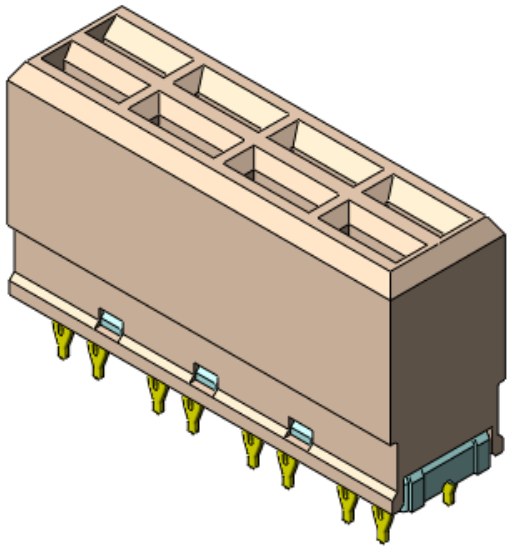
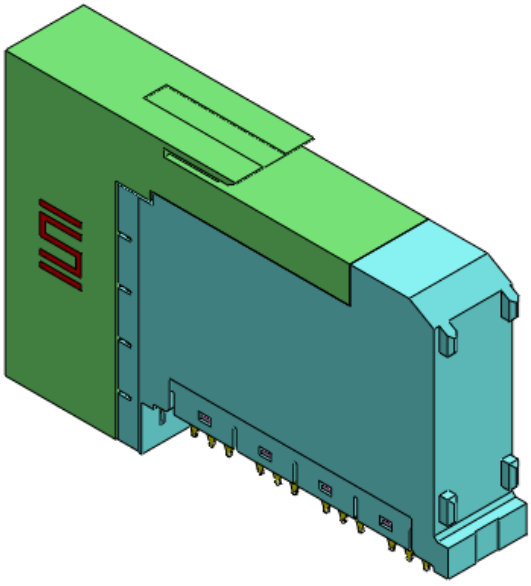
Project Number: Design Qualification Test Report	Tracking Code: CR-959105_Report_Rev_1
Requested by: Leo Lee	Date: 9/27/2023
Part #: HPTS-6-S-D-VT\SUB-HPTT-6-S-6-6-6-6-D-RA	
Part description: HPTS\SUB-HPTT	Tech: Kason He
Test Start: 7/14/2023	Test Completed: 8/15/2023





DESIGN QUALIFICATION TEST REPORT

HPTS/SUB-HPTT
HPTS-6-S-D-VT\SUB-HPTT-6-S-6-6-6-6-D-RA

REVISION HISTORY

DATA	REV.NUM.	DESCRIPTION	ENG
9/27/2023	**1**	**Initial Issue**	**KH**

CERTIFICATION

All instruments and measuring equipment were calibrated to National Institute for Standards and Technology (NIST) traceable standards according to IS0 10012-l and ANSI/NCSL 2540-1, as applicable.

SCOPE

To perform the following tests: Design Qualification test. Please see test plan.

APPLICABLE DOCUMENTS

Standards: EIA Publication 364

TEST SAMPLES AND PREPARATION

1) All materials were manufactured in accordance with the applicable product specification.
2) All test samples were identified and encoded to maintain traceability throughout the test sequences.
3) After soldering, the parts to be used for LLCR and DWV/IR testing were cleaned according to TLWI-0001.
4) Either an automated cleaning procedure or an ultrasonic cleaning procedure may be used.
5) The automated procedure is used with aqueous compatible soldering materials.
6) Parts not intended for testing LLCR and DWV/IR are visually inspected and cleaned if necessary.
7) Any additional preparation will be noted in the individual test sequences.
8) Solder Information: Lead free.
9) Samtec Test PCBs used: PCB-108772-TST / PCB-108773-TST.

FLOWCHARTS

Gas Tight

Group 1
HPTS-6-S-D-VT
SUB-HPTT-6-S-6-6-6-6-D-RA
8 Assemblies
Samtec VT To Samtec RA

Step	Description
1.	LLCR (2)
2.	Gas Tight (1)
3.	LLCR (2) Max Delta = 15 mOhm

Group 2
HPTS-6-S-D-VT
928-6000-A8H
8 Assemblies
Samtec VT To Amphenol RA

Step	Description
1.	LLCR (2)
2.	Gas Tight (1)
3.	LLCR (2) Max Delta = 15 mOhm

Group 3
968-6200-A1H
SUB-HPTT-6-S-6-6-6-6-D-RA
8 Assemblies
Amphenol VT To Samtec RA

Step	Description
1.	LLCR (2)
2.	Gas Tight (1)
3.	LLCR (2) Max Delta = 15 mOhm

Group 4
968-6200-A1H
928-6000-A8H
8 Assemblies
Amphenol To Amphenol RA

Step	Description
1.	LLCR (2)
2.	Gas Tight (1)
3.	LLCR (2) Max Delta = 15 mOhm

(1) Gas Tight = EIA-364-36

(2) LLCR = EIA-364-23
Open Circuit Voltage = 20 mV Max
Test Current = 100 mA Max

Normal Force

Group 1
HPTS-6-S-D-VT
SUB-HPTT-6-S-6-6-6-6-D-RA
8 Contacts Minimum
Samtec VT To Samtec RA W/o Thermals

Step	Description
1.	Contact Gaps
2.	Normal Force (1) Deflection = 0.010 " Expected Force at Max Deflection = 100 g

Group 2
HPTS-6-S-D-VT
SUB-HPTT-6-S-6-6-6-6-D-RA
8 Contacts Minimum
Samtec VT To Samtec RA W/ Thermals

Step	Description
1.	Contact Gaps
2.	Thermal Age (2)
3.	Contact Gaps
4.	Normal Force (1) Deflection = 0.010 " Expected Force at Max Deflection = 100 g

Group 3
HPTS-6-S-D-VT
928-6000-A8H
8 Contacts Minimum
Samtec VT To Amphenol RA W/o Thermals

Step	Description
1.	Contact Gaps
2.	Normal Force (1) Deflection = 0.010 " Expected Force at Max Deflection = 100 g

Group 4
HPTS-6-S-D-VT
928-6000-A8H
8 Contacts Minimum
Samtec VT To Amphenol RA W/ Thermals

Step	Description
1.	Contact Gaps
2.	Thermal Age (2)
3.	Contact Gaps
4.	Normal Force (1) Deflection = 0.010 " Expected Force at Max Deflection = 100 g

Group 5
968-6200-A1H
SUB-HPTT-6-S-6-6-6-6-D-RA
8 Contacts Minimum
Amphenol VT To Samtec RA W/o Thermals

Step	Description
1.	Contact Gaps
2.	Normal Force (1) Deflection = 0.010 " Expected Force at Max Deflection = 100 g

Group 6
968-6200-A1H
SUB-HPTT-6-S-6-6-6-6-D-RA
8 Contacts Minimum
Amphenol VT To Samtec RA W/ Thermals

Step	Description
1.	Contact Gaps
2.	Thermal Age (2)
3.	Contact Gaps
4.	Normal Force (1) Deflection = 0.010 " Expected Force at Max Deflection = 100 g

Group 7
968-6200-A1H
928-6000-A8H
8 Contacts Minimum
Amphenol VT To Amphenol RA W/o Thermals

Step	Description
1.	Contact Gaps
2.	Normal Force (1) Deflection = 0.010 " Expected Force at Max Deflection = 100 g

Group 8
968-6200-A1H
928-6000-A8H
8 Contacts Minimum
Amphenol To Amphenol RA W/ Thermals

Step	Description
1.	Contact Gaps
2.	Thermal Age (2)
3.	Contact Gaps
4.	Normal Force (1) Deflection = 0.010 " Expected Force at Max Deflection = 100 g

(1) Normal Force = EIA-364-04

(2) Thermal Age = EIA-364-17
Test Condition = 4 (105°C)
Time Condition = B (250 Hours)

FLOWCHARTS Continued

IR/DWV

Pin-to-Pin

Group 1
HPTS-6-S-D-VT
SUB-HPTT-6-S-6-6-6-6-D-RA
2 Assemblies
Samtec VT To Samtec RA

Step	Description
1.	DWV Breakdown (3)

Group 2
HPTS-6-S-D-VT
928-6000-A8H
2 Assemblies
Samtec VT To Amphenol RA

Step	Description
1.	DWV Breakdown (3)

Group 3
968-6200-A1H
SUB-HPTT-6-S-6-6-6-6-D-RA
2 Assemblies
Amphenol VT To Samtec RA

Step	Description
1.	DWV Breakdown (3)

Group 4
HPTS-6-S-D-VT
2 Assemblies
Samtec VT Only

Step	Description
1.	DWV Breakdown (3)

Group 5
SUB-HPTT-6-S-6-6-6-6-D-RA
2 Assemblies
Samtec RA Only

Step	Description
1.	DWV Breakdown (2)

Group 6
HPTS-6-S-D-VT
SUB-HPTT-6-S-6-6-6-6-D-RA
2 Assemblies
Samtec VT To Samtec RA

Step	Description
1.	IR (5)
2.	DWV at Test Voltage (1)
3.	Thermal Shock (6)
4.	IR (5)
5.	DWV at Test Voltage (1)
6.	Humidity (4)
7.	IR (5)
8.	DWV at Test Voltage (1)

Group 7
HPTS-6-S-D-VT
928-6000-A8H
2 Assemblies
Samtec VT To Amphenol RA

Step	Description
1.	IR (5)
2.	DWV at Test Voltage (1)
3.	Thermal Shock (6)
4.	IR (5)
5.	DWV at Test Voltage (1)
6.	Humidity (4)
7.	IR (5)
8.	DWV at Test Voltage (1)

Group 8
968-6200-A1H
SUB-HPTT-6-S-6-6-6-6-D-RA
2 Assemblies
Amphenol VT To Samtec RA

Step	Description
1.	IR (5)
2.	DWV at Test Voltage (1)
3.	Thermal Shock (6)
4.	IR (5)
5.	DWV at Test Voltage (1)
6.	Humidity (4)
7.	IR (5)
8.	DWV at Test Voltage (1)

Group 17
968-6200-A1H
928-6000-A8H
2 Assemblies
Amphenol VT To Amphenol RA

Step	Description
1.	DWV Breakdown (3)

Group 18
968-6200-A1H
2 Assemblies
Amphenol VT Only

Step	Description
1.	DWV Breakdown (3)

Group 19
928-6000-A8H
2 Assemblies
Amphenol RA Only

Step	Description
1.	DWV Breakdown (2)

Group 20
968-6200-A1H
928-6000-A8H
2 Assemblies
Amphenol VT To Amphenol RA

Step	Description
1.	IR (5)
2.	DWV at Test Voltage (1)
3.	Thermal Shock (6)
4.	IR (5)
5.	DWV at Test Voltage (1)
6.	Humidity (4)
7.	IR (5)
8.	DWV at Test Voltage (1)

Row-to-Row

Group 9
HPTS-6-S-D-VT
SUB-HPTT-6-S-6-6-6-6-D-RA
2 Assemblies
Samtec VT To Samtec RA

Step	Description
1.	DWV Breakdown (3)

Group 10
HPTS-6-S-D-VT
928-6000-A8H
2 Assemblies
Samtec VT To Amphenol RA

Step	Description
1.	DWV Breakdown (3)

Group 11
968-6200-A1H
SUB-HPTT-6-S-6-6-6-6-D-RA
2 Assemblies
Amphenol VT To Samtec RA

Step	Description
1.	DWV Breakdown (3)

Group 12
HPTS-6-S-D-VT
2 Assemblies
Samtec VT Only

Step	Description
1.	DWV Breakdown (3)

FLOWCHARTS Continued

Group 13
SUB-HPTT-6-S-6-6-6-6-D-RA
2 Assemblies
Samtec RA Only

Step	Description
1.	DWV Breakdown(2)

Group 14
HPTS-6-S-D-VT
SUB-HPTT-6-S-6-6-6-6-D-RA
2 Assemblies
Samtec VT To Samtec RA

Step	Description
1.	IR(5)
2.	DWV at Test Voltage(1)
3.	Thermal Shock(6)
4.	IR(5)
5.	DWV at Test Voltage(1)
6.	Humidity(4)
7.	IR(5)
8.	DWV at Test Voltage(1)

Group 15
HPTS-6-S-D-VT
928-6000-A8H
2 Assemblies
Samtec VT To Amphenol RA

Step	Description
1.	IR(5)
2.	DWV at Test Voltage(1)
3.	Thermal Shock(6)
4.	IR(5)
5.	DWV at Test Voltage(1)
6.	Humidity(4)
7.	IR(5)
8.	DWV at Test Voltage(1)

Group 16
968-6200-A1H
SUB-HPTT-6-S-6-6-6-6-D-RA
2 Assemblies
Amphenol VT To Samtec RA

Step	Description
1.	IR(5)
2.	DWV at Test Voltage(1)
3.	Thermal Shock(6)
4.	IR(5)
5.	DWV at Test Voltage(1)
6.	Humidity(4)
7.	IR(5)
8.	DWV at Test Voltage(1)

Group 21
968-6200-A1H
928-6000-A8H
2 Assemblies
Amphenol VT To Amphenol RA

Step	Description
1.	DWV Breakdown(3)

Group 22
968-6200-A1H
2 Assemblies
Amphenol VT Only

Step	Description
1.	DWV Breakdown(3)

Group 23
928-6000-A8H
2 Assemblies
Amphenol RA Only

Step	Description
1.	DWV Breakdown(2)

Group 24
968-6200-A1H
928-6000-A8H
2 Assemblies
Amphenol VT To Amphenol RA

Step	Description
1.	IR(5)
2.	DWV at Test Voltage(1)
3.	Thermal Shock(6)
4.	IR(5)
5.	DWV at Test Voltage(1)
6.	Humidity(4)
7.	IR(5)
8.	DWV at Test Voltage(1)

(1) DWV at Test Voltage = EIA-364-20
Test Condition = 1 (Sea Level)
DWV test voltage is equal to 75% of the lowest breakdown voltage
Test voltage applied for 60 seconds

(2) DWV Breakdown = EIA-364-20
Test Condition = 1 (Sea Level)
DWV test voltage is equal to 75% of the lowest breakdown voltage
Test voltage applied for 60 seconds

(3) DWV Breakdown = EIA-364-20
Test Condition = 1 (Sea Level)
DWV test voltage is equal to 75% of the lowest breakdown voltage
Test voltage applied for 60 seconds

(4) Humidity = EIA-364-31
Test Condition = B (240 Hours)
Test Method = III (+25°C to +65°C @ 90% RH to 98% RH)
Test Exceptions: ambient pre-condition and delete steps 7a and 7b

(5) IR = EIA-364-21
Test Condition = 500 Vdc, 2 Minutes Max

(6) Thermal Shock = EIA-364-32
Exposure Time at Temperature Extremes =1/2 Hour
Method A, Test Condition = I (-55°C to +85°C)
Test Duration = A-3 (100 Cycles)

FLOWCHARTS Continued

Current Carrying Capacity

Group 1
HPTS-6-S-D-VT
SUB-HPTT-6-S-6-6-6-6-D-RA
2 Pins Powered
Samtec VT To Samtec RA

Step	Description
1.	CCC (1) Number of Positions = 1 Rows = 2

Group 2
HPTS-6-S-D-VT
928-6000-A8H
2 Pins Powered
Samtec VT To Amphenol RA

Step	Description
1.	CCC (1) Number of Positions = 1 Rows = 2

Group 3
968-6200-A1H
SUB-HPTT-6-S-6-6-6-6-D-RA
2 Pins Powered
Amphenol VT To Samtec RA

Step	Description
1.	CCC (1) Number of Positions = 1 Rows = 2

Group 4
HPTS-6-S-D-VT
SUB-HPTT-6-S-6-6-6-6-D-RA
8 Pins Powered
Samtec VT To Samtec RA

Step	Description
1.	CCC (1) Number of Positions = 4 Rows = 2

Group 5
HPTS-6-S-D-VT
928-6000-A8H
8 Pins Powered
Samtec VT To Amphenol RA

Step	Description
1.	CCC (1) Number of Positions = 4 Rows = 2

Group 6
968-6200-A1H
SUB-HPTT-6-S-6-6-6-6-D-RA
8 Pins Powered
Amphenol VT To Samtec RA

Step	Description
1.	CCC (1) Number of Positions = 4 Rows = 2

Group 7
968-6200-A1H
928-6000-A8H
2 Pins Powered
Amphenol VT To Amphenol RA

Step	Description
1.	CCC (1) Rows = 2 Number of Positions = 1

Group 8
968-6200-A1H
928-6000-A8H
8 Pins Powered
Amphenol VT To Amphenol RA

Step	Description
1.	CCC (1) Rows = 2 Number of Positions = 4

(1) CCC = EIA-364-70
Method 2, Temperature Rise Versus Current Curve
(TIN PLATING) - Tabulate calculated current at RT,65°C, 75°C and 95°C after derating 20% and based on 105°C
(GOLD PLATING) - Tabulate calculated current at RT,85°C, 95°C and 115°C after derating 20% and based on 125°C

ATTRIBUTE DEFINITIONS

The following is a brief, simplified description of attributes.

THERMAL SHOCK:

1) EIA-364-32, *Thermal Shock (Temperature Cycling) Test Procedure for Electrical Connectors.*
2) Test Condition 1: -55°C to +85°C
3) Test Time: ½ hour dwell at each temperature extreme
4) Number of Cycles: 100
5) All test samples are pre-conditioned at ambient.
6) All test samples are exposed to environmental stressing in the mated condition.

