



Project Number: NA		Tracking Code: 0212--0640	
Requested by: W. Ouyang		Date: 3/22/02	Product Rev: See Front Page
Part #: See Front Page	Lot #: 03/18/02	Tech: G.Lewis	Eng: J. Tozier
Part description: 0.8mm, 0.635mm, 0.5mm Quiet & Basic High Speed Products			Qty to test: 210
Test Start: 3/29/02	Test Completed: 6/6/02		

## Mating - Unmating Summary Report

### PARTS DESCRIPTIONS

TERMINAL SIDE	SOCKET SIDE
BTE-020-01-F-D-A	BSE-020-01-F-D-A
BTE-060-01-F-D-A	BSE-060-01-F-D-A
BTE-120-01-F-D-A	BSE-120-01-F-D-A
REV: Q	REV: D
BTS-025-01-F-D-A	BSS-025-01-F-D-A
BTS-075-01-F-D-A	BSS-075-01-F-D-A
BTS-150-01-F-D-A	BSS-150-01-F-D-A
REV: B	REV: A
BTH-030-01-F-D-A	BSH-030-01-F-D-A
BTH-090-01-F-D-A	BSH-090-01-F-D-A
BTH-150-01-F-D-A	BSH-150-01-F-D-A
REV: K	REV: D
MIT-019-01-F-D-A	MIS-133-01-F-D-A
MIT-076-01-F-D-A	MIS-019-01-F-D-A
MIT-133-01-F-D-A	MIS-076-01-F-D-A
REV: C	REV: C
QTE-020-01-F-D-A	QSE-020-01-F-D-A
QTE-060-01-F-D-A	QSE-060-01-F-D-A
QTE-100-01-F-D-A	QSE-100-01-F-D-A
REV: X	REV: R
QTS-025-01-F-D-A	QSS-025-01-F-D-A
QTS-075-01-F-D-A	QSS-075-01-F-D-A
QTS-125-01-F-D-A	QSS-125-01-F-D-A
REV: A	REV: B
QTH-030-01-F-D-A	QSH-030-01-F-D-A
QTH-090-01-F-D-A	QSH-090-01-F-D-A
QTH-150-01-F-D-A	QSH-150-01-F-D-A
REV: N	REV: F



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## CERTIFICATION

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

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## SCOPE

To perform the following tests: Mating - Unmating

## 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 testing were cleaned according to TLWI-0001:
  - a) Sample test boards are to be ultrasonically cleaned after test lead attachment, preparation and/or soldering using the following process.
  - b) Immerse the sample test boards into the Branson 3510 cleaner which contains Kyzen Ionox HC1 (or equivalent) cleaning solution with the following conditions:
    - i) Temperature: 55° C +/- 5° C
    - ii) Frequency: 40 KHz
    - iii) Immersion Time: 5 to 10 Minutes
  - c) Sample test boards are then slowly removed and placed into the Branson 3510 cleaner which contains deionized water with the following conditions:
    - i) Temperature: 55° C +/- 5° C
    - ii) Frequency: 40 KHz
    - iii) Immersion Time: 5 to 10 Minutes
  - d) Sample test boards are then removed and placed in a beaker, on a hot plate with a magnetic stirrer containing deionized water warmed to 55° C +/- 5° C for 1/2 to 1 minute (Use 55° C as target)
  - e) Upon removal, the sample test boards are then rinsed for 1/2 to 1 minute in room temperature free flowing deionized water.
  - f) After the final rinse, the sample test boards are to be dried in an air-circulating oven for 10 to 15 minutes at 50° C +/- 5° C (Use 50° C as target)
  - g) Sample test boards are then allowed to set and recover to room ambient condition prior to testing.
- 4) Parts not intended for testing LLCR and DWV/IR are visually inspected and cleaned if necessary.
- 5) Any additional preparation will be noted in the individual test procedures.



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### ATTRIBUTE DEFINITION

Following is a brief, simplified description of the attribute measured.

#### MATING/UNMATING:

- 1) Reference document: EIA-364-13, *Mating and Unmating Forces Test Procedure for Electrical Connectors*.
- 2) The full insertion position was to within 0.003" to 0.004" of the plug bottoming out in the receptacle to prevent damage to the system under test.
- 3) One of the mating parts is secured to a floating X-Y table to prevent damage during cycling.
- 4) Mating/Unmating forces were evaluated on the first cycle.
- 5) Number of Samples tested: 5 per series

