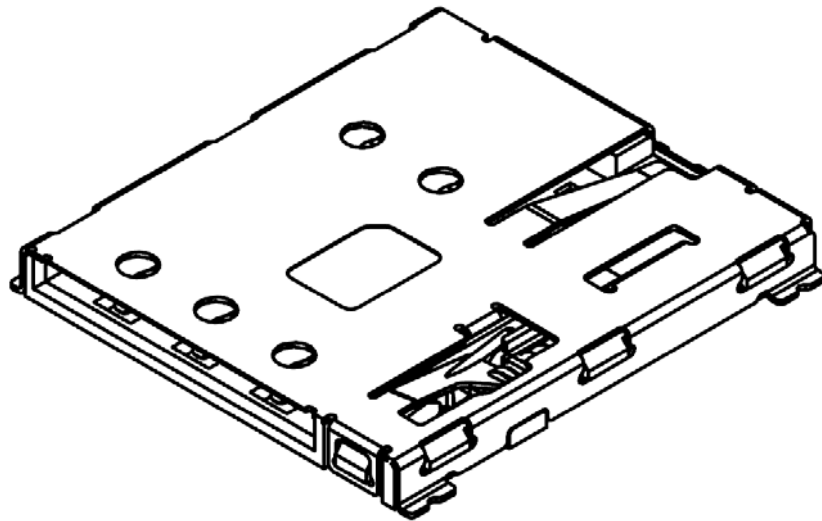


# PRODUCT SPECIFICATION

|                     |  |          |    |         |    |          |      |          |
|---------------------|--|----------|----|---------|----|----------|------|----------|
| Part Number         | SIM8065  |          |    | Rev     | A  |          | Date | 18/02/20 |
| Product Description | Nano SIM Card Connector, Push-Push Type, SMT, 6Pin, 1.37mm Profile |          |    |         |    |          | Page | 1        |
| Doc Number          | SIM8065  | Prepared | CC | Checked | VJ | Approved | PH   |          |



# PRODUCT SPECIFICATION

|                            |  |                 |           |                      |                       |
|----------------------------|--|-----------------|-----------|----------------------|-----------------------|
| <b>Part Number</b>         | SIM8065  | <b>Rev</b>      | A         | <b>Date</b>          | 18/02/20              |
| <b>Product Description</b> | Nano SIM Card Connector, Push-Push Type, SMT, 6Pin, 1.37mm Profile |                 |           |                      | <b>Page</b><br>2      |
| <b>Doc Number</b>          | SIM8065  | <b>Prepared</b> | <b>CC</b> | <b>Checked</b><br>VJ | <b>Approved</b><br>PH |

## 1.0 SCOPE.

This specification covers performance, tests and quality requirements for the Nano SIM Card Connector SIM8065 (Push-Push Type, SMT, 6 Pin, 1.37mm Profile).

## 2.0 PRODUCT NAME AND PART NUMBER.

Nano SIM Card Connector, Push-Push Type, SMT, 6 Pin, 1.37mm Profile: SIM8065.

## 3.0 PRODUCT SHAPE, DIMENSIONS AND MATERIAL.

Please refer to drawings.

## 4.0 RATINGS.

Current Rating ..... 1A AC/DC Max.  
Voltage Rating ..... 30V AC/DC  
Operating Temperature Range ..... -40°C to +85°C  
Storage Temperature ..... -40°C to +70°C  
Storage Humidity..... Relative Humidity: ≤80%

## 5.0 TEST AND MEASUREMENT CONDITIONS.

Product is designed to meet electrical, mechanical and environmental performance requirements specified in Paragraph 6.0. All tests are performed at ambient environmental conditions unless otherwise specified.