THERMAL:

1) EIA-364-17, *Temperature Life with or without Electrical Load Test Procedure for Electrical Connectors.*
2) Test Condition 4 at 105° C
3) Test Time Condition B for 250 hours.
4) All test samples are pre-conditioned at ambient.
5) All test samples are exposed to environmental stressing in the mated condition.

HUMIDITY:

1) Reference document: EIA-364-31, *Humidity Test Procedure for Electrical Connectors.*
2) Test Condition B, 240 Hours.
3) Method III, +25° C to + 65° C, 90% to 98% Relative Humidity excluding sub-cycles 7a and 7b.
4) All samples are pre-conditioned at ambient.
5) All test samples are exposed to environmental stressing in the mated condition.

LLCR:

1) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
2) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
3) The following guidelines are used to categorize the changes in LLCR as a result from stressing.
    a. <= +1.0 mOhms: ----------Stable
    b. +1.1 to +2.0 mOhms: ----------Minor
    c. +2.1 to +5.0 mOhms: ----------Acceptable
    d. +5.1 to +15.0 mOhms:----------Marginal
    e. +15.1 to +1000 mOhms: ----------Unstable
    f. >+1000 mOhms:----------Open Failure

ATTRIBUTE DEFINITIONS Continued

The following is a brief, simplified description of attributes.

TEMPERATURE RISE (Current Carrying Capacity, CCC):

1) EIA-364-70, *Temperature Rise versus Current Test Procedure for Electrical Connectors and Sockets*.
2) When current passes through a contact, the temperature of the contact increases as a result of I^2R (resistive) heating.
3) The number of contacts being investigated plays a significant part in power dissipation and therefore temperature rise.
4) The size of the temperature probe can affect the measured temperature.
5) Copper traces on PC boards will contribute to temperature rise:
    a. Self-heating (resistive)
    b. Reduction in heat sink capacity affecting the heated contacts.
6) A de-rating curve, usually 20%, is calculated.
7) Calculated de-rated currents at four temperature points are reported:
    a. Ambient
    b. 85^{o} C
    c. 95^{o} C
    d. 115^{o} C
8) Typically, neighboring contacts (in close proximity to maximize heat buildup) are energized.
9) The thermocouple (or temperature measuring probe) will be positioned at a location to sense the maximum temperature in the vicinity of the heat generation area.
10) A computer program, *TR 803.exe*, ensures accurate stability for data acquisition.
11) Hook-up wire cross section is larger than the cross section of any connector leads/PC board traces, jumpers, etc.
12) Hook-up wire length is longer than the minimum specified in the referencing standard.

ATTRIBUTE DEFINITIONS Continued

The following is a brief, simplified description of attributes.

GAS TIGHT:

To provide method for evaluating the ability of the contacting surfaces in preventing penetration of harsh vapors which might lead to oxide formation that may degrade the electrical performance of the contact system.

1) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
2) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
3) The following guidelines are used to categorize the changes in LLCR as a result from stressing.
    a. <= +1.0 mOhms: ----------Stable
    b. +1.1 to +2.0 mOhms: ----------Minor
    c. +2.1 to +5.0 mOhms: ----------Acceptable
    d. +5.1 to +15.0 mOhms:----------Marginal
    e. +15.1 to +1000 mOhms: ----------Unstable
    f. >+1000 mOhms:----------Open Failure
4) Procedure:
    a. Reference document: EIA-364-36, *Test Procedure for Determination of Gas-Tight Characteristics for Electrical Connectors, Sockets and/or Contact Systems*.
    b. Test Conditions:
        i. Class II--- Mated pairs of contacts assembled to their plastic housings.
        ii. Reagent grade Nitric Acid shall be used of sufficient volume to saturate the test chamber.
        iii. The ratio of the volume of the test chamber to the surface area of the acid shall be 10:1.
        iv. The chamber shall be saturated with the vapor for at least 15 minutes before samples are added.
        v. Exposure time, 55 to 65 minutes.
        vi. The samples shall be no closer to the chamber walls than 1 inch and no closer to the surface of the acid than 3 inches.
        vii. The samples shall be dried after exposure for a minimum of 1 hour.
        viii. Drying temperature 50^{o} C
        ix. The final LLCR shall be conducted within 1 hour after drying.

NORMAL FORCE (FOR CONTACTS TESTED IN THE HOUSING):

1) Reference document: EIA-364-04, *Normal Force Test Procedure for Electrical Connectors*.
2) The contacts shall be tested in the connector housing.
3) If necessary, a “window” shall be made in the connector body to allow a probe to engage and deflect the contact at the same attitude and distance (plus 0.05 mm [0.002”]) as would occur in actual use.
4) The connector housing shall be placed in a holding fixture that does not interfere with or otherwise influence the contact force or deflection.
5) Said holding fixture shall be mounted on a floating, adjustable, X-Y table on the base of the Dillon TC^2, computer controlled test stand with a deflection measurement system accuracy of 5.0 µm (0.0002”).
6) The nominal deflection rate shall be 5 mm (0.2”)/minute.
7) Unless otherwise noted a minimum of five contacts shall be tested.
8) The force/deflection characteristic to load and unload each contact shall be repeated five times.
9) The system shall utilize the TC^2 software in order to acquire and record the test data.
10) The permanent set of each contact shall be measured within the TC^2 software.
11) The acquired data shall be graphed with the deflection data on the X-axis and the force data on the Y-axis and a printout will be stored with the Tracking Code paperwork.

ATTRIBUTE DEFINITIONS Continued

The following is a brief, simplified description of attributes.

INSULATION RESISTANCE (IR):

To determine the resistance of insulation materials to leakage of current through or on the surface of these materials when a DC potential is applied.

1) PROCEDURE:
    a. Reference document: EIA-364-21, *Insulation Resistance Test Procedure for Electrical Connectors*.
    b. Test Conditions:
        i. Between Adjacent Contacts or Signal-to-Ground
        ii. Electrification Time 2.0 minutes
        iii. Test Voltage (500 VDC) corresponds to calibration settings for measuring resistances.
2) MEASUREMENTS:
3) When the specified test voltage is applied (VDC), the insulation resistance shall not be less than 5000 megohms.

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

To determine if the sockets can operate at its rated voltage and withstand momentary over potentials due to switching, surges, and other similar phenomenon. Separate samples are used to evaluate the effect of environmental stresses so not to influence the readings from arcing that occurs during the measurement process.

1) PROCEDURE:
    a. Reference document: EIA-364-20, *Withstanding Voltage Test Procedure for Electrical Connectors*.
    b. Test Conditions:
        i. Between Adjacent Contacts or Signal-to-Ground
        ii. Barometric Test Condition 1
        iii. Rate of Application 500 V/Sec
        iv. Test Voltage (VAC) until breakdown occurs.
2) MEASUREMENTS/CALCULATIONS
    a. The breakdown voltage shall be measured and recorded.
    b. The dielectric withstanding voltage shall be recorded as 75% of the minimum breakdown voltage.
    c. The working voltage shall be recorded as one-third (1/3) of the dielectric withstanding voltage (one-fourth of the breakdown voltage).

RESULTS

Temperature Rise, CCC at a 20% de-rating

HPTS-6-S-D-VT\SUB-HPTT-6-S-6-6-6-6-D-RA

- **CCC for a 30°C Temperature Rise----------13.7 A per contact with 2 contacts (2x1) powered.**
- **CCC for a 30°C Temperature Rise----------7.9 A per contact with 8 contacts (2x4) powered.**

HPTS-6-S-D-VT\968-6000-A8H

- **CCC for a 30°C Temperature Rise----------13.2 A per contact with 2 contacts (2x1) powered.**
- **CCC for a 30°C Temperature Rise----------7.9 A per contact with 8 contacts (2x4) powered.**

968-6200-A1H\SUB-HPTT-6-S-6-6-6-6-D-RA

- **CCC for a 30°C Temperature Rise----------13.1 A per contact with 2 contacts (2x1) powered.**
- **CCC for a 30°C Temperature Rise----------8.0 A per contact with 8 contacts (2x4) powered.**

968-6200-A1H\968-6000-A8H

- **CCC for a 30°C Temperature Rise----------13.3 A per contact with 2 contacts (2x1) powered.**
- **CCC for a 30°C Temperature Rise----------8.3 A per contact with 8 contacts (2x4) powered.**

Normal Force at 0.010-inch deflection

HPTS-6-S-D-VT\SUB-HPTT-6-S-6-6-6-6-D-RA

Long Pin

- **Initial**
  - **Min----------33.00 gf Set ----- 0.0000 in**
  - **Max ----------34.80 gf Set ----- 0.0004 in**
- **Thermal**
  - **Min----------21.20 gf Set----- 0.0001 in**
  - **Max ----------35.20 gf Set----- 0.0035 in**

Short Pin

- **Initial**
  - **Min----------52.30 gf Set ----- 0.0001 in**
  - **Max ----------59.40 gf Set ----- 0.0008 in**
- **Thermal**
  - **Min----------35.20 gf Set----- 0.0017 in**
  - **Max ----------45.10 gf Set----- 0.0038 in**

HPTS-6-S-D-VT\928-6000-A8H

Long Pin

- **Initial**
  - **Min----------33.00 gf Set ----- 0.0000 in**
  - **Max ----------34.80 gf Set ----- 0.0004 in**
- **Thermal**
  - **Min----------19.50 gf Set----- 0.0004 in**
  - **Max ----------34.20 gf Set----- 0.0045 in**

Short Pin

- **Initial**
  - **Min----------52.30 gf Set ----- 0.0001 in**
  - **Max ----------59.40 gf Set ----- 0.0008 in**
- **Thermal**
  - **Min----------33.30 gf Set----- 0.0019 in**
  - **Max ----------44.50 gf Set----- 0.0041 in**

RESULTS Continued

968-6200-A1H\SUB-HPTT-6-S-6-6-6-6-D-RA

Long Pin

- **Initial**
  - **Min ----------46.00 gf Set ----- 0.0000 in**
  - **Max ----------49.80 gf Set ----- 0.0003 in**
- **Thermal**
  - **Min ----------16.70 gf Set ----- 0.0041 in**
  - **Max ----------26.60 gf Set ----- 0.0062 in**

Short Pin

- **Initial**
  - **Min ----------70.70 gf Set ----- 0.0003 in**
  - **Max ----------77.90 gf Set ----- 0.0006 in**
- **Thermal**
  - **Min ----------21.30 gf Set ----- 0.0034 in**
  - **Max ----------48.00 gf Set ----- 0.0073 in**

968-6200-A1H\928-6000-A8H

Long Pin

- **Initial**
  - **Min ----------46.00 gf Set ----- 0.0000 in**
  - **Max ----------49.80 gf Set ----- 0.0003 in**
- **Thermal**
  - **Min ----------16.70 gf Set ----- 0.0041 in**
  - **Max ----------26.60 gf Set ----- 0.0062 in**

Short Pin

- **Initial**
  - **Min ----------70.70 gf Set ----- 0.0003 in**
  - **Max ----------77.90 gf Set ----- 0.0006 in**
- **Thermal**
  - **Min ----------21.30 gf Set ----- 0.0034 in**
  - **Max ----------48.00 gf Set ----- 0.0073 in**

RESULTS Continued

Insulation Resistance minimums, IR

HPTS-6-S-D-VT\SUB-HPTT-6-S-6-6-6-6-D-RA

Pin to Pin

- **Initial**
  - **Mated----------45000 Meg Ω ---------- Passed**
  - **Unmated ----------45000 Meg Ω ---------- Passed**
- **Thermal Shock**
  - **Mated----------45000 Meg Ω ---------- Passed**
  - **Unmated ----------45000Meg Ω ---------- Passed**
- **Humidity**
  - **Mated----------45000 Meg Ω ---------- Passed**
  - **Unmated ----------45000 Meg Ω ---------- Passed**

Row to Row

- **Initial**
  - **Mated----------45000 Meg Ω ---------- Passed**
  - **Unmated ----------45000 Meg Ω ---------- Passed**
- **Thermal Shock**
  - **Mated----------45000 Meg Ω ---------- Passed**
  - **Unmated ----------45000 Meg Ω ---------- Passed**
- **Humidity**
  - **Mated----------45000 Meg Ω ---------- Passed**
  - **Unmated ----------45000 Meg Ω ---------- Passed**

HPTS-6-S-D-VT\928-6000-A8H

Pin to Pin

- **Initial**
  - **Mated----------45000 Meg Ω ---------- Passed**
  - **Unmated ----------45000 Meg Ω ---------- Passed**
- **Thermal Shock**
  - **Mated----------45000 Meg Ω ---------- Passed**
  - **Unmated ----------45000Meg Ω ---------- Passed**
- **Humidity**
  - **Mated----------45000 Meg Ω ---------- Passed**
  - **Unmated ----------45000 Meg Ω ---------- Passed**

Row to Row

- **Initial**
  - **Mated----------45000 Meg Ω ---------- Passed**
  - **Unmated ----------45000 Meg Ω ---------- Passed**
- **Thermal Shock**
  - **Mated----------45000 Meg Ω ---------- Passed**
  - **Unmated ----------45000 Meg Ω ---------- Passed**
- **Humidity**
  - **Mated----------45000 Meg Ω ---------- Passed**
  - **Unmated ----------45000 Meg Ω ---------- Passed**

RESULTS Continued

968-6200-A1H\SUB-HPTT-6-S-6-6-6-6-D-RA

Pin to Pin

- **Initial**
  - **Mated ---------- 45000 Meg Ω ---------- Passed**
  - **Unmated ---------- 45000 Meg Ω ---------- Passed**
- **Thermal Shock**
  - **Mated ---------- 45000 Meg Ω ---------- Passed**
  - **Unmated ---------- 45000Meg Ω ---------- Passed**
- **Humidity**
  - **Mated ---------- 45000 Meg Ω ---------- Passed**
  - **Unmated ---------- 45000 Meg Ω ---------- Passed**

Row to Row

- **Initial**
  - **Mated ---------- 45000 Meg Ω ---------- Passed**
  - **Unmated ---------- 45000 Meg Ω ---------- Passed**
- **Thermal Shock**
  - **Mated ---------- 45000 Meg Ω ---------- Passed**
  - **Unmated ---------- 45000 Meg Ω ---------- Passed**
- **Humidity**
  - **Mated ---------- 45000 Meg Ω ---------- Passed**
  - **Unmated ---------- 45000 Meg Ω ---------- Passed**

968-6200-A1H\928-6000-A8H

Pin to Pin

- **Initial**
  - **Mated ---------- 45000 Meg Ω ---------- Passed**
  - **Unmated ---------- 45000 Meg Ω ---------- Passed**
- **Thermal Shock**
  - **Mated ---------- 45000 Meg Ω ---------- Passed**
  - **Unmated ---------- 45000Meg Ω ---------- Passed**
- **Humidity**
  - **Mated ---------- 45000 Meg Ω ---------- Passed**
  - **Unmated ---------- 45000 Meg Ω ---------- Passed**

Row to Row

- **Initial**
  - **Mated ---------- 12400 Meg Ω ---------- Passed**
  - **Unmated ---------- 45000 Meg Ω ---------- Passed**
- **Thermal Shock**
  - **Mated ---------- 45000 Meg Ω ---------- Passed**
  - **Unmated ---------- 45000 Meg Ω ---------- Passed**
- **Humidity**
  - **Mated ---------- 45000 Meg Ω ---------- Passed**
  - **Unmated ---------- 45000 Meg Ω ---------- Passed**

RESULTS Continued

Dielectric Withstanding Voltage minimums, DWV

HPTS-6-S-D-VT\SUB-HPTT-6-S-6-6-6-6-D-RA

- **Minimums**
  - **Breakdown Voltage ---------- 1412 VAC**
  - **Test Voltage ---------- 1060 VAC**
  - **Working Voltage ----------350 VAC**

Pin to Pin

- **Initial DWV ----------Passed**
- **Thermal DWV----------Passed**
- **Humidity DWV----------Passed**

Row to Row

- **Initial DWV ----------Passed**
- **Thermal DWV----------Passed**
- **Humidity DWV----------Passed**

HPTS-6-S-D-VT\928-6000-A8H

- **Minimums**
  - **Breakdown Voltage ---------- 1529 VAC**
  - **Test Voltage ---------- 1150 VAC**
  - **Working Voltage ----------380 VAC**

Pin to Pin

- **Initial DWV ----------Passed**
- **Thermal DWV----------Passed**
- **Humidity DWV----------Passed**

Row to Row

- **Initial DWV ----------Passed**
- **Thermal DWV----------Passed**
- **Humidity DWV----------Passed**

RESULTS Continued

968-6200-A1H\SUB-HPTT-6-S-6-6-6-6-D-RA

- **Minimums**
  - **Breakdown Voltage---------- 1347 VAC**
  - **Test Voltage ---------- 1010 VAC**
  - **Working Voltage ----------335 VAC**

Pin to Pin

- **Initial DWV ----------Passed**
- **Thermal DWV----------Passed**
- **Humidity DWV----------Passed**

Row to Row

- **Initial DWV ----------Passed**
- **Thermal DWV----------Passed**
- **Humidity DWV----------Passed**

968-6200-A1H\928-6000-A8H

- **Minimums**
  - **Breakdown Voltage---------- 1217 VAC**
  - **Test Voltage ----------913 VAC**
  - **Working Voltage ----------304 VAC**

Pin to Pin

- **Initial DWV ----------Passed**
- **Thermal DWV----------Passed**
- **Humidity DWV----------Passed**