#### RESULTS BXX Series (data)

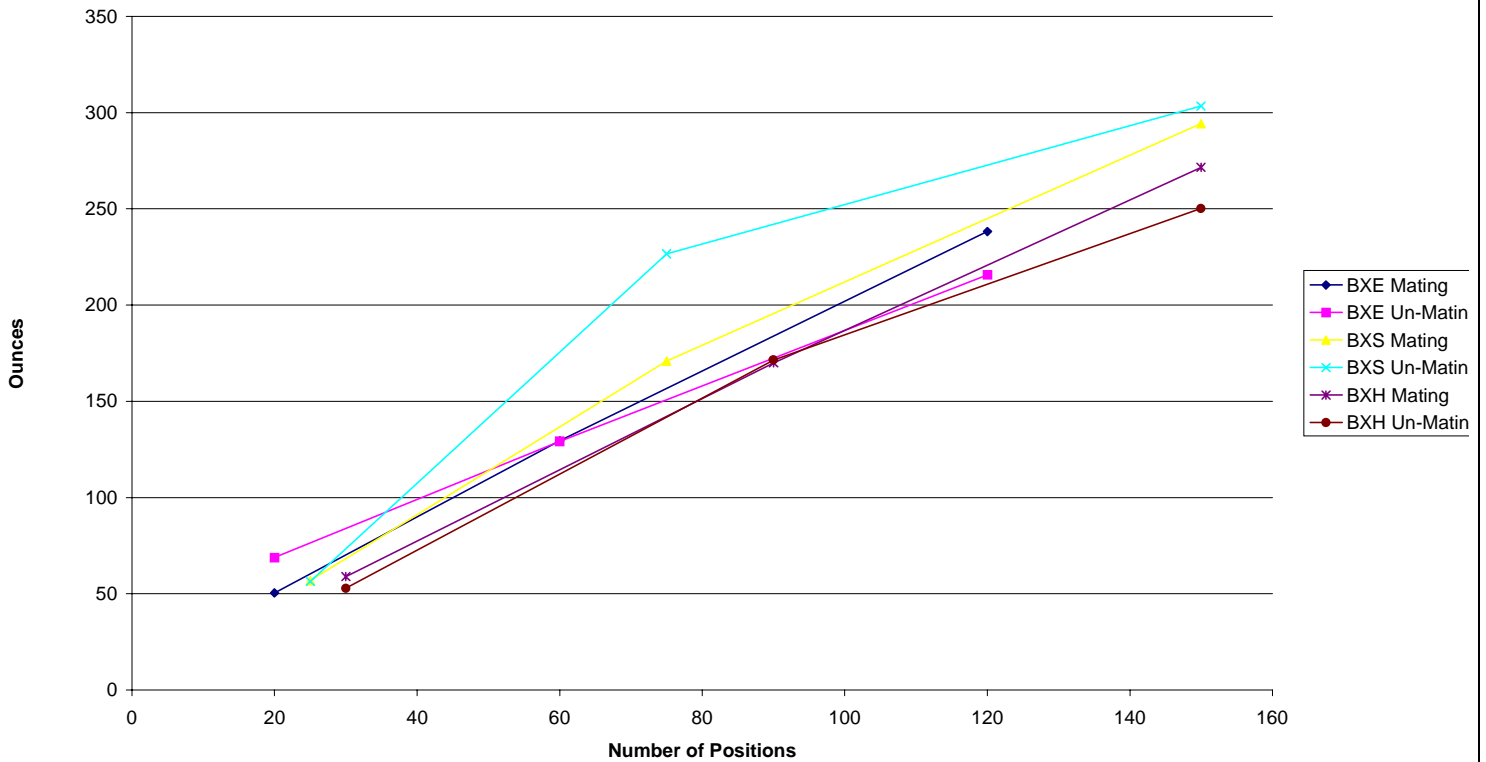
- 
- **Mating Forces BXE Series Maximums**
    - BXE 20 Positions 57.1 oz.
    - BXE 60 Positions 133.2 oz.
    - BXE 120 Positions 246.2 oz.
  - **Unmating Forces BXE Series Maximums**
    - BXE 20 Positions 77.4 oz.
    - BXE 60 Positions 142.1 oz.
    - BXE 120 Positions 236.5 oz.
- 
- **Mating Forces BXS Series Maximums**
    - BXS 25 Positions 61.0 oz.
    - BXS 75 Positions 179.8 oz.
    - BXS 150 Positions 320.4 3 oz.
  - **Unmating Forces BXS Series Maximums**
    - BXS 25 Positions 59.5 oz.
    - BXS 75 Positions 234.7 oz.
    - BXS 150 Positions 325.0 oz.
- 
- **Mating Forces BXH Series Maximums**
    - BXH 30 Positions 65.3 oz.
    - BXH 90 Positions 175.5 oz.
    - BXH 150 Positions 280.0 oz.
  - **Unmating Forces BXH Series Maximums**
    - BXH 30 Positions 66.6 oz.
    - BXH 90 Positions 182.2 oz.
    - BXH 150 Positions 273.6 oz.