## 6.0 PERFORMANCE.

| Item                   | Test Condition   | Requirement   |
|------------------------|--|---|
| Examination of Product | Visual, dimensional and functional inspection as per quality plan. | Product shall meet requirements of product drawing and specification. |

# PRODUCT SPECIFICATION

|                     |  |          |    |         |          |          |    |
|---------------------|--|----------|----|---------|----------|----------|----|
| Part Number         | SIM8065  | Rev      | A  | Date    | 18/02/20 |          |    |
| Product Description | Nano SIM Card Connector, Push-Push Type, SMT, 6Pin, 1.37mm Profile |          |    | Page    | 3        |          |    |
| Doc Number          | SIM8065  | Prepared | CC | Checked | VJ       | Approved | PH |

## 6.1 Electrical Performance.

| Item                  | Test Condition  | Requirement                                  |
|-----------------------|---|--|
| Contact Resistance    | Measure and record contact resistance of mated connector using test current of 10mA max and 20 mV open circuit voltage in accordance with EIA-364-23.           | Signal pin: 100mΩ max<br>CD to GND:200mΩ max |
| Insulation Resistance | Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector.<br>In accordance with EIA-364-21. | 1000 MΩ minimum<br>@100V DC for 1 minute     |
| Dielectric Strength   | Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector.<br>In accordance with EIA-364-20. | No Breakdown                                 |

## 6.2 Mechanical Performance.

| Item                  | Test Condition   | Requirement   |
|-----------------------|--|---|
| Durability            | Mate & Unmate Nano SIM card at vertical direction to the position equal to inserting a 0.67mm thick Nano SIM card for 5000 cycles.<br>In accordance with EIA-364-09.   | Signal pin: 100mΩ max<br>CD to GND:200mΩ max<br>Dielectric Strength: No breakdown<br>Insulation Resistance: 1000 MΩ min.          |
| Card Insertion Force  | Push the Nano SIM card at a rate of 25.4mm/min.<br>In accordance with EIA-364-13B.   | 10N Max.  |
| Card Withdrawal Force | Pull the Nano SIM card at a rate of 25.4mm/min.<br>In accordance with EIA-364-13B.   | 0.5N Min.   |
| Mechanical shock      | Subject the part to a 490 m/s <sup>2</sup> half sine wave acceleration for 11 ms.<br>Three shocks to be applied in each of the X, Y and Z planes and in both directions.<br>A total of 18 shocks<br>10mA Max. Applied.<br>In accordance with EIA-364-27. | Appearance: No Damage.<br>Discontinuity: 1.0 μ second Max.<br>Contact Resistance:<br>Signal pin: 100mΩ max<br>CD to GND:200mΩ max |
| Vibration             | Insert SIM card into connector and expose to 10 to 55 to 10 Hz frequency span over 1 minute at a 1.52mm amplitude for a total of 2Hours. Test to be conducted on 3 mutually perpendicular planes. 10mA Max. Applied.<br>In accordance with EIA-364-28.   | Appearance: No Damage.<br>Discontinuity: 1.0 μ second Max.<br>Contact Resistance:<br>Signal pin: 100mΩ max<br>CD to GND:200mΩ max |

# PRODUCT SPECIFICATION

|                     |  |          |    |         |    |          |      |          |
|---------------------|--|----------|----|---------|----|----------|------|----------|
| Part Number         | SIM8065  |          |    | Rev     | A  |          | Date | 18/02/20 |
| Product Description | Nano SIM Card Connector, Push-Push Type, SMT, 6Pin, 1.37mm Profile |          |    |         |    |          | Page | 4        |
| Doc Number          | SIM8065  | Prepared | CC | Checked | VJ | Approved | PH   |          |

## 6.3 Environmental Performance and Others.

| Item                                 | Test Condition  | Requirement  |
|--------------------------------------|---|--|
| Thermal Shock                        | The card shall be mated and exposed to the following condition for 10 cycles.<br>1 cycle) -55±3 for 30 minutes<br>b)+85±2 for 30 minutes transit time shall be within 3 minutes<br>Recovery time 1~2 hours.<br>In accordance with EIA-364-32  | No damage<br>Contact Resistance:<br>Signal pin: 100mΩ max<br>CD to GND:200mΩ max |
| Humidity Test                        | Mate Connector and expose to temperature of 25~65°C±3,<br>50~80%RH±3, Ramp times should be 0.5 hour & dwell should be 1 hour, 1 cycle 24H. 10cycles<br>In accordance with EIA-364-31.   | No damage<br>Contact Resistance:<br>Signal pin: 100mΩ max<br>CD to GND:200mΩ max |
| Salt Water Spray                     | 5±1% salt concentration 24 hours 35±2°C<br>In accordance with EIA-364-26.   | No rusty<br>Contact Resistance:<br>Signal pin: 100mΩ max<br>CD to GND:200mΩ max  |
| Temperature Life (High)              | Subject product to 85±2°C for 96 hours continuously. MIL-STD-202, Method 108.   | No damage<br>Contact Resistance:<br>Signal pin: 100mΩ max<br>CD to GND:200mΩ max |
| Low Temperature                      | Mate dummy card and exposed to -40 +2°C with 90~95% RH for 96 hours. Upon completion of the exposure period, the test specimens shall be conditions at ambient room conditions for 1 to 2 hours, after which the specified measurement shall be performed.<br>In accordance with EIA 364-59 | No damage<br>Contact Resistance:<br>Signal pin: 100mΩ max<br>CD to GND:200mΩ max |
| Temperature Rise                     | Mate card and measure the temperature rise of contact, when rated current is passed.<br>In accordance with EIA-364-70 Method 1.   | 30°C Max   |
| Solderability                        | Dip solders tails into molten solder, held at a temperature of 250±5°C up to 0.5mm from the tip of the tails for 3±0.5 seconds.   | Contact solder pad has a min. 95% solder coverage                                |
| Resistance to Reflow Soldering Heat. | Mount connector, place in reflow oven and expose to the temperature profile shown in fig 1.0  | No evidence of physical damage or abnormalities adversely affecting performance. |