Row to Row

- **Initial DWV ----------Passed**
- **Thermal DWV----------Passed**
- **Humidity DWV----------Passed**

RESULTS Continued

LLCR Gas Tight Group (64 LLCR test points)

HPTS-6-S-D-VT\SUB-HPTT-6-S-6-6-6-6-D-RA

- **Initial ---------- 2.28 mOhms Max**
- **Gas-Tight**
  - **<= +1.0 mOhms ---------- 64 Points ---------- Stable**
  - **+1.1 to +2.0 mOhms ---------- 0 Points ---------- Minor**
  - **+2.1 to +5.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+5.1 to +15.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+15.1 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

HPTS-6-S-D-VT\928-6000-A8H

- **Initial ---------- 1.82 mOhms Max**
- **Gas-Tight**
  - **<= +1.0 mOhms ---------- 64 Points ---------- Stable**
  - **+1.1 to +2.0 mOhms ---------- 0 Points ---------- Minor**
  - **+2.1 to +5.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+5.1 to +15.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+15.1 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

968-6200-A1H\SUB-HPTT-6-S-6-6-6-6-D-RA

- **Initial ---------- 1.89 mOhms Max**
- **Gas-Tight**
  - **<= +1.0 mOhms ---------- 64 Points ---------- Stable**
  - **+1.1 to +2.0 mOhms ---------- 0 Points ---------- Minor**
  - **+2.1 to +5.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+5.1 to +15.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+15.1 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

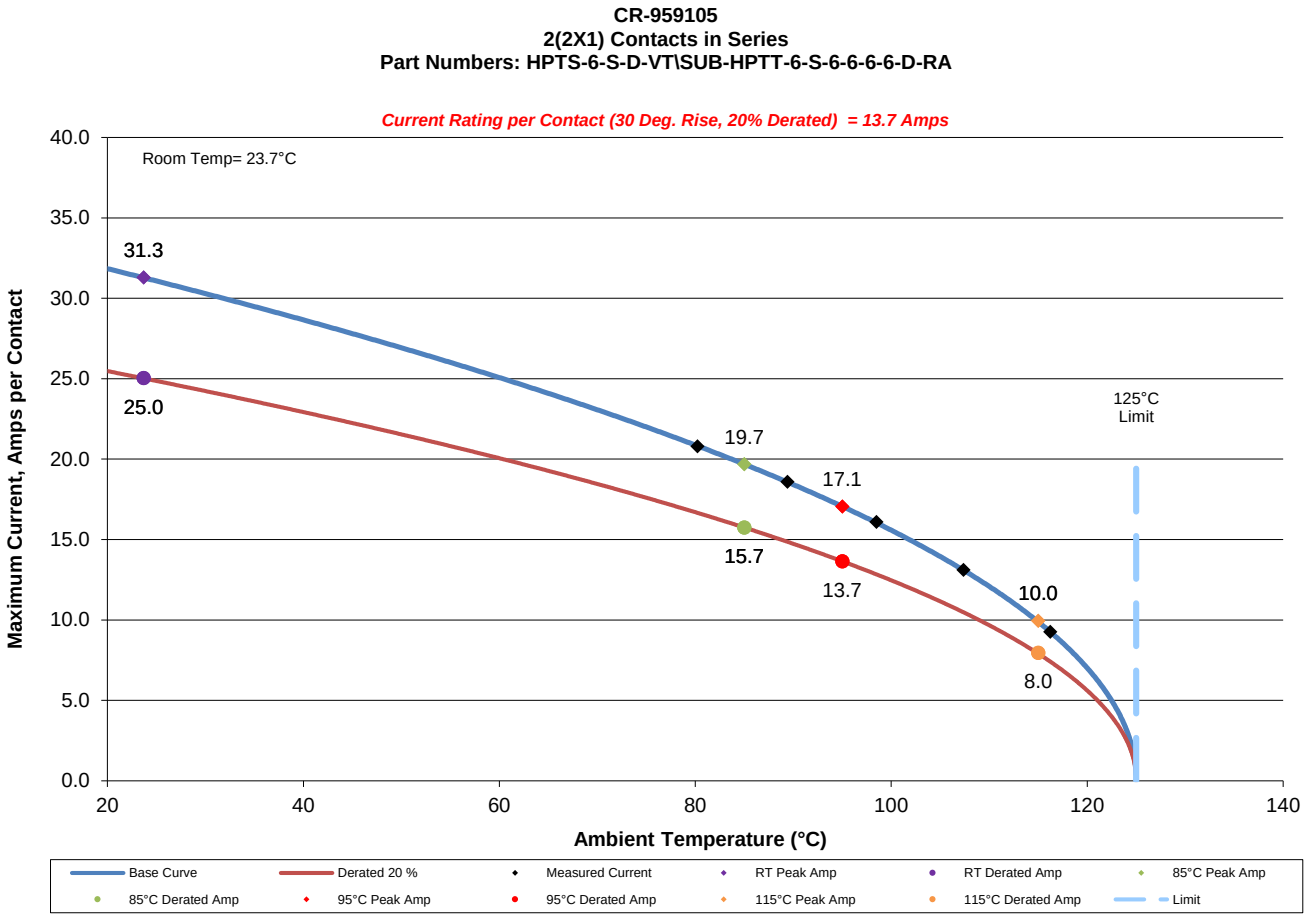
968-6200-A1H\928-6000-A8H

- **Initial ---------- 1.65 mOhms Max**
- **Gas-Tight**
  - **<= +1.0 mOhms ---------- 64 Points ---------- Stable**
  - **+1.1 to +2.0 mOhms ---------- 0 Points ---------- Minor**
  - **+2.1 to +5.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+5.1 to +15.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+15.1 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

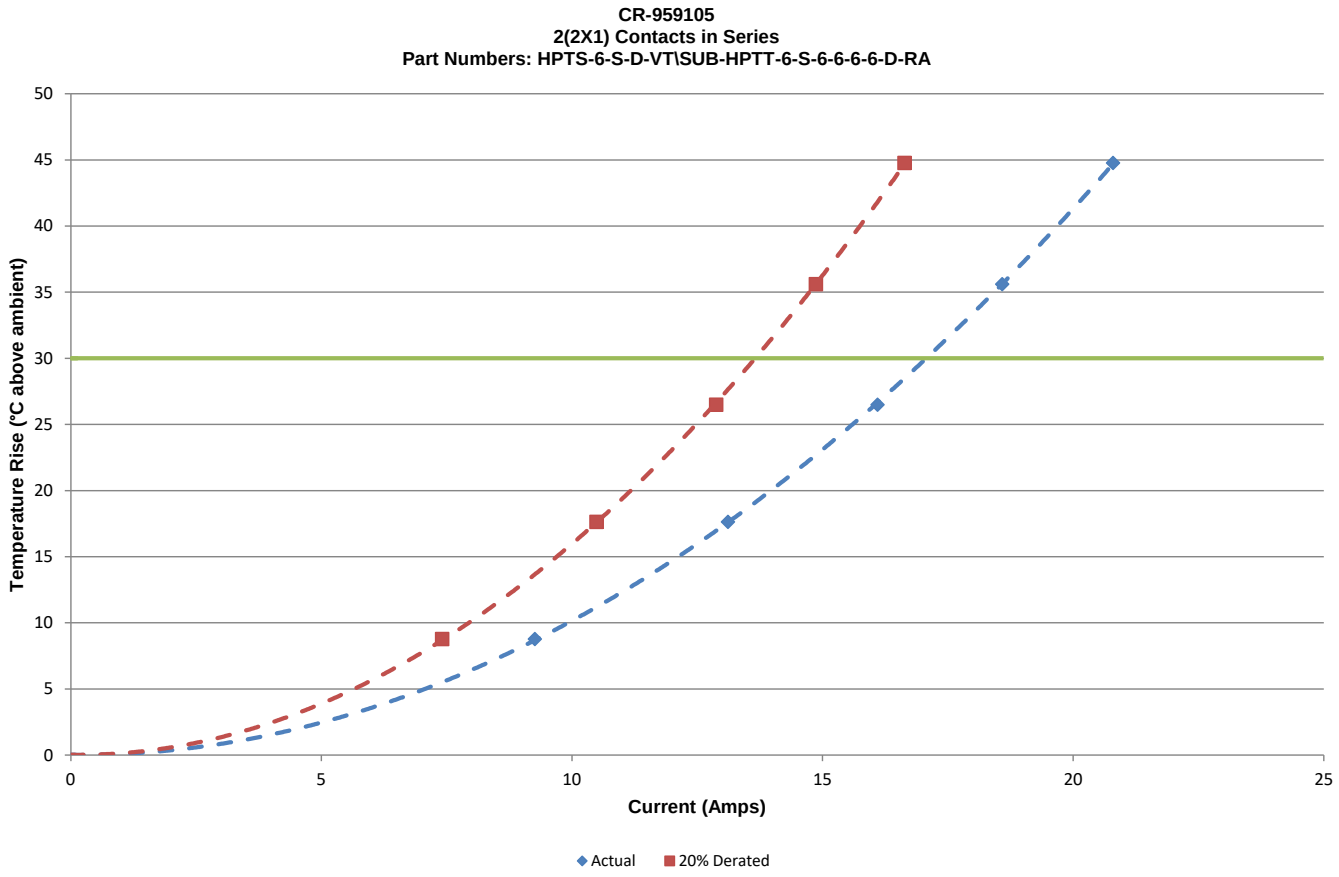
DATA SUMMARIES

TEMPERATURE RISE (Current Carrying Capacity, CCC):

1) High quality thermocouples whose temperature slopes track one another were used for temperature monitoring.
2) The thermocouples were placed at a location to sense the maximum temperature generated during testing.
3) Temperature readings recorded are those for which three successive readings, 15 minutes apart, differ less than 1° C (computer-controlled data acquisition).
4) Adjacent contacts were powered:
    a. Linear configuration with 2 adjacent conductors/contacts powered.

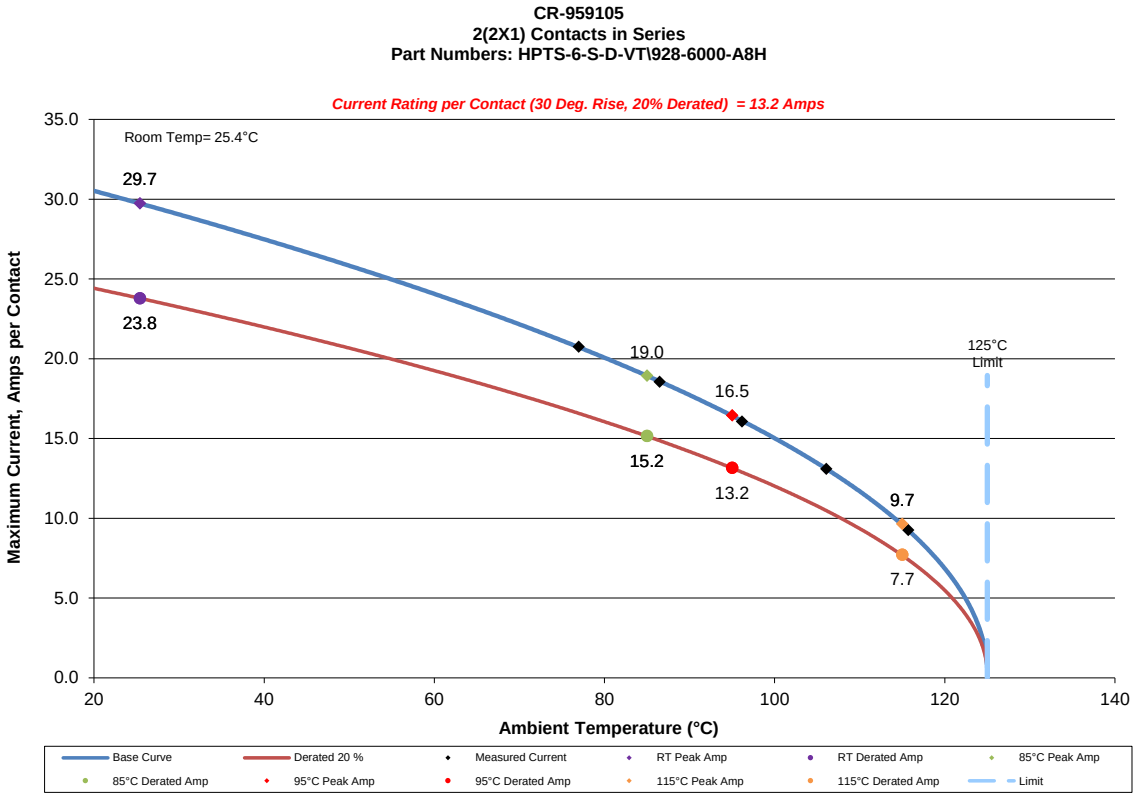


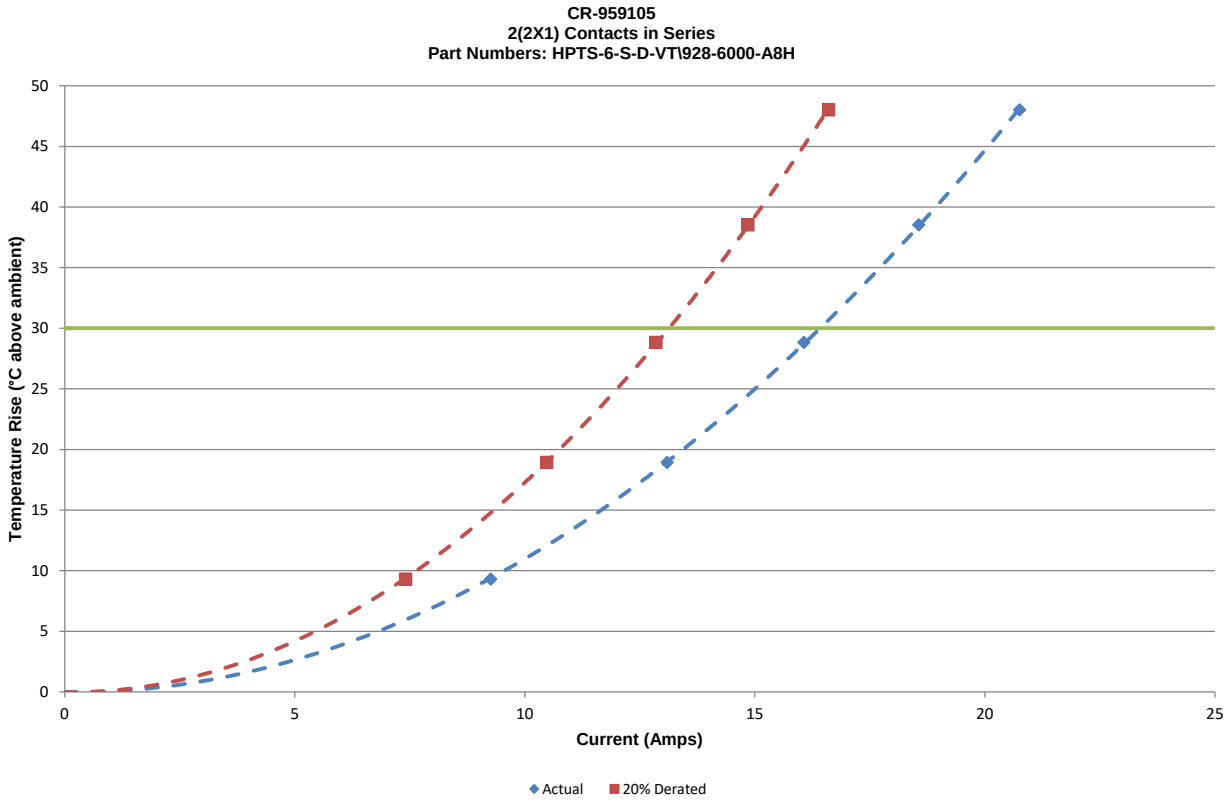
DATA SUMMARIES Continued



DATA SUMMARIES Continued

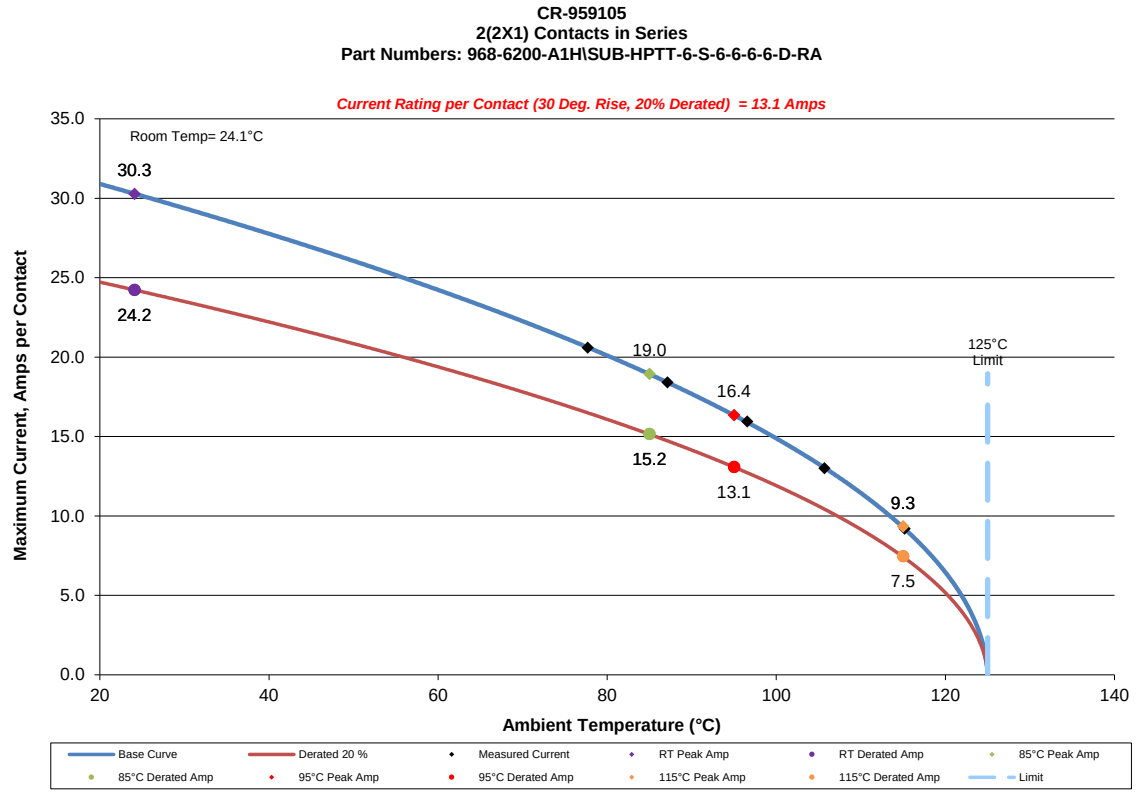
b. Linear configuration with 2 adjacent conductors/contacts powered.