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Test Start: 3/29/02		Test Completed: 6/6/02			

### RESULTS BXX Series (graphs)

Trends  
BXX Series



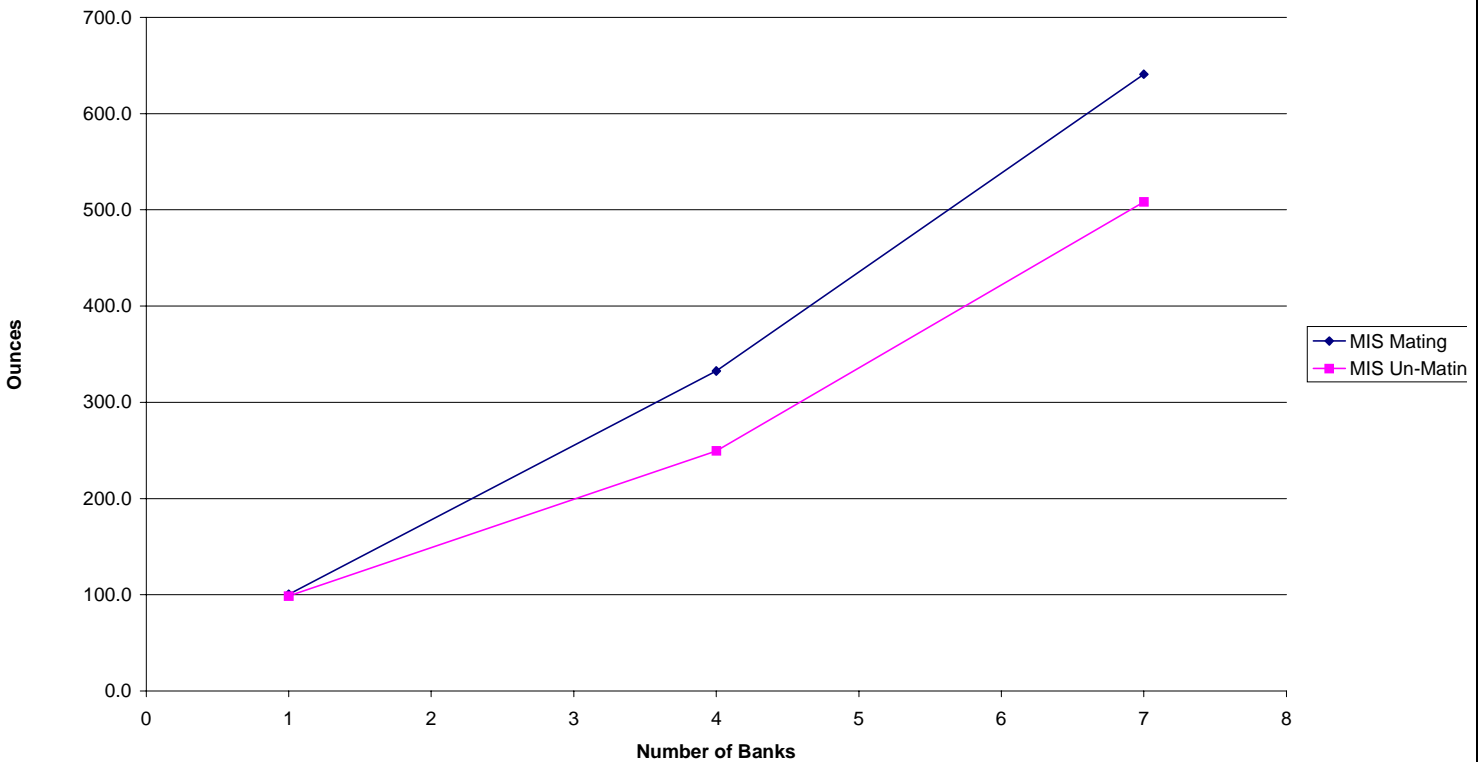


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### RESULTS MIS Series (data)

- **Mating Forces MIS Series Maximums**
  - MIS 1 Bank----- 115.2 oz.
  - MIS 4 Bank----- 360.5 oz.
  - MIS 7 Bank----- 694.6 oz.
  
- **Unmating Forces MIS Series Maximums**
  - MIS 1 Bank----- 109.3 oz.
  - MIS 4 Bank----- 293.3 oz.
  - MIS 7Bank ----- 541.1 oz.

Trends  
MIX Series





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### RESULTS QXX Series (data)

- **Mating Forces QXE Series Maximums**
  - QXE 1 Bank -----60.0 oz.
  - QXE 3 Bank -----163.8 oz.
  - QXE 5 Bank -----287.2 oz.