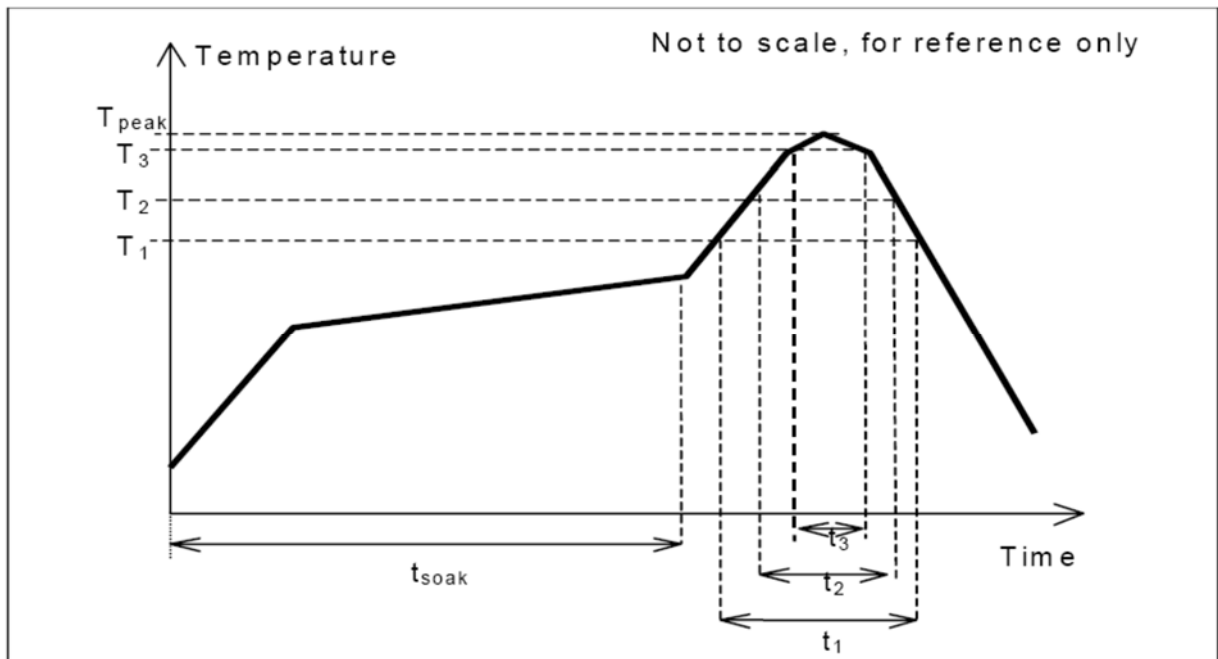
# PRODUCT SPECIFICATION

|                     |  |          |    |         |          |          |    |
|---------------------|--|----------|----|---------|----------|----------|----|
| Part Number         | SIM8065  | Rev      | A  | Date    | 18/02/20 |          |    |
| Product Description | Nano SIM Card Connector, Push-Push Type, SMT, 6Pin, 1.37mm Profile |          |    | Page    | 5        |          |    |
| Doc Number          | SIM8065  | Prepared | CC | Checked | VJ       | Approved | PH |

