



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

105386

RF 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

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| REVISION: A | ECR/ECN INFORMATION: EC No: SH2015-0239 DATE: 2015/03/09 | TITLE: RF SPRING | SHEET No. 1 of 4 |
| DOCUMENT NUMBER: PS-105386-001 | CREATED / REVISED BY: RLI09 | CHECKED BY: FYANG05 | APPROVED BY: RZHANG |



PRODUCT SPECIFICATION

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

10 Volts DC

4.2 CURRENT

1.5 Amps

4.3 FIELD LIFE AND TEMPERATURE

Field Life: 1 years

Field Temperature: -40°C~85°C

4.4 OPERATING TEMPERATURE

-40°C ~ +85°C

4.5 NON OPERATING TEMPERATURE

-55°C ~ +85°C

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: 50 mΩ Max. ΔR: 10 mΩ Max. |
| 2 | Contact Current Rating | Mate the connectors, single contact and measure the temperature rise at the rated current of 1.5A. | Maximum Temperature Rise: 30 °C above ambient. |

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5.2 MECHANICAL REQUIREMENTS

| ITEM | DESCRIPTION | TEST CONDITION | REQUIREMENT |
|------|--------------------|--|---|
| 3 | Normal Force | Measure force at minimum deflection | 0.25N minimum before durability 0.20N minimum after durability |
| 4 | Durability | 1500 cycles; 400 ~ 600 cycles per hour. (EIA-364-09C/ Method 2016 of MIL-STD-1344A) | Contact Resistance: ΔR : 10 m Ω Max. No physical damage |
| 5 | 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 Physical Damage Contact Resistance: ΔR : 10 m Ω Max. No discontinuities of 1 microsecond or longer duration. |
| 6 | 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 Physical Damage Contact Resistance: ΔR : 10 m Ω Max. No discontinuities of 1 microsecond or longer duration. |

5.3 ENVIRONMENTAL REQUIREMENTS

| ITEM | DESCRIPTION | TEST CONDITION | REQUIREMENT |
|------|------------------------------|--|---|
| 7 | Salt Spray | Meet 48 Hours, 5% Salt Concentration (EIA-364-26 / Method 101D, test condition B of MIL-STD-202F) | Contact Resistance: ΔR : 10 m Ω Max. Appearance: No Damage |
| 8 | Humidity-Temperature Cycling | 25°C~65°C, 90%~95% RH; 7 Cycles (7 days). (EIA-364-31B, Method IV) | Contact Resistance: ΔR : 10 m Ω Max. Appearance: No Damage |
| 9 | Thermal Shock | Mate connectors; expose to 10 cycles of: -55°C for 30 minutes and 85°C for 30 minutes. (EIA-364-32C) | Contact Resistance: ΔR : 10 m Ω Max. Appearance: No Damage |
| 10 | Temperature Life | Mate connectors; expose to: 250 hours at 85 \pm 3°C Per EIA-364-17 | Contact Resistance: ΔR : 10 m Ω Max. Appearance: No Damage |
| 11 | Solderability | Steam age for 8 hour +/- 15 min. Solder 5 \pm 0.5 seconds. Solder temperature: 245 \pm 5 °C. Non-activated flux. (EIA-364-52A) | Solder coverage: 95% MINIMUM |

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6.0 TEST SEQUENCE

| TEST DESCRIPTION SEQUENCE | TEST GROUP | | | | | | |
|------------------------------|------------|-----|-------|-----|-----|-----|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Contact Resistance | | 2,4 | 1,3,5 | 1,4 | 1,3 | 1,3 | |
| Contact Current Rating | 1 | | | | | | |
| Normal Force | | 1,5 | | | | | |
| Durability | | 3 | | | | | |
| Vibration | | | 2 | | | | |
| Shock (Mechanical) | | | 4 | | | | |
| Salt Spray | | | | | 2 | | |
| Humidity-Temperature Cycling | | | | 3 | | | |
| Thermal Shock | | | | 2 | | | |
| Temperature Life | | | | | | 2 | |
| Solderability | | | | | | | 1 |
| Sample Size per Test Group | 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. .

8.0 RECOMMENDED SOLDERING PROCESS

Connector should be soldered onto PCB using the reflow soldering technique.

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