- **Unmating Forces QXE Series Maximums**
  - QXE 1 Bank -----64.2 oz.
  - QXE 3 Bank -----169.3 oz.
  - QXE 5 Bank -----302.1 oz.

- 
- **Mating Forces QXS Series Maximums**
    - QXS 1 Bank -----60.6 oz.
    - QXS 3 Bank -----213.4 oz.
    - QXS 5 Bank -----339.2 oz.

- **Unmating Forces QXS Series Maximums**
  - QXS 1 Bank -----62.7 oz.
  - QXS 3 Bank -----187.4 oz.
  - QXS 5 Bank -----264.3 oz.

- 
- **Mating Forces QXH Series Maximums**
    - QXH 1 Bank-----72.0 oz.
    - QXH 3 Bank-----232.6 oz.
    - QXH 5 Bank-----434.6 oz.

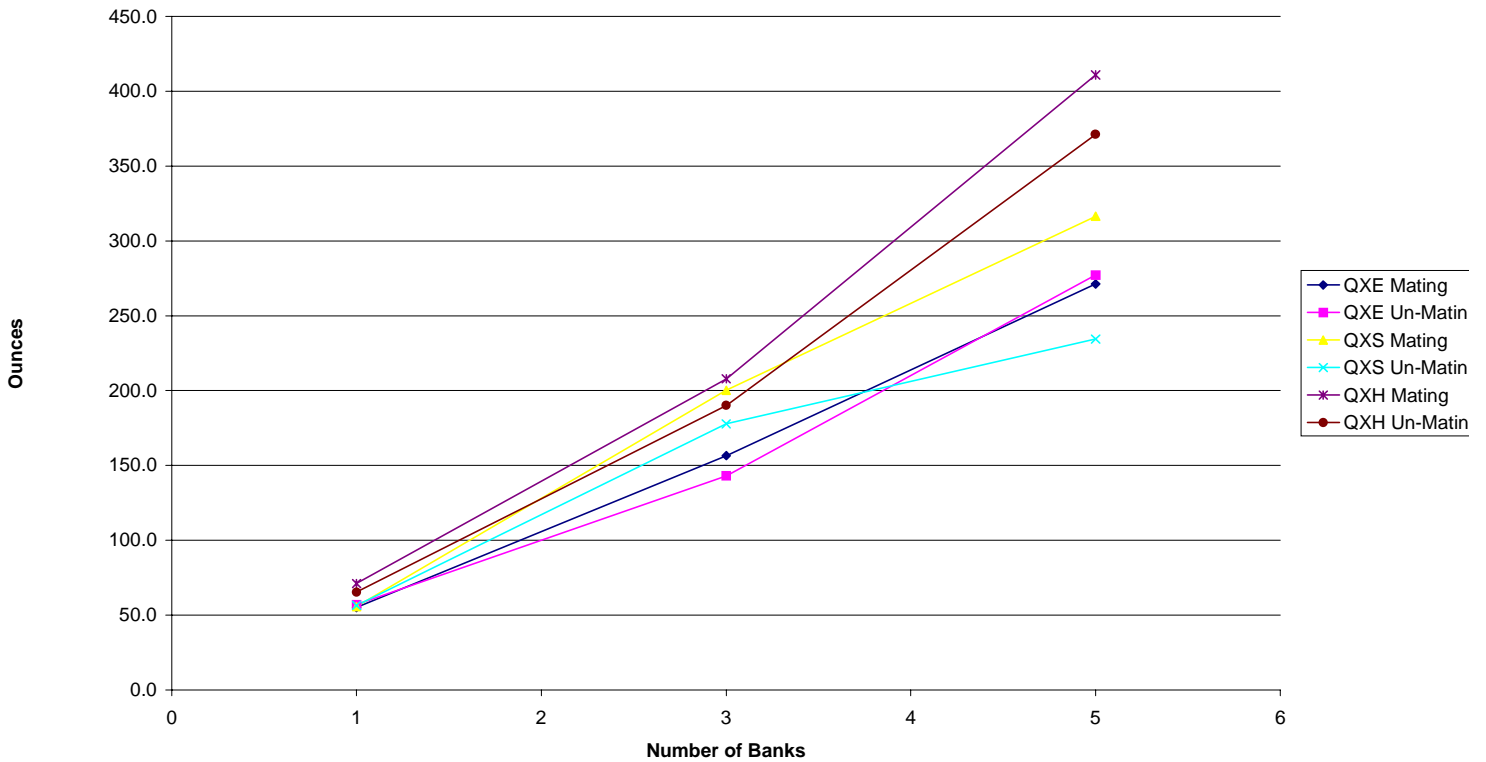
- **Unmating Forces QXH Series Maximums**
  - QXH 1 Bank-----74.9 oz.
  - QXH 3 Bank-----213.3 oz.
  - QXH 5 Bank-----396.2 oz.



