PRODUCT SPECIFICATION

CONTACT SPRING

1.0 SCOPE

This Product Specification covers contact spring product.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

Series Number	Product Descriptions
105439	**Contact Spring**

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See the appropriate Sales Drawings for information on dimensions, materials, plating and markings**,** recommended module outlines and footprint Specifications.

2.3 SAFETY AGENCY APPROVALS

UL File: TBA
CSA File: TBA

TENTATIVE RELEASE: THIS SPECIFICATION IS BASED ON DESIGN OBJECTIVES AND IS STRICTLY TENTATIVE. PRELIMINARY TEST DATA MAY EXIST, BUT THIS SPECIFICATION IS SUBJECTED TO CHANGE BASED ON THE RESULTS OF ADDITIONAL TESTING AND EVALUATION

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

The following documents are part of this specification between the requirements of this specified herewith. In the event of conflict between the requirements of this specification and the product drawings, the product drawings shall take precedence. In the event of conflict between the requirements of this specification and reference documents, this specification shall take precedence.

4.0 RATINGS

4.1 VOLTAGE

Max. 15 Volts DC

4.2 CURRENT

Max. 1.5 Amps

4.3 FIELD LIFE AND TEMPERATURE

Field Life: 1 years
Field Temperature: -40°C~85°C

4.4 OPERATING TEMPERTURE

-40°C ~ +85°C

4.5 STORAGE HUMIDITY RANGE:

15%RH~70%RH

5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	**Contact Resistance (Low Level)**	Mate connectors at minimum deflection: apply a maximum voltage of 20 mV and a maximum current of 100 mA. (EIA-364-23)	Initial: 75 mΩ Max. After group test: 100 mΩ Max
2	**Temperature Rise**	Mate the connectors, single contact and measure the temperature rise at the rated current of 1.5A.	Maximum Temperature Rise: 30 °C above ambient.

5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
3	**Contact Force**	Measure force at minimum deflection	0.20N minimum before durability and after durability
4	**Durability**	1500 cycles; 400 ~ 600 cycles per hour. (EIA-364-09C/ Method 2016 of MIL-STD-1344A)	No mechanical Damage Contact Resistance: Max. 100 mΩ
5	**Peeling strength**	Test method according STR retention force of contact	Min. 3N
6	**Push strength**	Test method according STR retention force of contact	Min. 10N
7	**Vibration**	Subject mated specimens to 3.10G's rms between 20-500Hz. 15 minutes in each of 3 mutually perpendicular planes. EIA-364-28, Test Condition VII, Test Condition Letter D	No mechanical Damage No change to performance. Discontinuity < 1us Contact Resistance: Max. 100 mΩ
8	**Shock (Mechanical)**	Subject mated specimens to 30 G's half-sine shock pulsed of 11 milliseconds duration. Three shocks in each direction applied along 3 mutually perpendicular planes, 18 total shock. (EIA-364-27, Condition H)	No mechanical Damage No change to performance. Discontinuity < 1us Contact Resistance: Max. 100 mΩ

5.3 ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
9	Damp heat IEC 60068-2-30 Db	Temp 25-55・C, RH 90-100% for 18 cycles of 24 hours each. The typical cycle in temp 25°C -> 55°C in 3 hours then maintain at 55°C for 9 hours Temp +55°C -> +25°C in 3 hours, maintain at 25°C for 9 hours. Recovery at 25°C. R/H 75% for 2 hours Mated tests: 10 mA (voltage is defined by current and resistance)	No change to performance Contact resistance: Max. 50mOhm for Cu alloy / 100mOhm for SST Measure the resistance without opening the mating after test. No reference value for "power on" available
		Unmated tests: Connector with free contacts No power on. Testing conditions are same	No corrosion on contact area after testing

6.0 TEST SEQUENCE

TEST DESCRIPTION SEQUENCE		TEST GROUP						
	1	2	3	4	5	6	7(mated)	8(unmated)
Contact Resistance	1,5	1,4					1,3	1,3
Temperature Rise						1		
Contact Force	2,4							
Durability	3							
Damp heat							2	2
Vibration		2						
Shock		3						
Peeling strength				1				
Push strength					1			
Sample Size per Test Group	5	5	5	5	5	5	5	5

7.0 PACKAGING

Parts shall be packed in tapes and protected against damage during handling, transportation and storage.