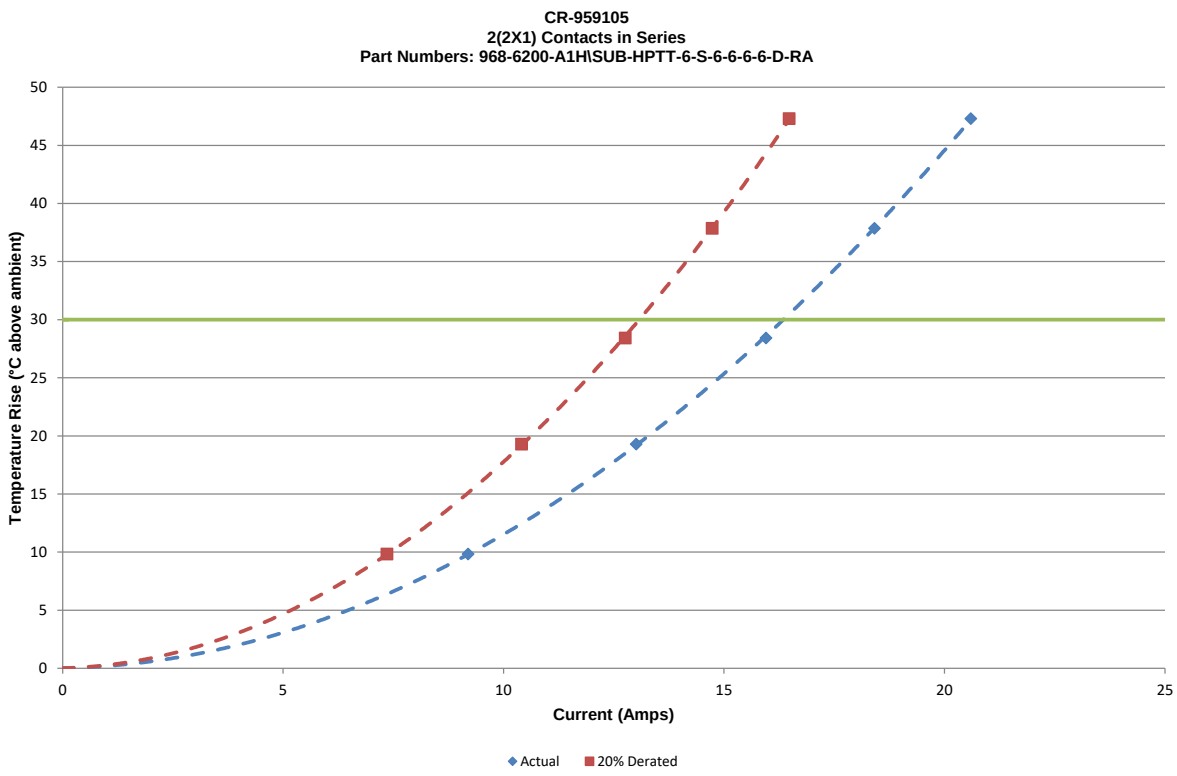




DATA SUMMARIES Continued

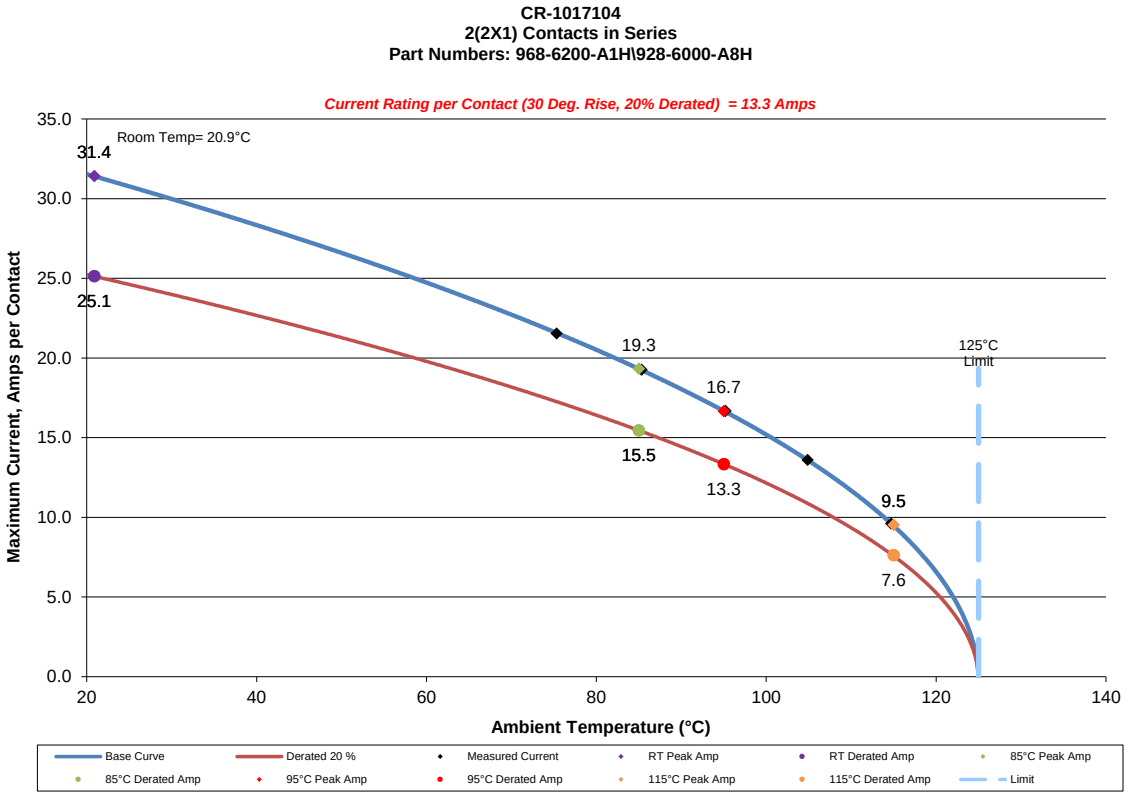
c. Linear configuration with 2 adjacent conductors/contacts powered.

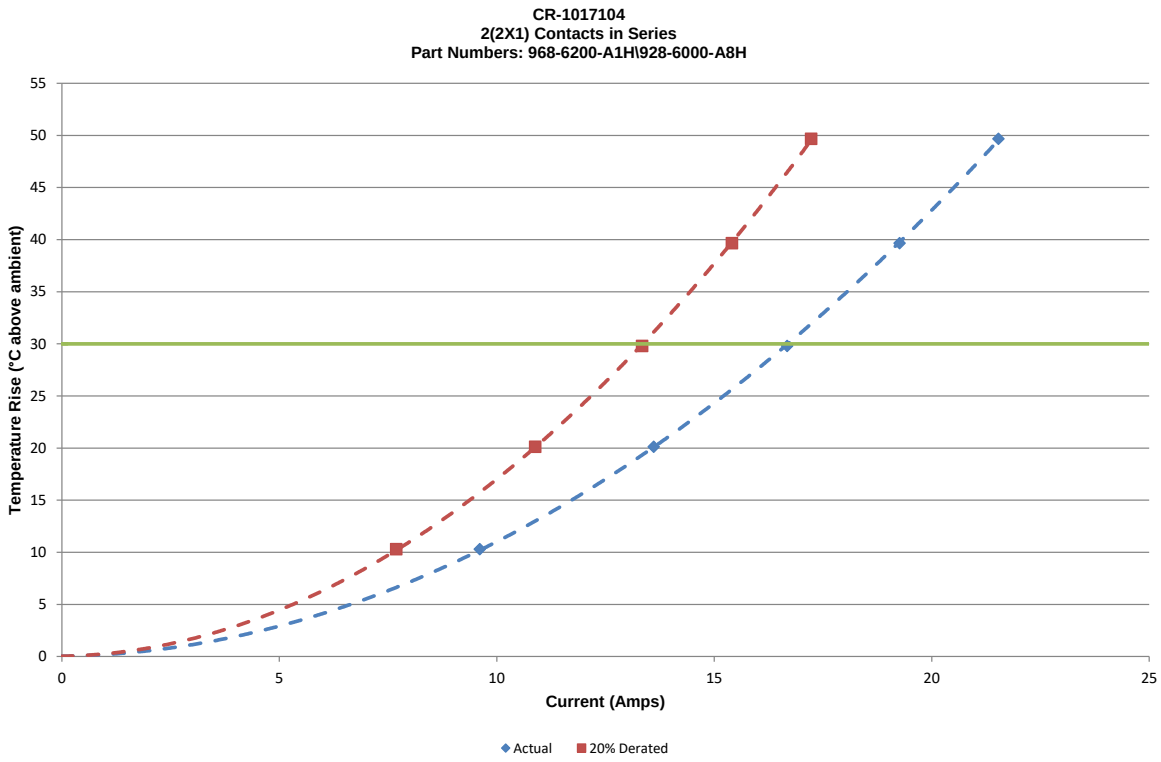




DATA SUMMARIES Continued

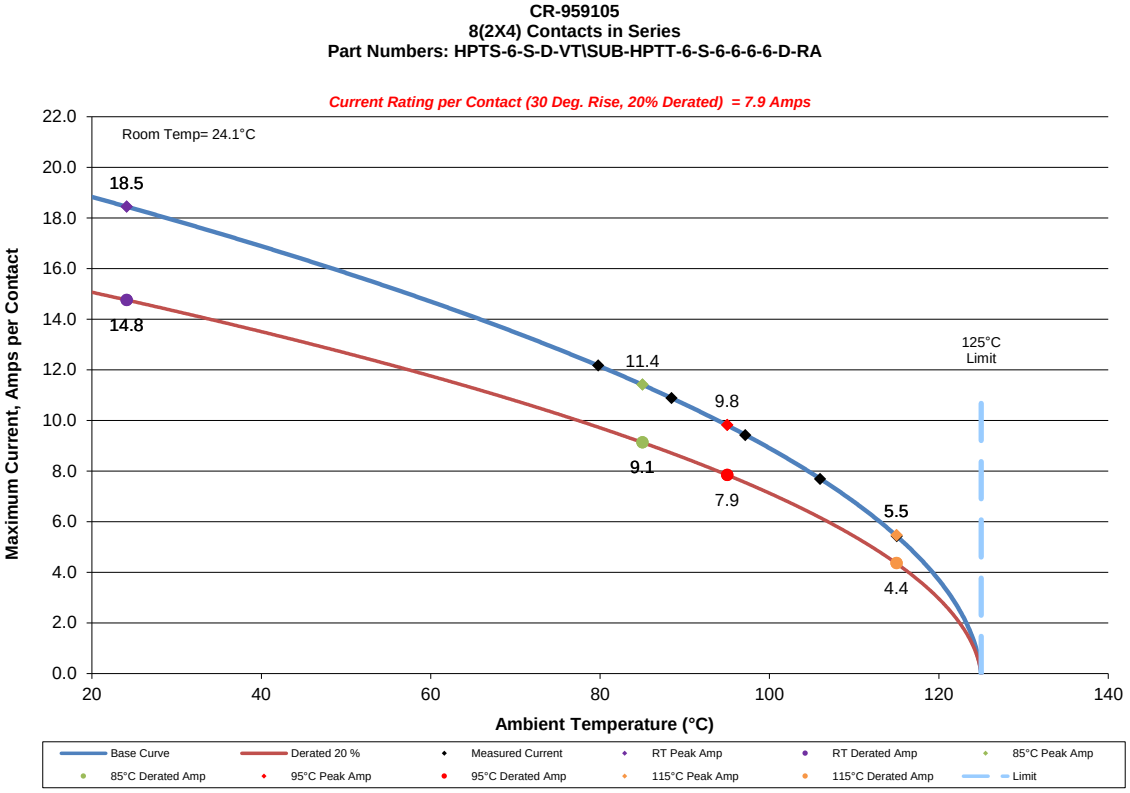
d. Linear configuration with 2 adjacent conductors/contacts powered.

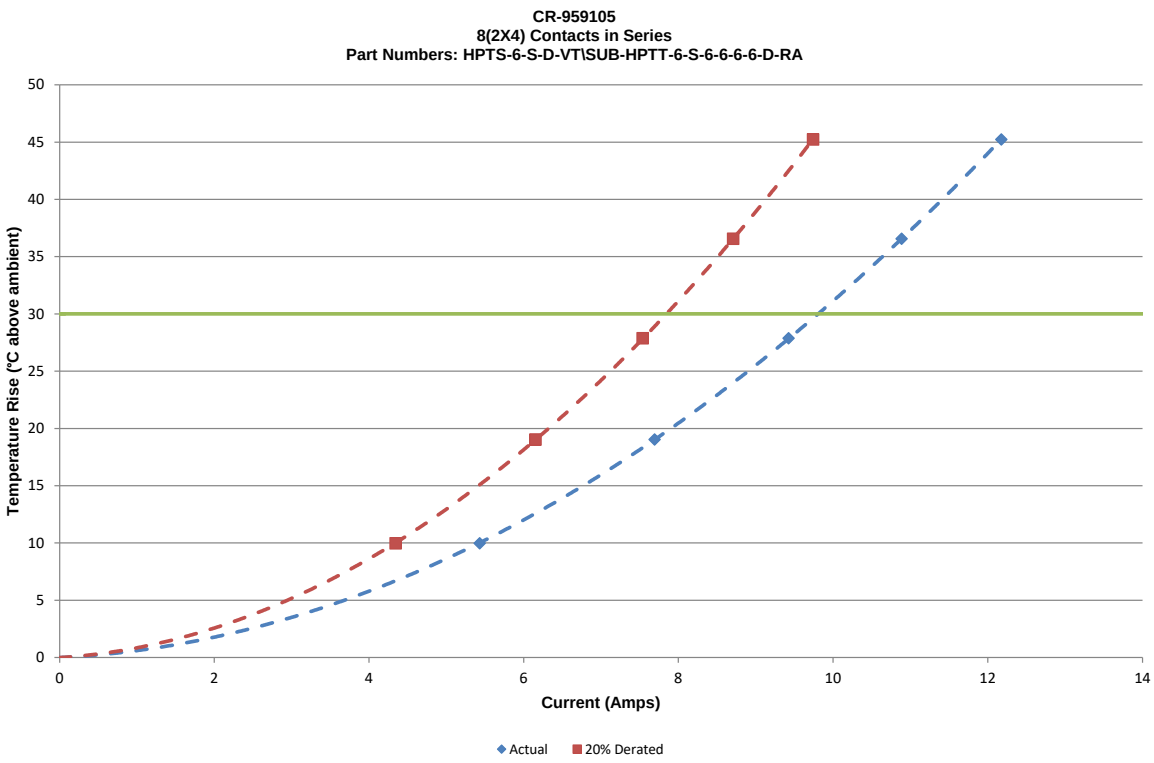




DATA SUMMARIES Continued

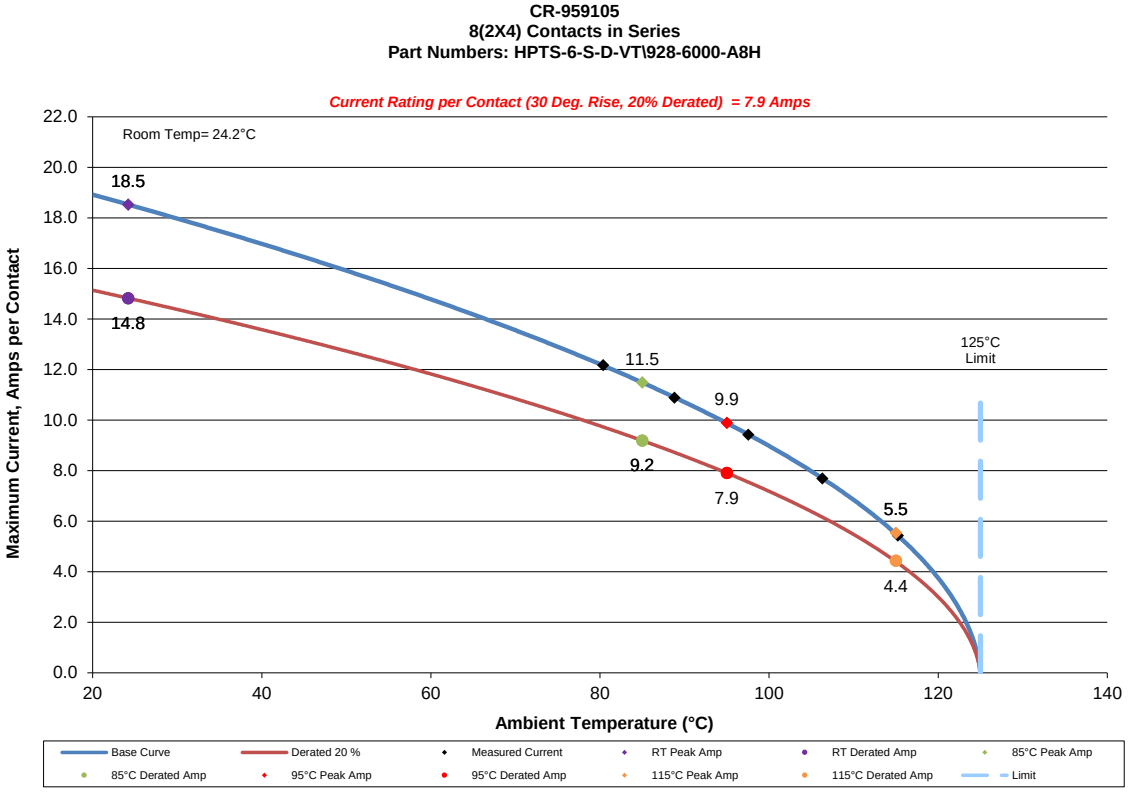
e. Linear configuration with 8 adjacent conductors/contacts powered.