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### RESULTS QXX Series (graphs)

Trends  
QXX Series





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Test Start: 3/29/02				Test Completed: 6/6/02											

## DATA SUMMARY

### MATING/UNMATING:

#### BXE Series

	20 Position				60 Position				120 Position			
	Mating		Ummating		Mating		Ummating		Mating		Ummating	
	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs
Minimum	48.3	3.0	59.0	3.7	123.0	7.7	118.7	7.4	224.3	14.0	190.4	11.9
Maximum	57.1	3.6	77.4	4.8	133.3	8.3	142.1	8.9	246.2	15.4	236.5	14.8
<b>Average</b>	<b>50.4</b>	<b>3.2</b>	<b>68.8</b>	<b>4.3</b>	<b>129.5</b>	<b>8.1</b>	<b>129.1</b>	<b>8.1</b>	<b>238.2</b>	<b>14.9</b>	<b>215.7</b>	<b>13.5</b>

#### BXS Series

	25 Position				75 Position				150 Position			
	Mating		Ummating		Mating		Ummating		Mating		Ummating	
	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs
Minimum	53.0	3.3	53.0	3.3	161.1	10.1	214.7	13.4	271.2	17.0	279.8	17.5
Maximum	61.0	3.8	59.5	3.7	179.8	11.2	234.7	14.7	320.5	20.0	325.0	20.3
<b>Average</b>	<b>56.8</b>	<b>3.5</b>	<b>56.4</b>	<b>3.5</b>	<b>170.8</b>	<b>10.7</b>	<b>226.6</b>	<b>14.2</b>	<b>294.3</b>	<b>18.4</b>	<b>303.4</b>	<b>19.0</b>

#### BXH Series

	30 Position				90 Position				150 Position			
	Mating		Ummating		Mating		Ummating		Mating		Ummating	
	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs
Minimum	49.4	3.1	44.3	2.8	166.9	10.4	141.6	8.9	260.5	16.3	221.3	13.8
Maximum	65.3	4.1	66.6	4.2	175.5	11.0	182.2	11.4	280.0	17.5	273.6	17.1
<b>Average</b>	<b>58.9</b>	<b>3.7</b>	<b>52.8</b>	<b>3.3</b>	<b>170.0</b>	<b>10.6</b>	<b>171.5</b>	<b>10.7</b>	<b>271.6</b>	<b>17.0</b>	<b>250.2</b>	<b>15.6</b>





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**DATA SUMMARY continued**

**MATING/UNMATING:**

**MIS Series**

	One Bank				Four Bank				Seven Bank			
	Mating		Ummating		Mating		Ummating		Mating		Ummating	
	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs
Minimum	81.0	5.1	85.9	5.4	303.2	19.0	203.2	12.7	579.7	36.2	457.1	28.6
Maximum	115.2	7.2	109.3	6.8	360.5	22.5	293.3	18.3	694.6	43.4	541.1	33.8
<b>Average</b>	<b>100.3</b>	<b>6.3</b>	<b>98.7</b>	<b>6.2</b>	<b>332.5</b>	<b>20.8</b>	<b>249.5</b>	<b>15.6</b>	<b>641.0</b>	<b>40.1</b>	<b>508.3</b>	<b>31.8</b>



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### DATA SUMMARY continued

#### MATING/UNMATING:

#### QXE Series

	One Bank				Three Bank				Five Bank			
	Mating		Ummating		Mating		Ummating		Mating		Ummating	
	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs
Minimum	52.2	3.3	53.3	3.3	151.4	9.5	117.0	7.3	259.7	16.2	261.1	16.3
Maximum	60.0	3.8	64.2	4.0	163.8	10.2	169.3	10.6	287.2	18.0	302.1	18.9
<b>Average</b>	<b>55.0</b>	<b>3.4</b>	<b>57.0</b>	<b>3.6</b>	<b>156.6</b>	<b>9.8</b>	<b>143.1</b>	<b>8.9</b>	<b>271.3</b>	<b>17.0</b>	<b>277.3</b>	<b>17.3</b>

#### QXS Series

	One Bank				ThreeBank				Five Bank			
	Mating		Ummating		Mating		Ummating		Mating		Ummating	
	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs
Minimum	51.8	3.2	48.3	3.0	179.8	11.2	157.9	9.9	301.8	18.9	201.4	12.6
Maximum	60.6	3.8	62.7	3.9	213.4	13.3	187.4	11.7	339.2	21.2	264.3	16.5
<b>Average</b>	<b>55.6</b>	<b>3.5</b>	<b>56.4</b>	<b>3.5</b>	<b>200.2</b>	<b>12.5</b>	<b>177.7</b>	<b>11.1</b>	<b>316.5</b>	<b>19.8</b>	<b>234.4</b>	<b>14.7</b>

