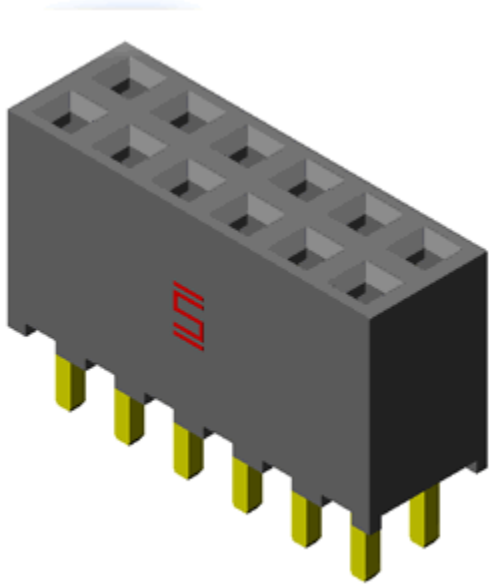
Project Number: NA	Tracking Code: TC0344--0303		
Requested by: Ty Atkins	Date: 10/31/2003	Product Rev: N/A	
Part #: SQW-162-01-L-D	Lot #: N/A	Tech: Troy Cook	Eng: John Tozier
Part description: SQW			Qty to test: 4
Test Start: 10/31/2003	Test Completed: 10/31/2003		



Breakdown Voltage

PART DESCRIPTION

SQW-162-01-L-D
Mated with TMM-1xx-01-S-D

Tracking Code: TC0344--0303	Part #: SQW-162-01-L-D
Part description: SQW	

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: Test Breakdown Voltage both mated and unmated.

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
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) The ultrasonic procedure can be used with either aqueous or non-aqeous soldering components and follows:
   a) Sample test boards are to be ultrasonically cleaned after test lead attachment, preparation and/or soldering using the following process.
   b) Sample test boards are immersed into Branson 3510 cleaner containing Kyzen Ionox HC1 (or equivalent) with the following conditions:
      i) Temperature: ----------55° C+/- 5° C
      ii) Frequency:----------40 KHz
      iii) Immersion Time: ----------5 to 10 Minutes
      iv) Sample test boards are removed and placed into the Branson 3510 cleaner containing deionized water with the following conditions:
      v) Temperature: ----------55° C +/- 5° C
      vi) Frequency:----------40 KHz
      vii) Immersion Time: ----------5 to 10 Minutes
      viii) Sample test boards are removed and placed in a beaker positioned on a hot plate with a magnetic stirrer containing deionized water warmed to 55° C +/- 5° C for 1/2 to 1 minute
   c) Upon removal, the sample test boards are rinsed for 1/2 to 1 minute in room temperature free flowing deionized water.
   d) After the final rinse, the sample test boards are dried in an air-circulating oven for 10 to 15 minutes at 50° C +/- 5° C
   e) Sample test boards are then allowed to set and recover to room ambient condition prior to testing.
7) Parts not intended for testing LLCR and DWV/IR are visually inspected and cleaned if necessary.
8) Any additional preparation will be noted in the individual test procedures.

Tracking Code: TC0344--0303	Part #: SQW-162-01-L-D
Part description: SQW	

ATTRIBUTE DEFINITION

Following is a brief, simplified description of attributes.

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
      ii) Mated and Unmated
      iii) Unmounted
      iv) Rate of Application 500 V/Sec
      v) 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).

Tracking Code: TC0344--0303	Part #: SQW-162-01-L-D
Part description: SQW	

RESULTS

Dielectric Withstanding Voltage minimums, DWV

- **Ambient**
  - **Breakdown Pin - Pin**
    - **Mated**
      - **Row – Row ---------- 2500 VAC**
      - **Pin - Pin---------- 1800 VAC**
    - **Unmated**
      - **Row – Row ---------- 2800 VAC**
      - **Pin - Pin---------- 1600 VAC**
  - **DWV Pin - Pin**
    - **Mated**
      - **Row – Row ---------- 1875 VAC**
      - **Pin - Pin---------- 1350 VAC**
    - **Unmated**
      - **Row – Row ---------- 2100 VAC**
      - **Pin - Pin---------- 1200 VAC**
  - **Working voltage Pin - Pin**
    - **Mated**
      - **Row – Row ----------625 VAC**
      - **Pin - Pin----------450 VAC**
    - **Unmated**
      - **Row – Row ----------700 VAC**
      - **Pin - Pin----------400 VAC**

Tracking Code: TC0344--0303	Part #: SQW-162-01-L-D
Part description: SQW	

DATA SUMMARIES

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

	Voltage Rate ***500 VAC Per Sec.***					
	Test Voltage ***Until Breakdown Occurs***					
	Mated Row-Row			**Mated Pin-Pin**		
	Breakdown Voltage	**DWV**	**Working Voltage**	**Breakdown Voltage**	**DWV**	**Working Voltage**
Average	2733	2050	683	1933	1450	483
Min	2500	1875	625	1800	1350	450
Max	2900	2175	725	2100	1575	525

	Voltage Rate ***500 VAC Per Sec.***					
	Test Voltage ***Until Breakdown Occurs***					
	Unmated Row-Row			**Unmated Pin-Pin**		
	Breakdown Voltage	**DWV**	**Working Voltage**	**Breakdown Voltage**	**DWV**	**Working Voltage**
Average	2967	2225	742	1733	1300	433
Min	2800	2100	700	1600	1200	400
Max	3100	2325	775	1800	1350	450

Tracking Code: TC0344--0303	Part #: SQW-162-01-L-D
Part description: SQW	

DATA

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

Test Date:	10/31/2003	VAC
Operator:	Troy Cook	
Temperature (C):	22	
Humidity (RH):	41%	
Pressure (In. Hg):	29.53	
Equipment ID:	HPM-01	

Contact Part #:	C-179-XX-X
Used In:	SQT

Test Conditions	**YES**	**NO**
Adjacent Contacts	X	
Mated	X	X
PC Mounted		X

	Voltage Rate ***500 VAC Per Sec.***					
	Test Voltage ***Until Breakdown Occurs***					
	Mated Row-Row			**Mated Pin-Pin**		
Sample #	**Breakdown Voltage**	**DWV**	**Working Voltage**	**Breakdown Voltage**	**DWV**	**Working Voltage**
1	2800	2100	700	1900	1425	475
2	2900	2175	725	1800	1350	450
3	2500	1875	625	2100	1575	525

	Voltage Rate ***500 VAC Per Sec.***					
	Test Voltage ***Until Breakdown Occurs***					
	Unmated Row-Row			**Unmated Pin-Pin**		
Sample #	**Breakdown Voltage**	**DWV**	**Working Voltage**	**Breakdown Voltage**	**DWV**	**Working Voltage**
1	3000	2250	750	1800	1350	450
2	2800	2100	700	1800	1350	450
3	3100	2325	775	1600	1200	400

Tracking Code: TC0344--0303	Part #: SQW-162-01-L-D
Part description: SQW	

EQUIPMENT AND CALIBRATION SCHEDULES

Equipment #: THL-01
Description: Temperature/Humidity Chart Recorder
Manufacturer: Dickson
Model: THDX
Serial #: 9316255
Accuracy: Temp: +/- 1C; Humidity: +/-2% RH (0 - 60%) +/- 3% RH (61 - 95%).
… Last Cal: 7/15/02, Next Cal: 7/15/03

Equipment #: HPM-01
Description: Hipot Megommeter
Manufacturer: Hipotronics
Model: H306B-A
Serial #: M9905004
Accuracy: 2 % Full Scale Accuracy
… Last Cal6/12/03, Next Cal: 6/12/04