RH}$

Test Location: No.31, Wu Chyuan Road, New Taipei Industrial Park, WuKu District, New Taipei City, Taiwan

Test Method/ Specification:

Test method: MIL-STD-810G w/Change 1: 2014, Method 516.7, Procedure I - Functional Shock Test

Sample condition: Operating (execute "Burn-In" and "FurMark")

Pulse shape: Sawtooth

Acceleration: 20 g

Pulse duration: 11 ms

Shock direction: 6 faces ($\pm X, \pm Y, \pm Z$ axes, see photo 4 ~ 6)

No. of shock: 3 shocks/ axis (total 6 shocks)

- Examine the appearance of specimen(s) by visual check and perform functional check after this test.
- Functional check: Connect the specimen with rated power, turn on the power of specimen then execute test program "Burn-In" and "FurMark" while performing functional check.

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Specimen:

Style/Item No.: GPC-1000-Geforce RTX2080DELL U2711& Geforce RTX2080
TiacerCB280HK / No.1





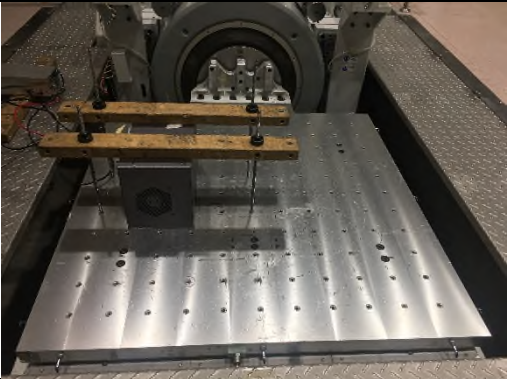
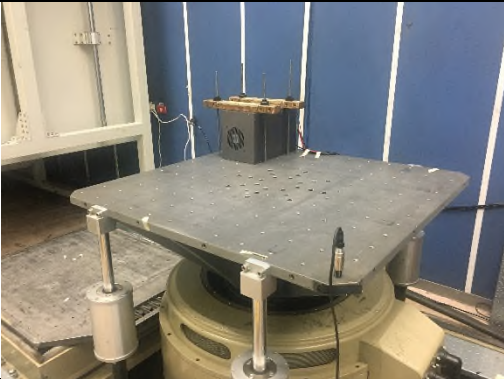
Quantity: Total 1 set

Test Result:

Style/ Item No.	Check Item	Appearance check (Visual check)	Functional check
GPC-1000-Geforce RTX2080DELL U2711& Geforce RTX2080 TiacerCB280HK / No.1		No visible damage	Normal

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Test Photos:

	
<p>1. Appearance of specimen</p>	<p>2. Appearance of specimen</p>
	
<p>3. High Temperature Test/ Low Temperature Test</p>	<p>4. Random Vibration Test: X axis/ Mechanical Shock Test: $\pm X$ axis</p>
	
<p>5. Random Vibration Test: Y axis/ Mechanical Shock Test: $\pm Y$ axis</p>	<p>6. Random Vibration Test: Z axis/ Mechanical Shock Test: $\pm Z$ axis</p>

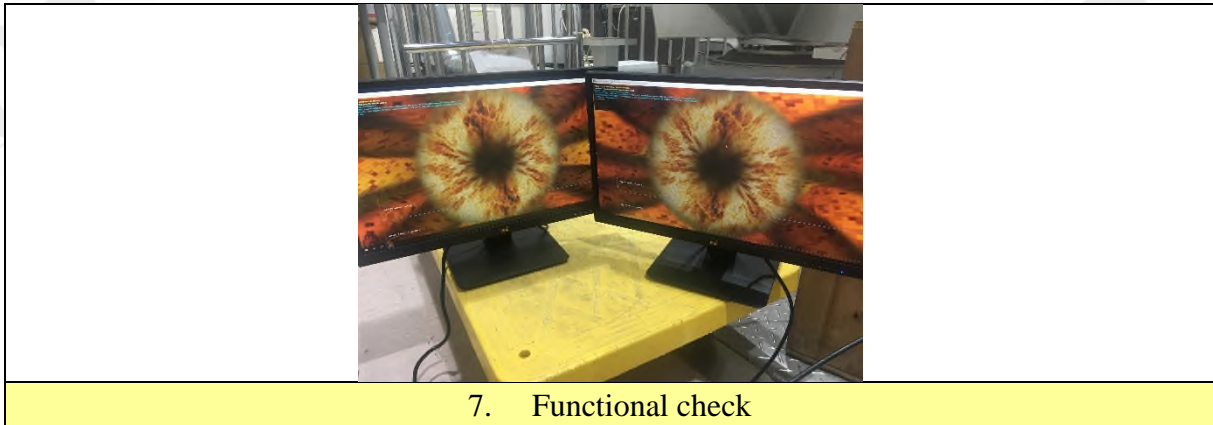
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Test Photos--Continued:



--- The End of Test Report ---

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