#### QXH Series

	One Bank				Three Bank				Five Bank			
	Mating		Ummating		Mating		Ummating		Mating		Ummating	
	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs
Minimum	69.6	4.4	57.1	3.6	193.6	12.1	169.4	10.6	395.0	24.7	347.0	21.7
Maximum	72.0	4.5	74.9	4.7	232.6	14.5	213.3	13.3	434.6	27.2	396.2	24.8
<b>Average</b>	<b>71.1</b>	<b>4.4</b>	<b>65.2</b>	<b>4.1</b>	<b>207.8</b>	<b>13.0</b>	<b>190.1</b>	<b>11.9</b>	<b>410.9</b>	<b>25.7</b>	<b>371.2</b>	<b>23.2</b>



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## DATA

### MATING/UNMATING:

### BXE Series

<b>Test Date:</b>	5/29/2002	5/29/2002	5/29/2002									
<b>Operator:</b>	GL	GL	GL									
<b>Temperature (C):</b>	25	25	25									
<b>Humidity (RH):</b>	39%	39%	39%									
<b>Equipment Code Number</b>	59	59	59									
<b>Load Cell Code Number</b>	60	60	60									
<b>Readout Code Number</b>												
<b>Contact Description</b>												
<b>Contact Used In:</b>	BSE/BTE	BSE/BTE	BSE/BTE									
<b>Contact Mates With:</b>												
	<b>20 Position</b>				<b>60 Position</b>				<b>120 Position</b>			
	<b>Mating</b>		<b>Ummating</b>		<b>Mating</b>		<b>Ummating</b>		<b>Mating</b>		<b>Ummating</b>	
<b>Sample#</b>	<u>Oz</u>	<u>Lbs</u>	<u>Oz</u>	<u>Lbs</u>	<u>Oz</u>	<u>Lbs</u>	<u>Oz</u>	<u>Lbs</u>	<u>Oz</u>	<u>Lbs</u>	<u>Oz</u>	<u>Lbs</u>
1	48.5	3.0	65.4	4.1	131.5	8.2	118.7	7.4	224.3	14.0	204.3	12.8
2	48.8	3.1	70.4	4.4	130.2	8.1	124.8	7.8	243.5	15.2	190.4	11.9
3	57.1	3.6	77.4	4.8	129.4	8.1	129.3	8.1	245.6	15.4	233.6	14.6
4	49.3	3.1	59.0	3.7	133.3	8.3	142.1	8.9	231.4	14.5	213.8	13.4
5	48.3	3.0	71.7	4.5	123.0	7.7	130.7	8.2	246.2	15.4	236.5	14.8



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**DATA continued**

**MATING/UNMATING:**

**BXS Series**

<b>Test Date:</b>	5/29/2002	5/29/2002	5/29/2002
<b>Operator:</b>	GL	GL	GL
<b>Temperature (C):</b>	25	25	25
<b>Humidity (RH):</b>	37%	37%	37%
<b>Equipment Code Number</b>	59	59	59
<b>Load Cell Code Number</b>	60	60	60
<b>Readout Code Number</b>			
<b>Contact Description</b>			
<b>Contact Used In:</b>	BSS/BTS	BSS/BTS	BSS/BTS
<b>Contact Mates With:</b>			

Sample#	25 Position				75 Position				150 Position			
	Mating		Ummating		Mating		Ummating		Mating		Ummating	
	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs
1	53.0	3.3	55.8	3.5	179.8	11.2	232.0	14.5	320.5	20.0	324.2	20.3
2	61.0	3.8	58.1	3.6	171.8	10.7	234.7	14.7	271.2	17.0	289.6	18.1
3	56.0	3.5	53.0	3.3	177.3	11.1	225.3	14.1	287.7	18.0	279.8	17.5
4	56.8	3.6	55.5	3.5	161.1	10.1	226.2	14.1	289.3	18.1	298.6	18.7
5	57.1	3.6	59.5	3.7	164.0	10.3	214.7	13.4	302.9	18.9	325.0	20.3



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**DATA continued**

**MATING/UNMATING:**

**BXH Series**

<b>Test Date:</b>	6/6/2002		6/6/2002		6/6/2002	
<b>Operator:</b>	GL		GL		GL	
<b>Temperature (C):</b>	25		25		25	
<b>Humidity (RH):</b>	38%		38%		38%	
<b>Equipment Code Number</b>	59		59		59	
<b>Load Cell Code Number</b>	60		60		60	
<b>Readout Code Number</b>						
<b>Contact Description</b>						
<b>Contact Used In:</b>	BSH/BTH		BSH/BTH		BSH/BTH	