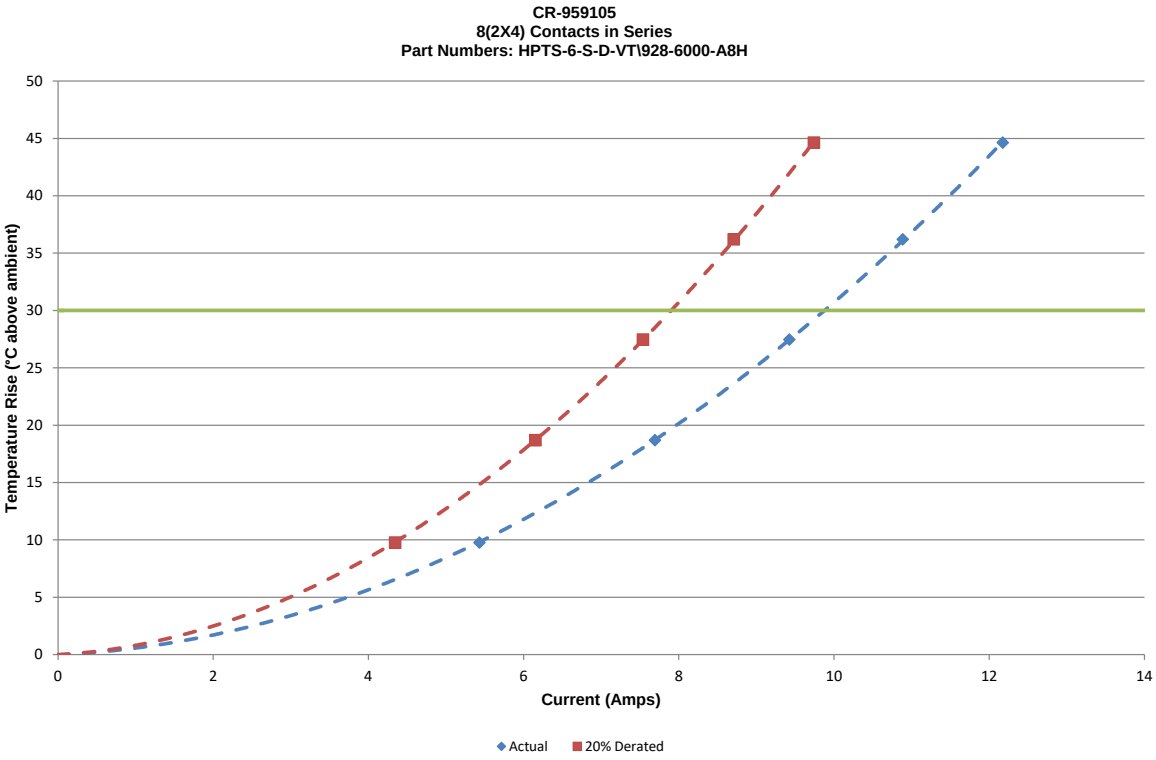




DATA SUMMARIES Continued

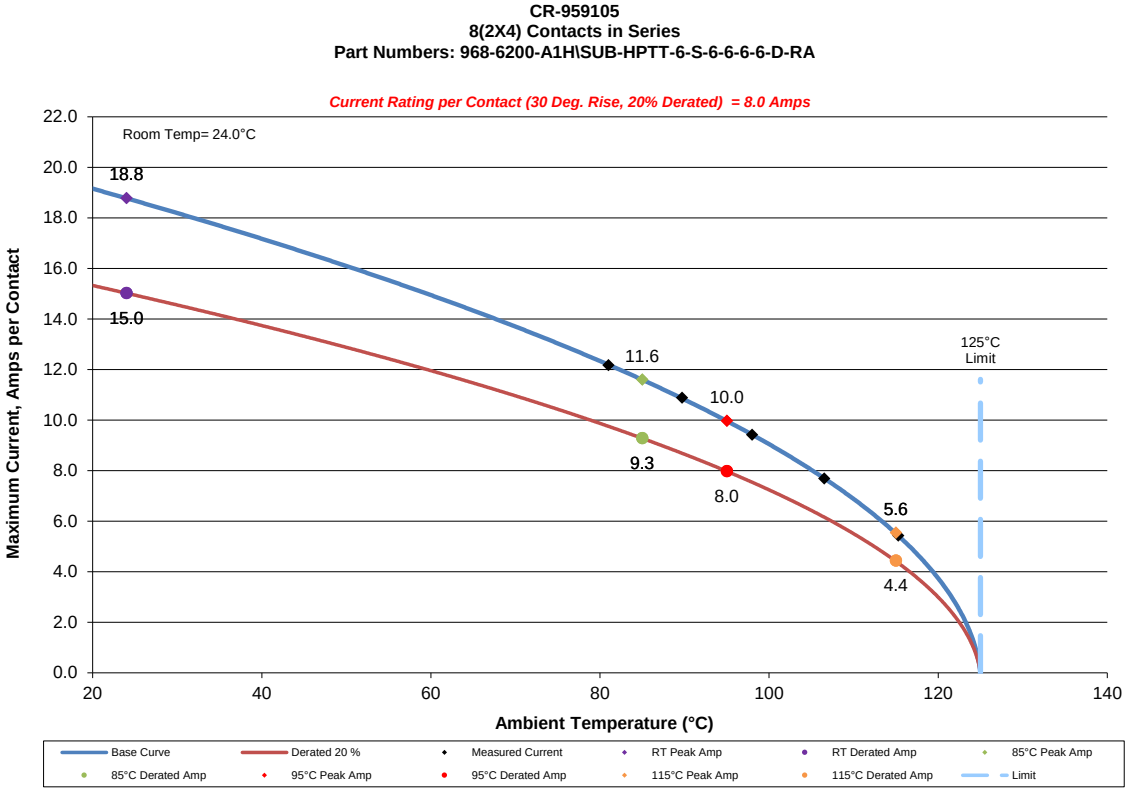
f. Linear configuration with 8 adjacent conductors/contacts powered.

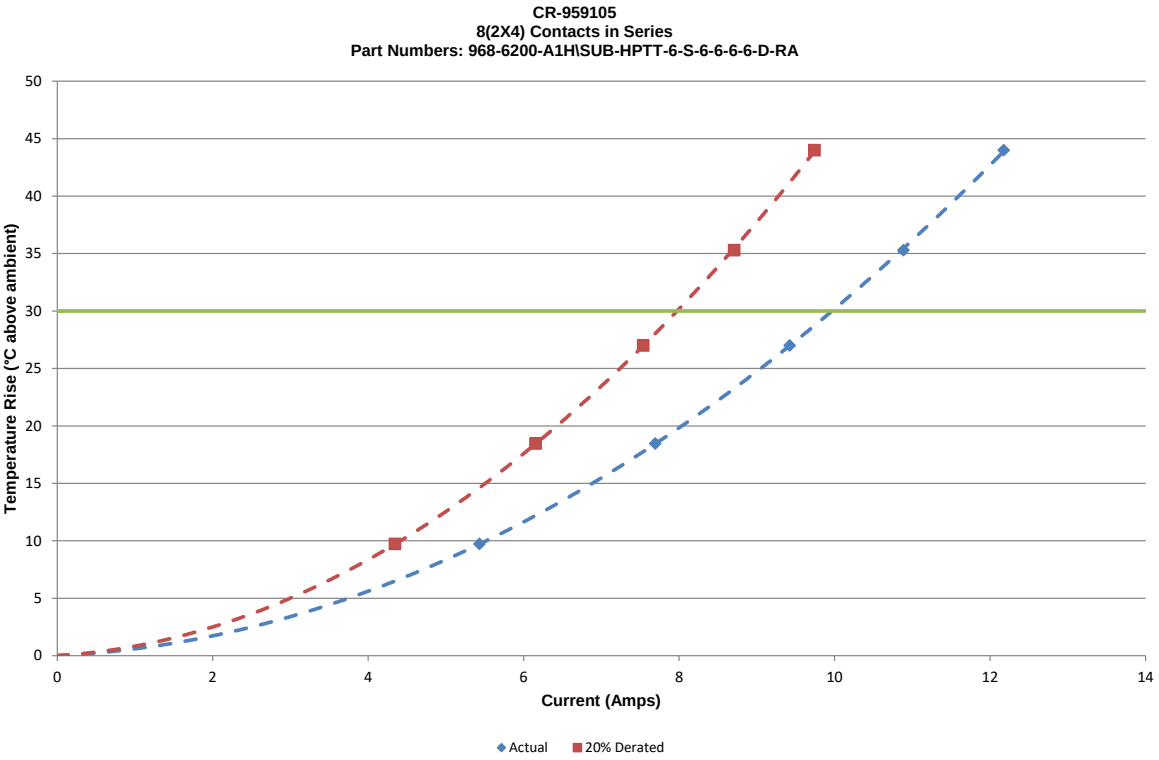




DATA SUMMARIES Continued

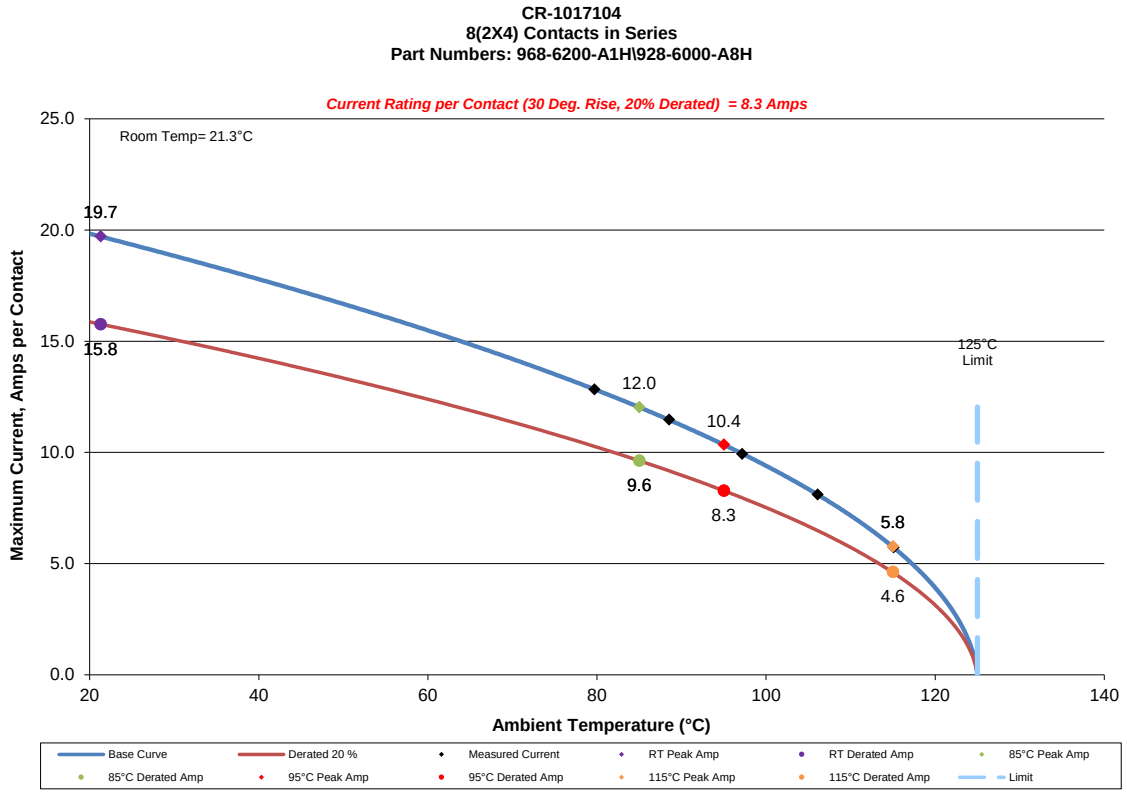
g. Linear configuration with 8 adjacent conductors/contacts powered.

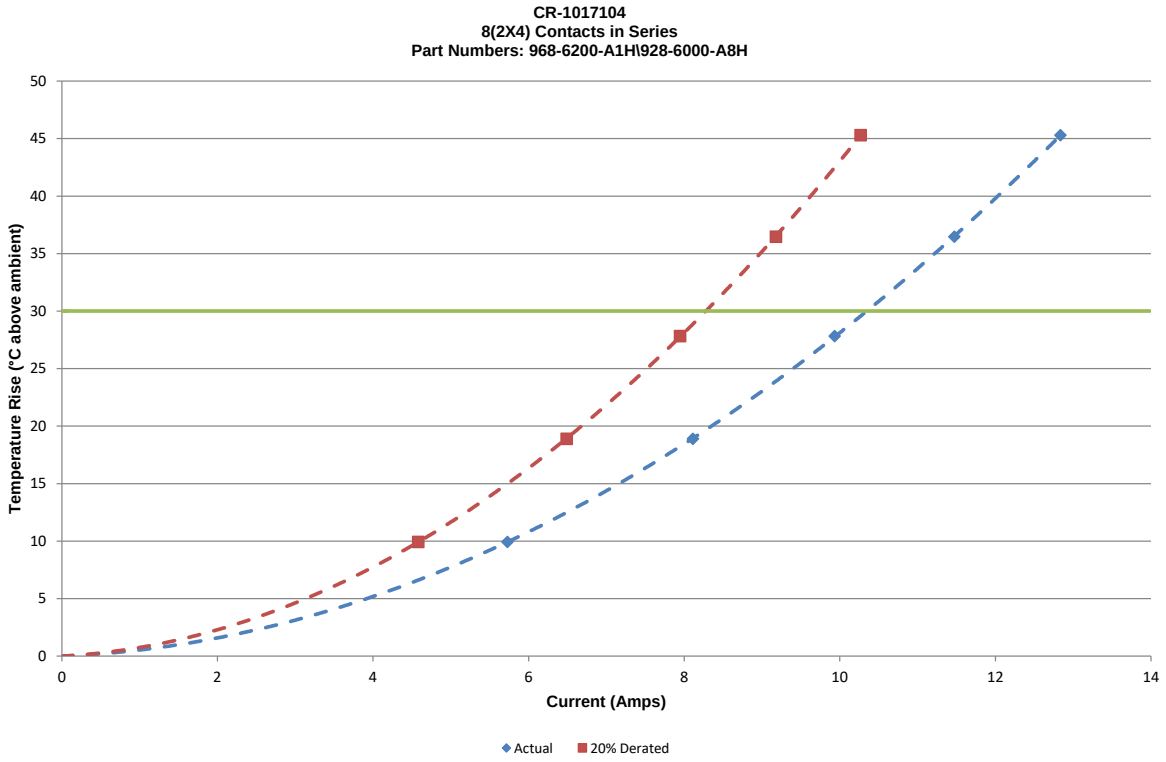




DATA SUMMARIES Continued

h. Linear configuration with 8 adjacent conductors/contacts powered.