## 6.4 REFLOW SOLDERING PROFILE

Pb-free reflow profile requirements

| Parameter                                  | Reference         | Specification   |
|--|-------------------|-----------------|
| Average temperature gradient in preheating |                   | 2.5°C/s         |
| Soak time                                  | t <sub>soak</sub> | 2-3 minutes     |
| Time above 217°C                           | t <sub>1</sub>    | 60 s            |
| Time above 230°C                           | t <sub>2</sub>    | 50 s            |
| Time above 250°C                           | t <sub>3</sub>    | 5 s             |
| Peak temperature in reflow                 | T <sub>peak</sub> | 255°C (−0/+5°C) |
| Temperature gradient in cooling            |                   | Max -5°C/s      |



This profile is the minimum requirement for evaluating soldering heat resistance of components. Heat transfer method used for reflow soldering is hot air convection. The actual air temperatures used to achieve the specified profile is higher and largely dependent on the reflow equipment.

# PRODUCT SPECIFICATION

|                     |  |          |    |         |      |          |    |
|---------------------|--|----------|----|---------|------|----------|----|
| Part Number         | SIM8065  | Rev      | A  |         | Date | 18/02/20 |    |
| Product Description | Nano SIM Card Connector, Push-Push Type, SMT, 6Pin, 1.37mm Profile |          |    |         |      | Page     | 6  |
| Doc Number          | SIM8065  | Prepared | CC | Checked | VJ   | Approved | PH |

## 7.0 PRODUCT QUALIFICATION AND TEST SEQUENCE

| Test Item                       | Group |     |     |     |     |     |     |     |     |     | K   |
|---------------------------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                                 | A     | B   | C   | D   | E   | F   | G   | H   | I   | J   |     |
| Examination of Product          | 1,9   | 1,3 | 1,3 | 1,3 | 1,4 | 1,6 | 1,5 | 1,3 | 1,5 | 1,5 | 1,3 |
| Contact Resistance              | 2,6   |     |     |     |     | 2,5 | 2,4 |     | 2,4 | 2,4 |     |
| Insulation Resistance           | 3,7   |     |     |     |     |     |     |     |     |     |     |
| Dielectric Withstanding Voltage | 4,8   |     |     |     |     |     |     |     |     |     |     |
| Durability                      | 5     |     |     |     |     |     |     |     |     |     |     |
| Temperature Rise                |       | 2   |     |     |     |     |     |     |     |     |     |
| Solderability                   |       |     | 2   |     |     |     |     |     |     |     |     |
| Resistance to Soldering Heat    |       |     |     | 2   |     |     |     |     |     |     |     |
| Card Insertion Force            |       |     |     |     | 2   |     |     |     |     |     |     |
| Card Withdrawal Force           |       |     |     |     | 3   |     |     |     |     |     |     |
| Mechanical shock                |       |     |     |     |     | 3   |     |     |     |     |     |
| Vibration                       |       |     |     |     |     | 4   |     |     |     |     |     |
| Temperature life (High)         |       |     |     |     |     |     | 3   |     |     |     |     |
| Low Temperature                 |       |     |     |     |     |     |     | 2   |     |     |     |
| Thermal Shock                   |       |     |     |     |     |     |     |     | 3   |     |     |
| Humidity Test                   |       |     |     |     |     |     |     |     |     | 3   |     |
| Salt Water Spray                |       |     |     |     |     |     |     |     |     |     | 2   |

# PRODUCT SPECIFICATION

|                     |  |          |    |         |    |          |      |          |
|---------------------|--|----------|----|---------|----|----------|------|----------|
| Part Number         | SIM8065  |          |    | Rev     | A  |          | Date | 18/02/20 |
| Product Description | Nano SIM Card Connector, Push-Push Type, SMT, 6Pin, 1.37mm Profile |          |    |         |    |          | Page | 7        |
| Doc Number          | SIM8065  | Prepared | CC | Checked | VJ | Approved | PH   |          |

## Revision details

| Revision | Information            | Page | Release Date |
|----------|------------------------|------|--------------|
| A        | Specification Released | -    | 18/02/2020   |
|          |                        |      |              |
|          |                        |      |              |

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Global Connector Technology \(GCT\):](#)

[SIM8065-6-1-14-01-A](#)