Sample#	30 Position				90 Position				150 Position			
	Mating		Ummating		Mating		Ummating		Mating		Ummating	
	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs
1	65.3	4.1	46.1	2.9	167.4	10.5	182.2	11.4	277.4	17.3	221.3	13.8
2	64.6	4.0	66.6	4.2	175.5	11.0	141.6	8.9	270.7	16.9	258.2	16.1
3	49.4	3.1	56.5	3.5	166.9	10.4	174.4	10.9	269.6	16.9	272.0	17.0
4	59.5	3.7	44.3	2.8	169.4	10.6	178.9	11.2	280.0	17.5	273.6	17.1
5	55.7	3.5	50.4	3.2	170.6	10.7	180.2	11.3	260.5	16.3	225.9	14.1



Project Number: NA		Tracking Code: 0212--0640	
Requested by: W. Ouyang		Date: 3/22/02	Product Rev: See Front Page
Part #: See Front Page	Lot #: 03/18/02	Tech: G.Lewis	Eng: J. Tozier
Part description: 0.8mm, 0.635mm, 0.5mm Quiet & Basic High Speed Products			Qty to test: 210
Test Start: 3/29/02	Test Completed: 6/6/02		

**DATA continued**

**MATING/UNMATING:**

**MIS Series**

<b>Test Date:</b>	5/30/2002	5/30/2002	5/30/2002
<b>Operator:</b>	GL	GL	GL
<b>Temperature (C):</b>	21	21	21
<b>Humidity (RH):</b>	48%	48%	48%
<b>Equipment Code Number</b>	59	59	59
<b>Load Cell Code Number</b>	60	60	60
<b>Readout Code Number</b>			
<b>Contact Description</b>			
<b>Contact Used In:</b>	MIS/MIT	MIS/MIT	MIS/MIT
<b>Contact Mates With:</b>			

Sample#	One Bank				Four Bank				Seven Bank			
	Mating		Ummating		Mating		Ummating		Mating		Ummating	
	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs
1	81.0	5.1	85.9	5.4	332.0	20.8	293.3	18.3	598.2	37.4	457.1	28.6
2	100.8	6.3	109.3	6.8	337.1	21.1	231.4	14.5	677.8	42.4	535.2	33.5
3	115.2	7.2	91.0	5.7	303.2	19.0	203.2	12.7	654.7	40.9	510.4	31.9
4	102.1	6.4	107.4	6.7	360.5	22.5	276.5	17.3	694.6	43.4	541.1	33.8
5	102.4	6.4	99.7	6.2	329.8	20.6	243.4	15.2	579.7	36.2	497.6	31.1



Project Number: NA		Tracking Code: 0212--0640	
Requested by: W. Ouyang		Date: 3/22/02	Product Rev: See Front Page
Part #: See Front Page	Lot #: 03/18/02	Tech: G.Lewis	Eng: J. Tozier
Part description: 0.8mm, 0.635mm, 0.5mm Quiet & Basic High Speed Products			Qty to test: 210
Test Start: 3/29/02	Test Completed: 6/6/02		

**DATA continued**

**MATING/UNMATING:**

**QXE Series**

<b>Test Date:</b>	6/3/2002	6/3/2002	6/3/2002
<b>Operator:</b>	GL	GL	GL
<b>Temperature (C):</b>	21	21	21
<b>Humidity (RH):</b>	51%	51%	51%
<b>Equipment Code Number</b>	59	59	59
<b>Load Cell Code Number</b>	60	60	60
<b>Readout Code Number</b>			
<b>Contact Description</b>			
<b>Contact Used In:</b>	QSE/QTE	QSE/QTE	QSE/QTE

Sample#	One Bank				Three Bank				Five Bank			
	Mating		Ummating		Mating		Ummating		Mating		Ummating	
	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs
1	58.2	3.6	56.3	3.5	Lbs	Oz	Lbs	8.0	Lbs	Oz	Lbs	16.3
2	60.0	3.8	64.2	4.0	Lbs	Oz	Lbs	7.3	Lbs	Oz	Lbs	18.9
3	52.3	3.3	53.3	3.3	Lbs	Oz	Lbs	9.4	Lbs	Oz	Lbs	17.2
4	52.2	3.3	56.0	3.5	Lbs	Oz	Lbs	9.4	Lbs	Oz	Lbs	16.9
5	52.2	3.3	55.0	3.4	Lbs	Oz	Lbs	10.6	Lbs	Oz	Lbs	17.4