DATA SUMMARIES Continued

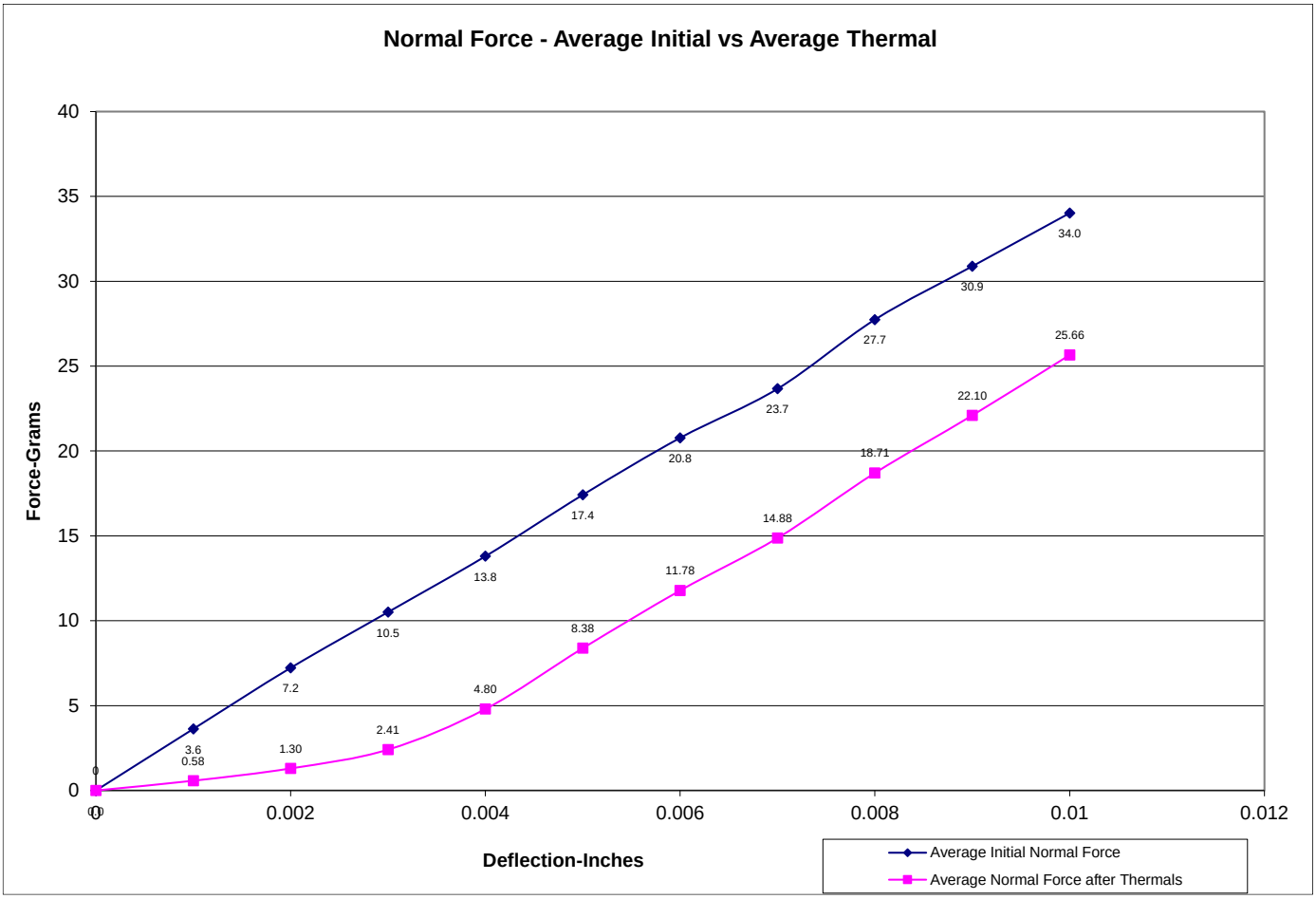
NORMAL FORCE (FOR CONTACTS TESTED IN THE HOUSING):

1) Calibrated force gauges are used along with computer-controlled positioning equipment.
2) For Normal force 8-10 measurements are taken and the averages reported.

HPTS-6-S-D-VT\SUB-HPTT-6-S-6-6-6-6-D-RA
Long Pin

	Deflections in inches Forces in Grams										
Initial	**0.0010**	**0.0020**	**0.0030**	**0.0040**	**0.0050**	**0.0060**	**0.0070**	**0.0080**	**0.0090**	**0.0100**	***SET***
Averages	3.63	7.23	10.51	13.80	17.42	20.78	23.67	27.74	30.88	34.02	0.0002
Min	3.00	6.40	9.70	13.20	16.60	20.00	22.90	26.90	30.00	33.00	0.0000
Max	4.00	7.70	10.90	14.30	18.00	21.50	24.30	28.40	31.60	34.80	0.0004
St. Dev	0.293	0.344	0.350	0.407	0.517	0.503	0.472	0.496	0.513	0.518	0.0001
Count	12	12	12	12	12	12	12	12	12	12	12

After Thermals	Deflections in inches Forces in Grams										
	0.0010	**0.0020**	**0.0030**	**0.0040**	**0.0050**	**0.0060**	**0.0070**	**0.0080**	**0.0090**	**0.0100**	***SET***
Averages	0.58	1.30	2.41	4.80	8.38	11.78	14.88	18.71	22.10	25.66	0.0027
Min	-0.20	-0.20	-0.20	0.70	4.40	7.30	10.50	14.40	17.60	21.20	0.0001
Max	3.30	6.80	10.40	14.00	17.60	21.40	24.20	28.40	31.80	35.20	0.0039
St. Dev	1.071	2.491	3.880	4.684	4.710	4.881	4.825	4.899	5.084	4.995	0.0013
Count	12	12	12	12	12	12	12	12	12	12	12

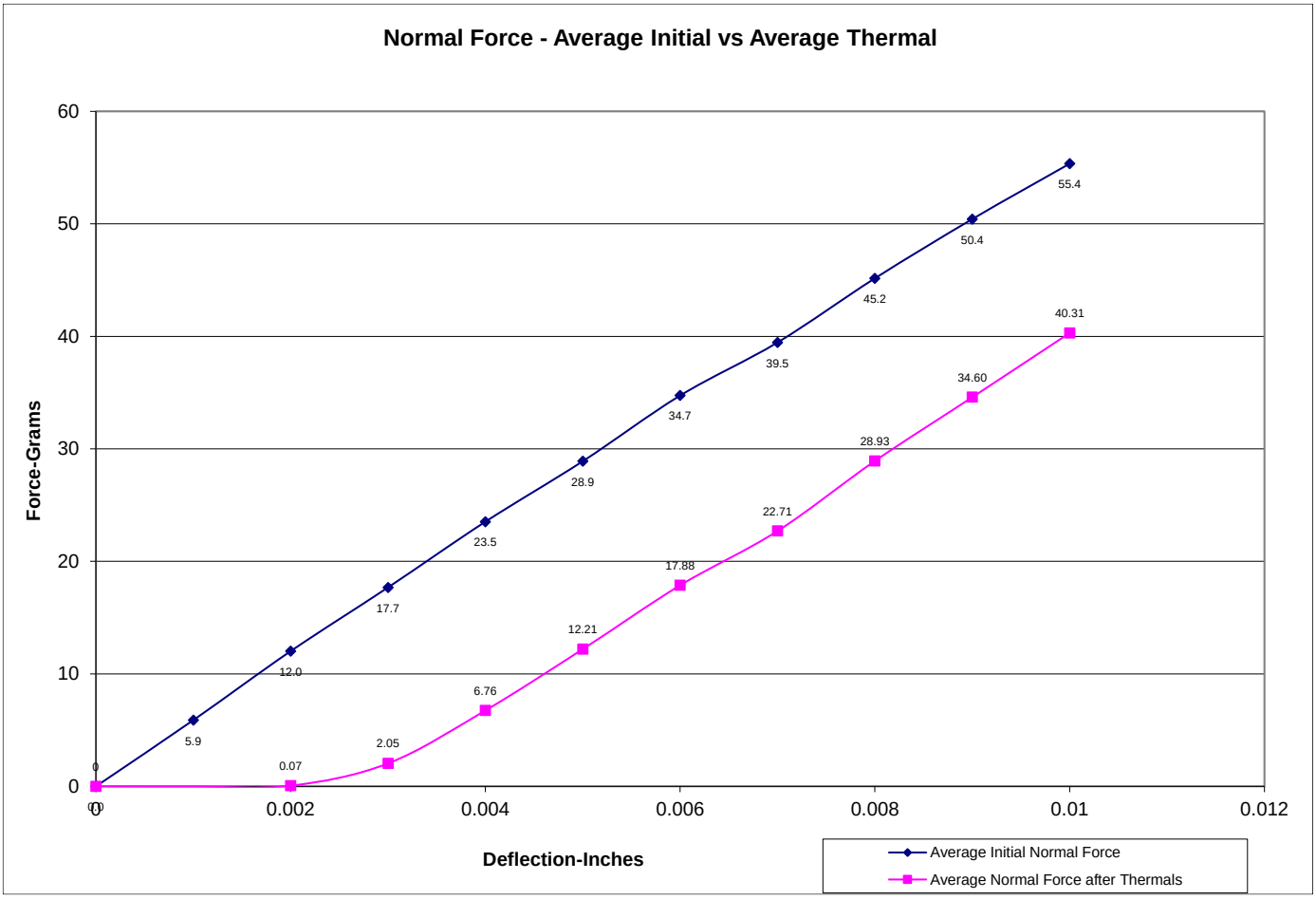


DATA SUMMARIES Continued

Short Pin

Initial	Deflections in inches Forces in Grams										
	0.0010	**0.0020**	**0.0030**	**0.0040**	**0.0050**	**0.0060**	**0.0070**	**0.0080**	**0.0090**	**0.0100**	***SET***
Averages	5.88	12.02	17.68	23.53	28.90	34.74	39.46	45.16	50.43	55.35	0.0005
Min	4.80	11.30	16.60	22.60	27.80	33.30	37.30	42.80	47.80	52.30	0.0001
Max	7.00	12.80	18.70	24.50	30.00	36.10	41.80	48.60	54.10	59.40	0.0008
St. Dev	0.595	0.497	0.615	0.461	0.663	0.767	1.113	1.421	1.578	1.702	0.0002
Count	12	12	12	12	12	12	12	12	12	12	12

After Thermals	Deflections in inches Forces in Grams										
	0.0010	**0.0020**	**0.0030**	**0.0040**	**0.0050**	**0.0060**	**0.0070**	**0.0080**	**0.0090**	**0.0100**	***SET***
Averages	-0.02	0.07	2.05	6.76	12.21	17.88	22.71	28.93	34.60	40.31	0.0028
Min	-0.50	-0.50	-0.40	0.30	5.70	11.80	16.60	22.50	29.40	35.20	0.0017
Max	0.30	1.40	7.70	12.90	18.50	23.50	27.90	33.80	39.30	45.10	0.0038
St. Dev	0.252	0.487	2.620	3.499	3.763	3.525	3.545	3.838	3.545	3.719	0.0006
Count	12	12	12	12	12	12	12	12	12	12	12



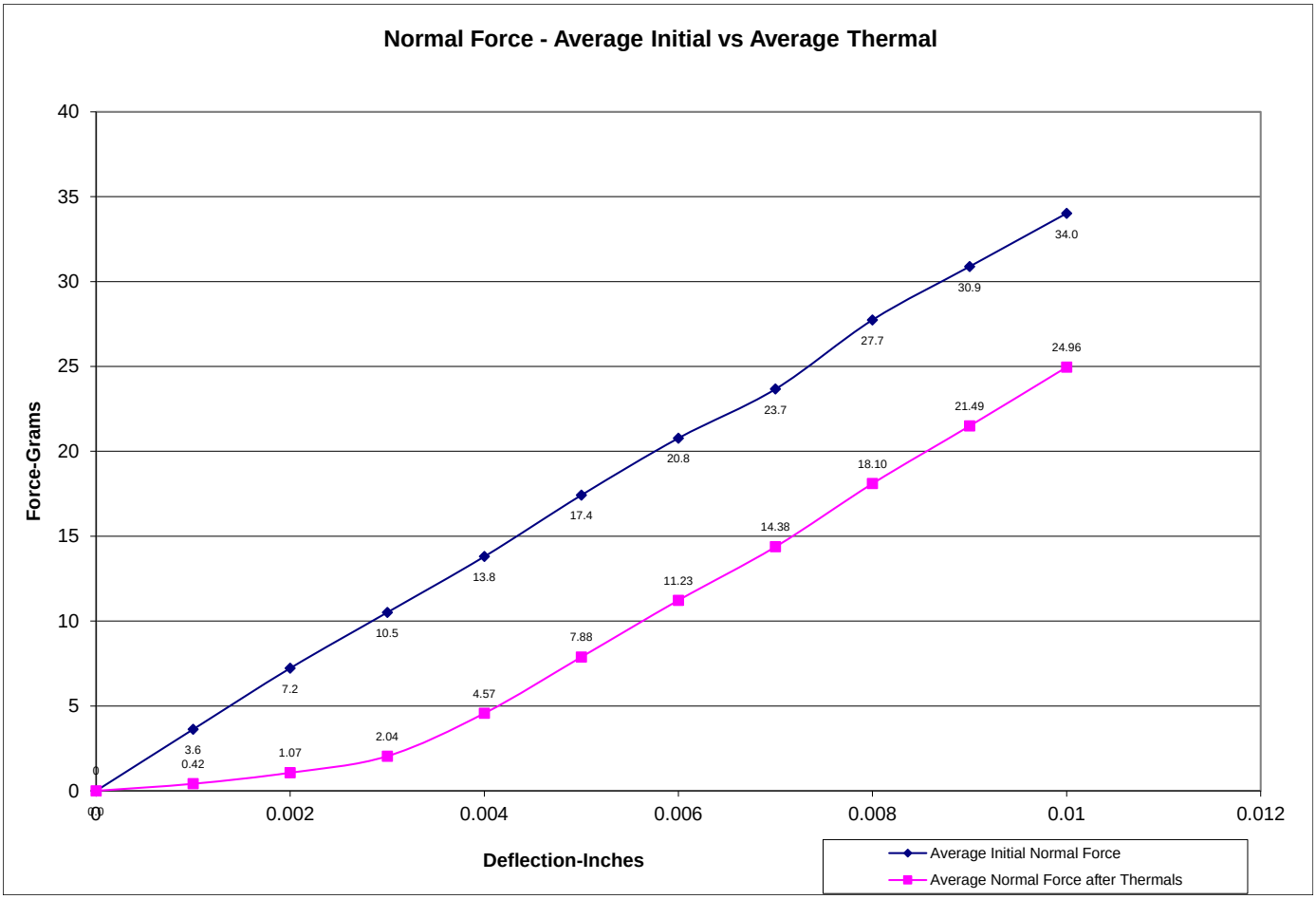
DATA SUMMARIES Continued

HPTS-6-S-D-VT\928-6000-A8H

Long Pin

Initial	Deflections in inches Forces in Grams										
	0.0010	**0.0020**	**0.0030**	**0.0040**	**0.0050**	**0.0060**	**0.0070**	**0.0080**	**0.0090**	**0.0100**	***SET***
Averages	3.63	7.23	10.51	13.80	17.42	20.78	23.67	27.74	30.88	34.02	0.0002
Min	3.00	6.40	9.70	13.20	16.60	20.00	22.90	26.90	30.00	33.00	0.0000
Max	4.00	7.70	10.90	14.30	18.00	21.50	24.30	28.40	31.60	34.80	0.0004
St. Dev	0.293	0.344	0.350	0.407	0.517	0.503	0.472	0.496	0.513	0.518	0.0001
Count	12	12	12	12	12	12	12	12	12	12	12

After Thermals	Deflections in inches Forces in Grams										
	0.0010	**0.0020**	**0.0030**	**0.0040**	**0.0050**	**0.0060**	**0.0070**	**0.0080**	**0.0090**	**0.0100**	***SET***
Averages	0.42	1.07	2.04	4.57	7.88	11.23	14.38	18.10	21.49	24.96	0.0028
Min	-0.70	-0.80	-0.80	0.00	1.80	5.40	8.60	12.30	15.90	19.50	0.0004
Max	2.40	6.30	9.70	13.30	17.00	20.50	23.30	27.60	31.00	34.20	0.0045
St. Dev	1.011	2.384	3.718	4.335	4.660	4.731	4.668	4.812	4.769	4.644	0.0013
Count	12	12	12	12	12	12	12	12	12	12	12

