Reliability Test

1-1 Electrical Performance

No.	Item	Specification	Test Method
1-1-1	Inductance	Refer To Standard Electrical Characteristic List.	HP 4291A + HP16193A
1-1-2	Q		HP 4291A + HP16193A
1-1-3	SRF		HP 8753D
1-1-4	DC Resistance Rdc		DIGITAL MULTIMETER SC-7401
1-1-5	Rated Current Idc		Applied The Current To Coils, The Inductance Change Should Be Less Than 10% To Initial Value.
1-1-6	Over Load Test	After Test, Inductors Shall Be No Evidence Of Electrical And Mechanical Damage.	Applied 2 Times Of Rated Allowed DC Current To Inductor For A Period Of 5 Minute.
1-1-7	Withstanding Voltage Test	After Test, Inductors Shall Be No Evidence Of Electrical And Mechanical Damage.	AC Voltage Of 500 VAC Applied Between Inductors Terminal And Case For 1 Minute.
1-1-8	Insulation Resistance Test	1000M ohms Min.	100 VDC Applied Between Inductor Terminal And Case

1-2 Environmental Performance

<table>
<tr><th>No.</th><th>Item</th><th>Specification</th><th>Test Method</th></tr>
<tr><td>1-2-1</td><td>Temperature Cycle</td><td rowspan="4">Appearance: No Damage
L change: Within±10%
Q change: Within±20%</td><td>One Cycle:
<table>
<tr><th>Step</th><th>Temperature (℃)</th><th>Time (min.)</th></tr>
<tr><td>1</td><td>-25±3</td><td>30</td></tr>
<tr><td>2</td><td>25±2</td><td>15</td></tr>
<tr><td>3</td><td>85±3</td><td>30</td></tr>
<tr><td>4</td><td>25±2</td><td>15</td></tr>
</table>
Total: 5 cycles
Measured After Exposure In The Room Condition For 1Hrs</td></tr>
<tr><td>1-2-2</td><td>Humidity Resistance</td><td>Temperature: 40±2℃
Relative Humidity: 90 ~ 95%
Time: 100Hrs
Measured After Exposure In The Room Condition For 1Hrs</td></tr>
<tr><td>1-2-3</td><td>High Temperature Resistance</td><td>Temperature: 125±3℃
Time: 50Hrs
Measured After Exposure In The Room Condition For 1Hrs</td></tr>
<tr><td>1-2-4</td><td>Low Temperature Resistance</td><td>Temperature: -40±3℃
Time: 50Hrs
Measured After Exposure In The Room Condition For 1Hrs</td></tr>
<tr><td>1-2-5</td><td>High Temperature Load Life</td><td rowspan="2">There Should Be No Evidence Of Short Or Open Circle</td><td>Temperature: 85±3℃
Load: Allowed DC Current
Time: 1000Hrs</td></tr>
<tr><td>1-2-6</td><td>Humidity Load Life</td><td>Temperature: 40±2℃
Relative Humidity: 90 ~ 95%
Load: Allowed DC Current
Time: 1000Hrs</td></tr>
</table>

1-3 Mechanical Performance

No.	Item	Specification	Test Method
1-3-1	Vibration Test (Low Frequency)	1. Appearance: No damage 2. L change: within±5% 3. Q change: within±10%	1. Test Device Shall Be Soldered On The Substrate. 2. Oscillation Frequency: 10 to 55 to 10Hz for 1min. 3. Amplitude: 1.5mm 4. Time: 2hrs For Each Axis (X, Y & Z), Total 6hrs
1-3-2	Resistance To Soldering Heat	Appearance: No Damage	1. Pre-Heating: 150℃, 1min. 2. Solder Composition: Sn/Pb = 63/37. 3. Solder Temperature: 260±5℃. 4. Immersion Time: 10±1sec.
1-3-3	Solderability	The Electrodes Shall Be At Least 90% Covered With New Solder Coating	1. Pre-Heating: 150℃, 1min. 2. Solder Composition: Sn/Pb = 63/37. 3. Solder Temperature: 230±5℃. 4. Immersion Time: 4±1sec.
1-3-4	Component Adhesion (Push Test)	2 Lbs. For 0603 4 Lbs. For The Rest	The Device Should Be Reflow Soldered (230℃?5℃ For 10 Seconds) To A Tinned Copper Substrate. A Force Gauge Should Be Applied To The Side Of The Component. The Device Must Withstand A Minimum Force Of 2 Or 4 Pounds Without A Failure Of The Termination Attached To Component.