Project Number: NA		Tracking Code: 0212--0640	
Requested by: W. Ouyang		Date: 3/22/02	Product Rev: See Front Page
Part #: See Front Page	Lot #: 03/18/02	Tech: G.Lewis	Eng: J. Tozier
Part description: 0.8mm, 0.635mm, 0.5mm Quiet & Basic High Speed Products			Qty to test: 210
Test Start: 3/29/02	Test Completed: 6/6/02		

**DATA continued**

**MATING/UNMATING:**

**QXS Series**

<b>Test Date:</b>	5/31/2002	5/31/2002	5/31/2002
<b>Operator:</b>	GL	GL	GL
<b>Temperature (C):</b>	21	21	21
<b>Humidity (RH):</b>	45%	45%	45%
<b>Equipment Code Number</b>	59	59	59
<b>Load Cell Code Number</b>	60	60	60
<b>Readout Code Number</b>			
<b>Contact Description</b>			
<b>Contact Used In:</b>	QSS/QTS	QSS/QTS	QSS/QTS

Sample#	One Bank				Three Bank				Five Bank			
	Mating		Ummating		Mating		Ummating		Mating		Ummating	
	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs
1	57.8	3.6	57.8	3.6	210.6	13.2	187.4	11.7	319.8	20.0	255.5	16.0
2	54.1	3.4	48.3	3.0	197.4	12.3	182.1	11.4	301.8	18.9	243.5	15.2
3	60.6	3.8	62.7	3.9	199.8	12.5	178.7	11.2	306.1	19.1	201.4	12.6
4	53.8	3.4	57.0	3.6	179.8	11.2	157.9	9.9	339.2	21.2	264.3	16.5
5	51.8	3.2	56.5	3.5	213.4	13.3	182.6	11.4	315.5	19.7	207.4	13.0





Project Number: NA		Tracking Code: 0212--0640	
Requested by: W. Ouyang		Date: 3/22/02	Product Rev: See Front Page
Part #: See Front Page	Lot #: 03/18/02	Tech: G.Lewis	Eng: J. Tozier
Part description: 0.8mm, 0.635mm, 0.5mm Quiet & Basic High Speed Products			Qty to test: 210
Test Start: 3/29/02	Test Completed: 6/6/02		

**DATA continued**

**MATING/UNMATING:**

**QXH Series**

<b>Test Date:</b>	5/31/2002	5/31/2002	5/31/2002
<b>Operator:</b>	GL	GL	GL
<b>Temperature (C):</b>	25	25	25
<b>Humidity (RH):</b>	36%	36%	36%
<b>Equipment Code Number</b>	59	59	59
<b>Load Cell Code Number</b>	60	60	60
<b>Readout Code Number</b>			
<b>Contact Description</b>			
<b>Contact Used In:</b>	QSH/QTH	QSH/QTH	QSH/QTH

Sample#	One Bank				Three Bank				Five Bank			
	Mating		Ummating		Mating		Ummating		Mating		Ummating	
	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs	Oz	Lbs
1	71.8	4.5	57.1	3.6	198.6	12.4	206.1	12.9	408.8	25.6	382.9	23.9
2	72.0	4.5	63.4	4.0	208.2	13.0	186.1	11.6	409.0	25.6	374.6	23.4
3	70.4	4.4	66.9	4.2	206.2	12.9	213.3	13.3	407.2	25.5	347.0	21.7
4	71.8	4.5	64.0	4.0	232.6	14.5	175.5	11.0	395.0	24.7	355.4	22.2
5	69.6	4.4	74.9	4.7	193.6	12.1	169.4	10.6	434.6	27.2	396.2	24.8



Project Number: NA		Tracking Code: 0212--0640	
Requested by: W. Ouyang		Date: 3/22/02	Product Rev: See Front Page
Part #: See Front Page	Lot #: 03/18/02	Tech: G.Lewis	Eng: J. Tozier
Part description: 0.8mm, 0.635mm, 0.5mm Quiet & Basic High Speed Products			Qty to test: 210
Test Start: 3/29/02	Test Completed: 6/6/02		

### EQUIPMENT AND CALIBRATION SCHEDULES

**Equipment #: 59**

**Description:** Dillon Quantrol TC2 Test Stand

**Manufacturer:** Dillon Quantrol

**Model:** TC2

**Serial #:** 02-1033-03

**Accuracy:** Speed Accuracy: +/- 5% of indicated speed; Displacement: +/- 5 micrometers.

... Last Cal: 03/21/02, Next Cal: 03/21/03

**Equipment #: 60**

**Description:** 2500 N Load Cell for Dillon Quantrol

**Manufacturer:** Dillon Quantrol

**Model:** icell

**Serial #:** 01-0132-01

**Accuracy:** .10% of capacity

... Last Cal: 3/21/02, Next Cal: 3/21/03