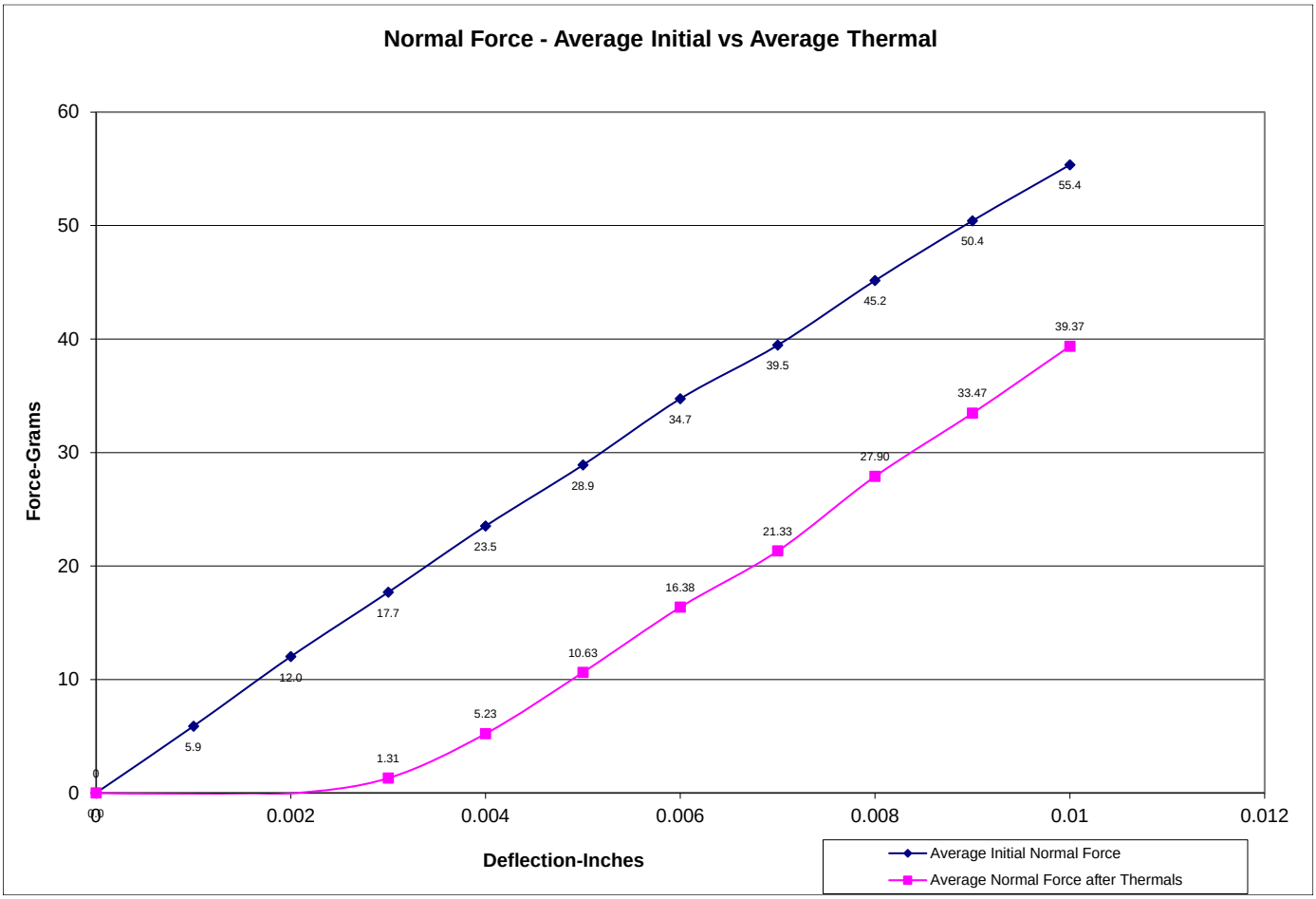


DATA SUMMARIES Continued

Short Pin

	Deflections in inches Forces in Grams										
Initial	**0.0010**	**0.0020**	**0.0030**	**0.0040**	**0.0050**	**0.0060**	**0.0070**	**0.0080**	**0.0090**	**0.0100**	***SET***
Averages	5.88	12.02	17.68	23.53	28.90	34.74	39.46	45.16	50.43	55.35	0.0005
Min	4.80	11.30	16.60	22.60	27.80	33.30	37.30	42.80	47.80	52.30	0.0001
Max	7.00	12.80	18.70	24.50	30.00	36.10	41.80	48.60	54.10	59.40	0.0008
St. Dev	0.595	0.497	0.615	0.461	0.663	0.767	1.113	1.421	1.578	1.702	0.0002
Count	12	12	12	12	12	12	12	12	12	12	12

After Thermals	Deflections in inches Forces in Grams										
	0.0010	**0.0020**	**0.0030**	**0.0040**	**0.0050**	**0.0060**	**0.0070**	**0.0080**	**0.0090**	**0.0100**	***SET***
Averages	-0.12	-0.04	1.31	5.23	10.63	16.38	21.33	27.90	33.47	39.37	0.0030
Min	-0.70	-0.60	-0.70	-0.10	4.80	9.80	15.10	20.90	27.50	33.30	0.0019
Max	0.50	0.40	6.10	11.00	16.40	21.00	25.70	31.60	37.00	44.50	0.0041
St. Dev	0.349	0.334	2.288	3.367	3.396	3.167	2.949	3.117	2.680	3.110	0.0006
Count	12	12	12	12	12	12	12	12	12	12	12



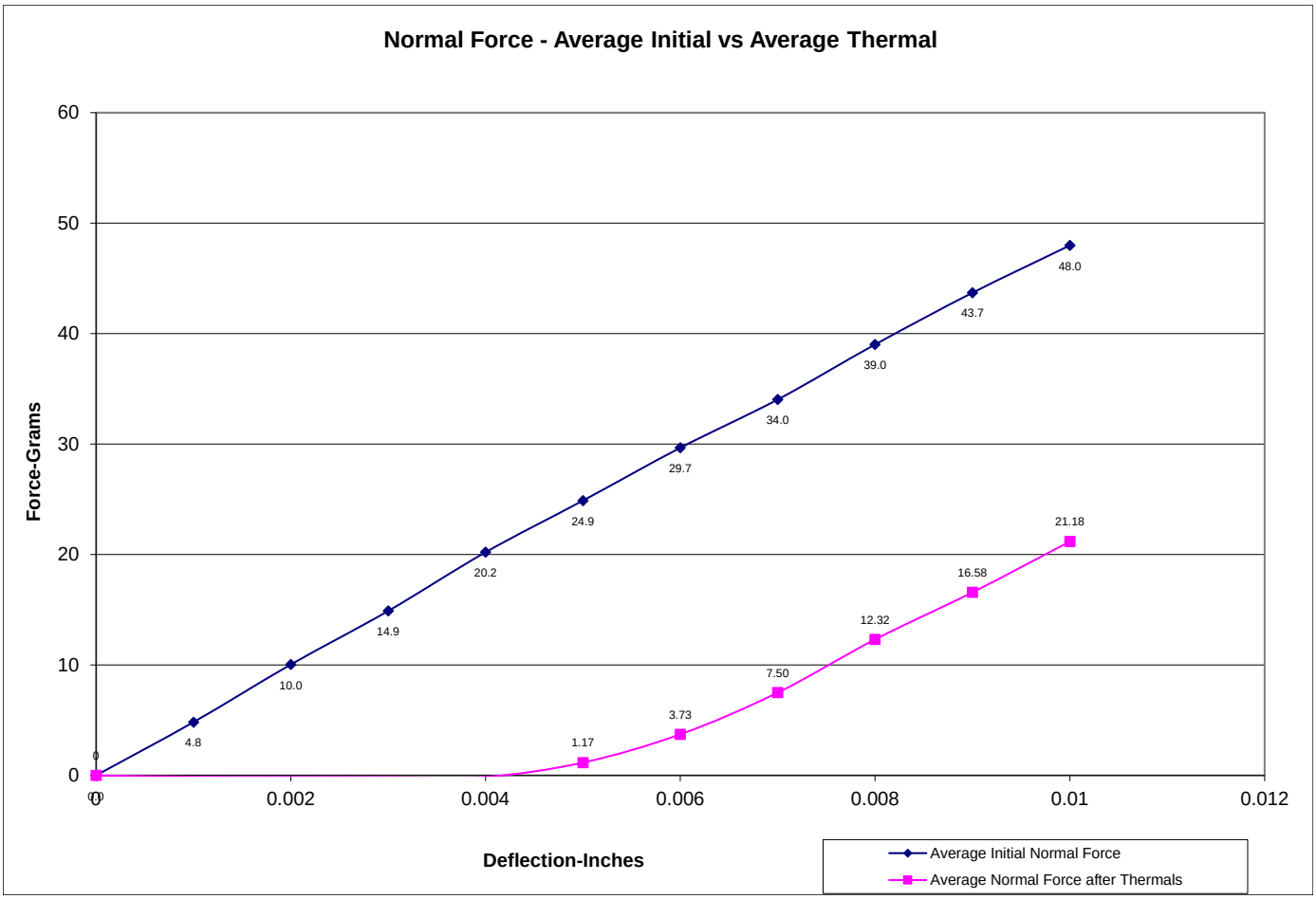
DATA SUMMARIES Continued

968-6200-A1H\SUB-HPTT-6-S-6-6-6-6-D-RA

Long Pin

Initial	Deflections in inches Forces in Grams										
	0.0010	**0.0020**	**0.0030**	**0.0040**	**0.0050**	**0.0060**	**0.0070**	**0.0080**	**0.0090**	**0.0100**	***SET***
Averages	4.83	10.04	14.89	20.21	24.88	29.67	34.03	39.02	43.70	47.98	0.0001
Min	4.10	8.70	13.60	18.00	22.70	27.90	32.00	36.70	41.40	46.00	0.0000
Max	5.90	11.00	16.50	22.00	26.70	31.20	35.80	40.90	45.60	49.80	0.0003
St. Dev	0.658	0.756	0.996	1.238	1.419	1.218	1.346	1.471	1.648	1.486	0.0001
Count	12	12	12	12	12	12	12	12	12	12	12

After Thermals	Deflections in inches Forces in Grams										
	0.0010	**0.0020**	**0.0030**	**0.0040**	**0.0050**	**0.0060**	**0.0070**	**0.0080**	**0.0090**	**0.0100**	***SET***
Averages	-0.13	-0.13	-0.16	-0.13	1.17	3.73	7.50	12.32	16.58	21.18	0.0052
Min	-0.50	-0.50	-0.50	-0.40	-0.40	-0.10	3.40	8.50	12.60	16.70	0.0041
Max	0.30	0.40	0.40	0.30	4.20	8.40	12.40	17.30	22.10	26.60	0.0062
St. Dev	0.305	0.306	0.294	0.271	1.827	3.232	3.389	3.391	3.583	3.735	0.0008
Count	12	12	12	12	12	12	12	12	12	12	12

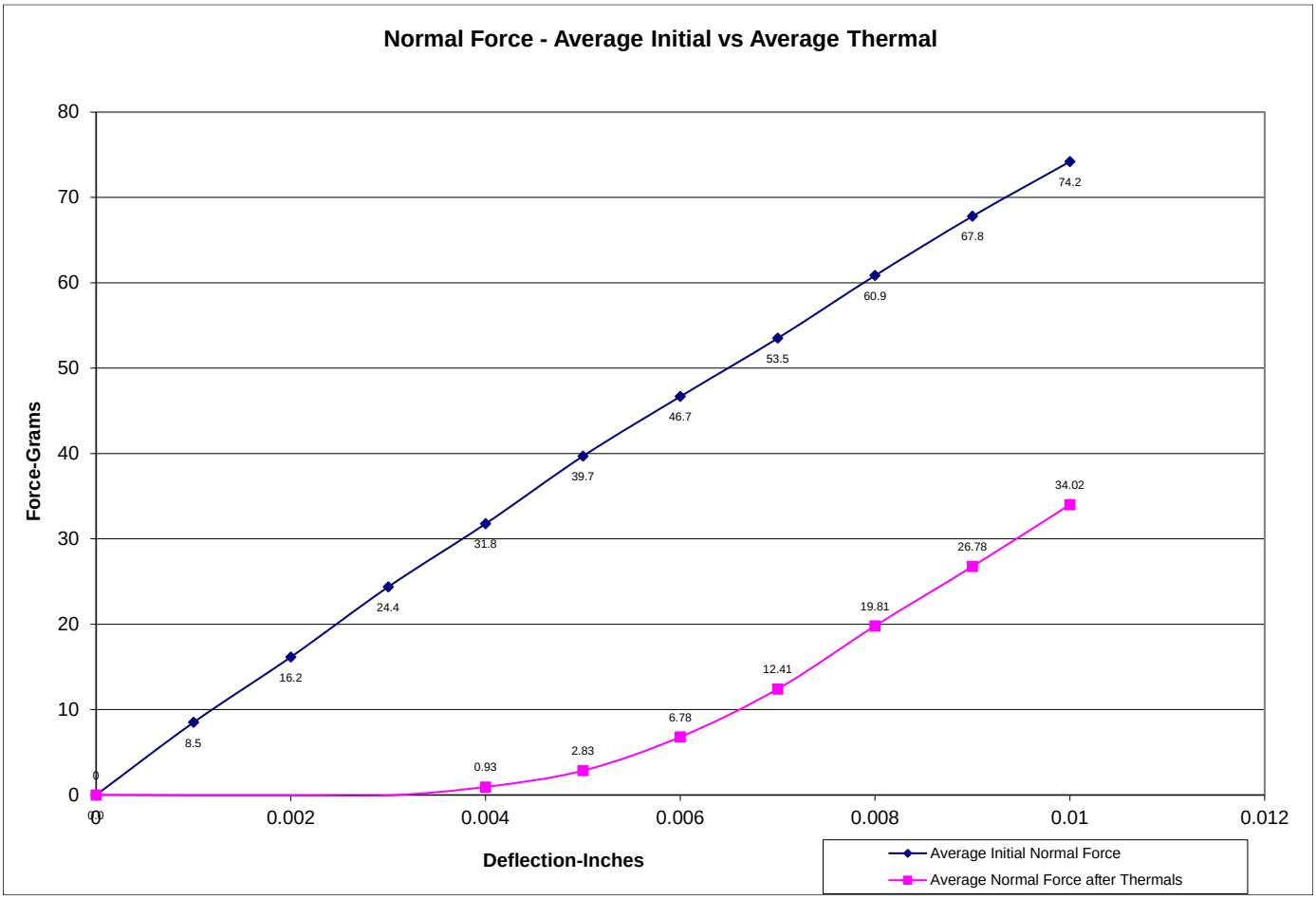


DATA SUMMARIES Continued

Short Pin

	Deflections in inches Forces in Grams										
Initial	**0.0010**	**0.0020**	**0.0030**	**0.0040**	**0.0050**	**0.0060**	**0.0070**	**0.0080**	**0.0090**	**0.0100**	***SET***
Averages	8.50	16.17	24.38	31.78	39.70	46.69	53.52	60.87	67.81	74.21	0.0004
Min	7.30	15.10	22.50	29.60	37.10	43.70	50.90	58.10	65.00	70.70	0.0003
Max	9.20	17.30	26.30	34.30	42.60	49.70	56.70	64.20	71.40	77.90	0.0006
St. Dev	0.595	0.781	1.330	1.511	1.778	2.131	2.128	2.169	2.263	2.543	0.0001
Count	12	12	12	12	12	12	12	12	12	12	12

After Thermals	Deflections in inches Forces in Grams										
	0.0010	**0.0020**	**0.0030**	**0.0040**	**0.0050**	**0.0060**	**0.0070**	**0.0080**	**0.0090**	**0.0100**	***SET***
Averages	-0.07	-0.07	-0.08	0.93	2.83	6.78	12.41	19.81	26.78	34.02	0.0052
Min	-0.50	-0.40	-0.40	-0.50	-0.40	-0.50	-0.40	6.40	13.10	21.30	0.0034
Max	0.30	0.30	0.30	4.60	11.80	19.50	25.80	33.50	39.70	48.00	0.0073
St. Dev	0.277	0.253	0.260	1.903	4.966	7.277	8.023	8.369	8.539	8.696	0.0012
Count	12	12	12	12	12	12	12	12	12	12	12



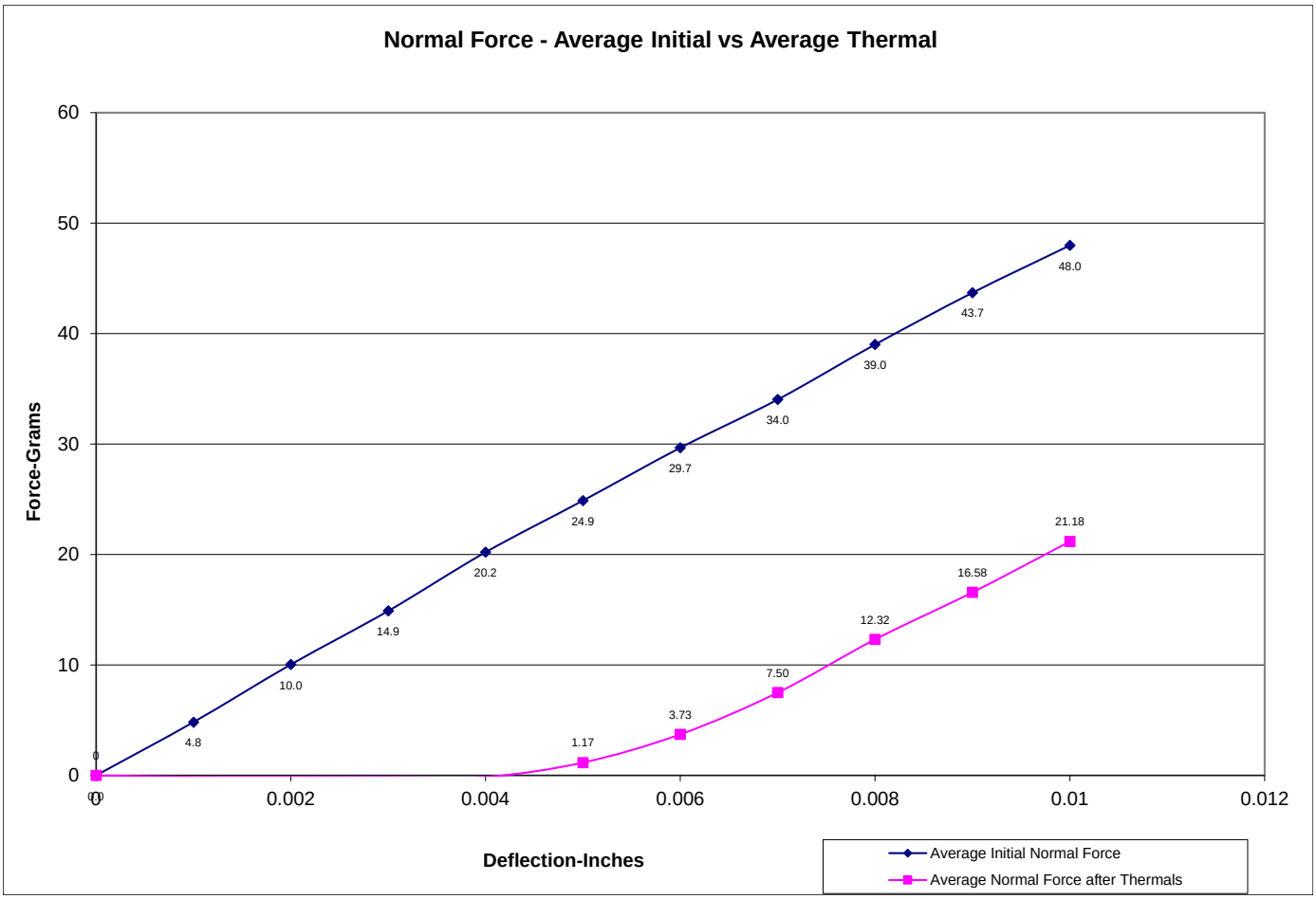
DATA SUMMARIES Continued

968-6200-A1H\928-6000-A8H

Long Pin

Initial	Deflections in inches Forces in Grams										
	0.0010	**0.0020**	**0.0030**	**0.0040**	**0.0050**	**0.0060**	**0.0070**	**0.0080**	**0.0090**	**0.0100**	***SET***
Averages	4.83	10.04	14.89	20.21	24.88	29.67	34.03	39.02	43.70	47.98	0.0001
Min	4.10	8.70	13.60	18.00	22.70	27.90	32.00	36.70	41.40	46.00	0.0000
Max	5.90	11.00	16.50	22.00	26.70	31.20	35.80	40.90	45.60	49.80	0.0003
St. Dev	0.658	0.756	0.996	1.238	1.419	1.218	1.346	1.471	1.648	1.486	0.0001
Count	12	12	12	12	12	12	12	12	12	12	12

After Thermals	Deflections in inches Forces in Grams										
	0.0010	**0.0020**	**0.0030**	**0.0040**	**0.0050**	**0.0060**	**0.0070**	**0.0080**	**0.0090**	**0.0100**	***SET***
Averages	-0.13	-0.13	-0.16	-0.13	1.17	3.73	7.50	12.32	16.58	21.18	0.0052
Min	-0.50	-0.50	-0.50	-0.40	-0.40	-0.10	3.40	8.50	12.60	16.70	0.0041
Max	0.30	0.40	0.40	0.30	4.20	8.40	12.40	17.30	22.10	26.60	0.0062
St. Dev	0.305	0.306	0.294	0.271	1.827	3.232	3.389	3.391	3.583	3.735	0.0008
Count	12	12	12	12	12	12	12	12	12	12	12

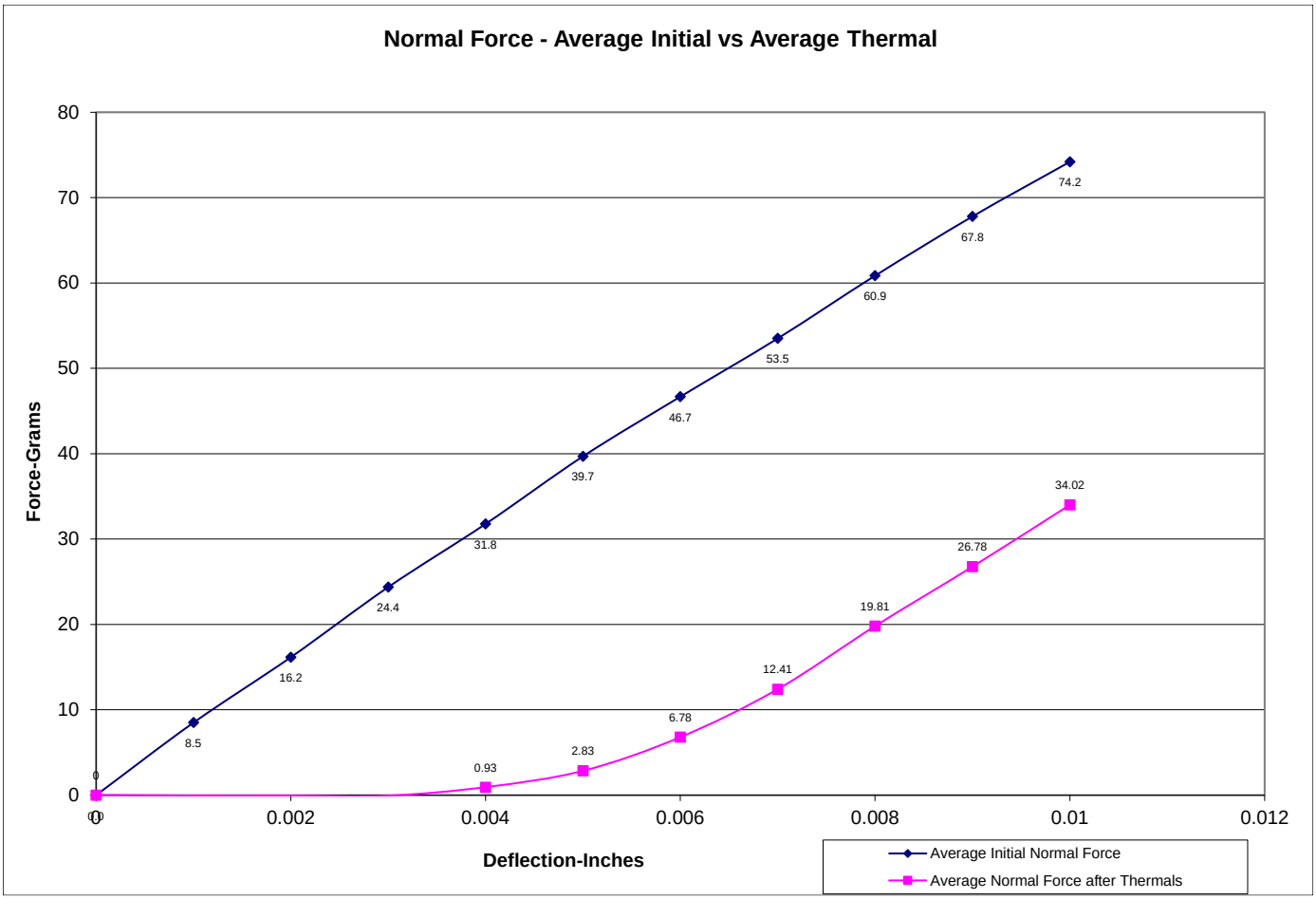


DATA SUMMARIES Continued

Short Pin

	Deflections in inches Forces in Grams										
Initial	**0.0010**	**0.0020**	**0.0030**	**0.0040**	**0.0050**	**0.0060**	**0.0070**	**0.0080**	**0.0090**	**0.0100**	***SET***
Averages	8.50	16.17	24.38	31.78	39.70	46.69	53.52	60.87	67.81	74.21	0.0004
Min	7.30	15.10	22.50	29.60	37.10	43.70	50.90	58.10	65.00	70.70	0.0003
Max	9.20	17.30	26.30	34.30	42.60	49.70	56.70	64.20	71.40	77.90	0.0006
St. Dev	0.595	0.781	1.330	1.511	1.778	2.131	2.128	2.169	2.263	2.543	0.0001
Count	12	12	12	12	12	12	12	12	12	12	12

After Thermals	Deflections in inches Forces in Grams										
	0.0010	**0.0020**	**0.0030**	**0.0040**	**0.0050**	**0.0060**	**0.0070**	**0.0080**	**0.0090**	**0.0100**	***SET***
Averages	-0.07	-0.07	-0.08	0.93	2.83	6.78	12.41	19.81	26.78	34.02	0.0052
Min	-0.50	-0.40	-0.40	-0.50	-0.40	-0.50	-0.40	6.40	13.10	21.30	0.0034
Max	0.30	0.30	0.30	4.60	11.80	19.50	25.80	33.50	39.70	48.00	0.0073
St. Dev	0.277	0.253	0.260	1.903	4.966	7.277	8.023	8.369	8.539	8.696	0.0012
Count	12	12	12	12	12	12	12	12	12	12	12



DATA SUMMARIES Continued

INSULATION RESISTANCE (IR):

HPTS-6-S-D-VT\SUB-HPTT-6-S-6-6-6-6-D-RA

	Pin to Pin		
	Mated	Unmated	Unmated
Minimum	**HPTS/SUB-HPTT**	**HPTS**	**SUB-HPTT**
Initial	45000	45000	45000
Thermal	45000	45000	45000
Humidity	45000	45000	45000

	Row to Row		
	Mated	Unmated	Unmated
Minimum	**HPTS/SUB-HPTT**	**HPTS**	**SUB-HPTT**
Initial	45000	45000	45000
Thermal	45000	45000	45000
Humidity	45000	45000	45000

HPTS-6-S-D-VT\928-6000-A8H

	Pin to Pin		
	Mated	Unmated	Unmated
Minimum	**HPTS/928-6000**	**HPTS**	**928-6000**
Initial	45000	45000	Not Tested
Thermal	45000	45000	Not Tested
Humidity	45000	45000	Not Tested

	Row to Row		
	Mated	Unmated	Unmated
Minimum	**HPTS/928-6000**	**HPTS**	**928-6000**
Initial	45000	45000	Not Tested
Thermal	45000	45000	Not Tested
Humidity	45000	45000	Not Tested

DATA SUMMARIES Continued

968-6200-A1H\SUB-HPTT-6-S-6-6-6-6-D-RA

	Pin to Pin		
	Mated	Unmated	Unmated
Minimum	**968-6200/SUB-HPTT**	**968-6200**	**SUB-HPTT**
Initial	45000	Not Tested	45000
Thermal	45000	Not Tested	45000
Humidity	45000	Not Tested	45000

	Row to Row		
	Mated	Unmated	Unmated
Minimum	**968-6200/SUB-HPTT**	**968-6200**	**SUB-HPTT**
Initial	45000	Not Tested	45000
Thermal	45000	Not Tested	45000
Humidity	45000	Not Tested	45000

968-6200-A1H\928-600-A8H

	Pin to Pin		
	Mated	Unmated	Unmated
Minimum	**968-6200/928-6000**	**968-6200**	**928-6000**
Initial	45000	45000	45000
Thermal	45000	45000	45000
Humidity	45000	45000	45000

	Row to Row		
	Mated	Unmated	Unmated
Minimum	**968-6200/928-6000**	**968-6200**	**928-6000**
Initial	12400	45000	45000
Thermal	45000	45000	45000
Humidity	45000	45000	45000

DATA SUMMARIES Continued

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

HPTS-6-S-D-VT\SUB-HPTT-6-S-6-6-6-6-D-RA

Voltage Rating Summary	
Minimum	**HPTS\SUB-HPTT**
Break Down Voltage	1412
Test Voltage	1060
Working Voltage	350

Pin to Pin	
Initial Test Voltage	Passed
After Thermal Test Voltage	Passed
After Humidity Test Voltage	Passed

Row to Row	
Initial Test Voltage	Passed
After Thermal Test Voltage	Passed
After Humidity Test Voltage	Passed

HPTS-6-S-D-VT\928-6000-A8H

Voltage Rating Summary	
Minimum	**HPTS/928-6000**
Break Down Voltage	1529
Test Voltage	1150
Working Voltage	380

Pin to Pin	
Initial Test Voltage	Passed
After Thermal Test Voltage	Passed
After Humidity Test Voltage	Passed

Row to Row	
Initial Test Voltage	Passed
After Thermal Test Voltage	Passed
After Humidity Test Voltage	Passed

DATA SUMMARIES Continued

968-6200-A1H\SUB-HPTT-6-S-6-6-6-6-D-RA

Voltage Rating Summary	
Minimum	**968-6200/SUB-HPTT**
Break Down Voltage	1347
Test Voltage	1010
Working Voltage	335

Pin to Pin	
Initial Test Voltage	Passed
After Thermal Test Voltage	Passed
After Humidity Test Voltage	Passed

Row to Row	
Initial Test Voltage	Passed
After Thermal Test Voltage	Passed
After Humidity Test Voltage	Passed

968-6200-A1H\928-6000-A8H

Voltage Rating Summary	
Minimum	**968-6200/928-6000**
Break Down Voltage	1217
Test Voltage	913
Working Voltage	304

Pin to Pin	
Initial Test Voltage	Passed
After Thermal Test Voltage	Passed
After Humidity Test Voltage	Passed

Row to Row	
Initial Test Voltage	Passed
After Thermal Test Voltage	Passed
After Humidity Test Voltage	Passed

DATA SUMMARIES Continued

LLCR Gas Tight Group

1) A total of 64 points were measured.
2) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets.*
3) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
4) The following guidelines are used to categorize the changes in LLCR as a result from stressing.
   a. <= +1.0 mOhms:----------Stable
   b. +1.1 to +2.0 mOhms: ----------Minor
   c. +2.1 to +5.0 mOhms: ----------Acceptable
   d. +5.1 to +15.0 mOhms: ----------Marginal
   e. +15.1 to +1000 mOhms:----------Unstable
   f. >+1000 mOhms:----------Open Failure

HPTS-6-S-D-VT\SUB-HPTT-6-S-6-6-6-6-D-RA

LLCR Measurement Summaries by Pin Type				
Date	2023/7/25	2023/7/28		
Room Temp (Deg C)	22	22		
Rel Humidity (%)	52	52		
Technician	Kason He	Kason He		
mOhm values	Actual **Initial**	**Delta** **Acid Vapor**		
Pin Type: Signal 1				
Average	1.46	0.09		
St. Dev.	0.25	0.07		
Min	1.06	0		
Max	2.28	0.28		
Summary Count	64	64		
Total Count	64	64		

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=1**	**>1 & <=2**	**>2 & <=5**	**>5 & <=15**	**>15 & <=1000**	**>1000**
Acid Vapor	**64**	**0**	**0**	**0**	**0**	**0**

DATA SUMMARIES Continued

HPTS-6-S-D-VT\928-6000-A8H

LLCR Measurement Summaries by Pin Type		
Date	2023/7/25	2023/7/28
Room Temp (Deg C)	22	22
Rel Humidity (%)	52	52
Technician	Kason He	Kason He
mOhm values	Actual	**Delta**
	Initial	**Acid Vapor**
Pin Type: Signal 1		
Average	1.41	0.19
St. Dev.	0.22	0.18
Min	1.07	0
Max	1.82	0.99
Summary Count	64	64
Total Count	64	64

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=1**	**>1 & <=2**	**>2 & <=5**	**>5 & <=15**	**>15 & <=1000**	**>1000**
Acid Vapor	**64**	**0**	**0**	**0**	**0**	**0**

968-6200-A1H\SUB-HPTT-6-S-6-6-6-6-D-RA

LLCR Measurement Summaries by Pin Type		
Date	2023/7/25	2023/7/31
Room Temp (Deg C)	22	22
Rel Humidity (%)	52	52
Technician	Kason He	Kason He
mOhm values	Actual	**Delta**
	Initial	**Acid Vapor**
Pin Type: Signal 1		
Average	1.45	0.1
St. Dev.	0.24	0.09
Min	1.03	0
Max	1.89	0.53
Summary Count	64	64
Total Count	64	64

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=1**	**>1 & <=2**	**>2 & <=5**	**>5 & <=15**	**>15 & <=1000**	**>1000**
Acid Vapor	**64**	**0**	**0**	**0**	**0**	**0**

DATA SUMMARIES Continued

968-6200-A1H\928-6000-A8H

	LLCR Measurement Summaries by Pin Type			
Date	2023/11/21	2023/11/22		
Room Temp (Deg C)	22	22		
Rel Humidity (%)	52	52		
Technician	Kason He	Kason He		
mOhm values	Actual **Initial**	**Delta** **Acid Vapor**		
	Pin Type: Signal 1			
Average	1.33	0.13		
St. Dev.	0.2	0.08		
Min	1.01	0		
Max	1.65	0.46		
Summary Count	64	64		
Total Count	64	64		

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=1**	**>1 & <=2**	**>2 & <=5**	**>5 & <=15**	**>15 & <=1000**	**>1000**
Acid Vapor	**64**	**0**	**0**	**0**	**0**	**0**

EQUIPMENT AND CALIBRATION SCHEDULES

Equipment #: HZ-TCT-01
Description: Normal force analyzer
Manufacturer: Mecmesin Multitester
Model: Mecmesin Multitester 2.5-i
Serial #: 08-1049-04
Accuracy: Last Cal: 4/25/2023, Next Cal: 4/24/2024

Equipment #: HZ-OV-01
Description: Oven
Manufacturer: Huida
Model: CS101-1E
Serial #: CS101-1E-B
Accuracy: Last Cal: 12/13/2022, Next Cal: 12/12/2023

Equipment #: HZ-THC-01
Description: Humidity transmitter
Manufacturer: Thermtron
Model: SM-8-8200
Serial #: 38846
Accuracy: Last Cal: 2/27/2023, Next Cal: 2/26/2024

Equipment #: HZ-TSC-01
Description: Vertical Thermal Shock Chamber
Manufacturer: Cincinnatti Sub Zero
Model: VTS-3-6-6-SC/AC
Serial #: 10-VT14994
Accuracy: See Manual
… Last Cal: 06/27/2023, Next Cal: 06/26/2024

Equipment #: HZ-MO-05
Description: Micro-ohmmeter
Manufacturer: Keithley
Model: 3706
Serial #: 1285188
Accuracy: Last Cal: 11/15/2022, Next Cal: 11/14/2023

Equipment #: DG-HPT-01
Description: Hipot Safety Tester
Manufacturer: Vitrek
Model: V73
Serial #: 025866
Accuracy:
… Last Cal: 04/10/2023, Next Cal: 04/9/2024