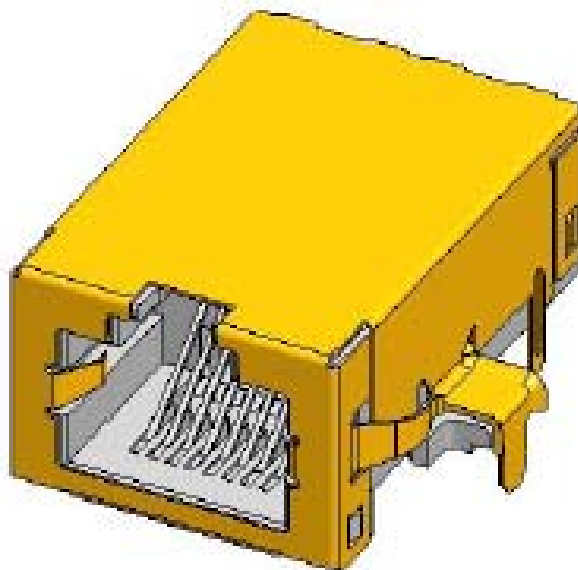




# PRODUCT SPECIFICATION

RD-PS-A-001-151



ACRON P/N: GDI27-N3-090A300

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REVISION:	ECR/ECN INFORMATION:		PRODUCT NO	GDI27-N3-090A300	SHEET No
<b>B</b>	EC No:	<b>RD-130365</b>	PRODUCT NAME	GIGABIT MODULAR JACK DIP TYPE (WITH LED)	<b>1 of 6</b>
	DATE:	<b>2013/8/21</b>			
DOCUMENT NUMBER:		CREATED / REVISED BY:		CHECKED BY:	APPROVED BY:
<b>PS-GD-0009</b>		<b>JEFF.YANG</b>		<b>JERRY.TUNG</b>	<b>KIMI.HSU</b>



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## 1.0 SCOPE

This specification defines the performances for GIGABIT MODULAR JACK CONNECTOR.

## 2.0 PRODUCT DESCRIPTION

Gigabit Modular jack Dip Type. Part No: GDI27-N3-090A300

## 3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

See product drawing and other sections of this specification for the relevant reference documents and specifications. In cases where the specification differs from the product drawings, the product drawings take precedence. In the event of conflict between the requirements of this specification and the referenced documents, the specification shall take precedence.

## 4.0 RATINGS

A. Operating temperature range at rated voltage and current: 0°C to +70°C

B. Storage Temperature Range: -40°C to +85°C

## 5.0 MEASUREMENT

All measurements shall be made 5 times of identity point, and the record is on average of those. But, in case of measurement that is no suspicion, it shall be made 1 time.

All test measurements are at standard atmospheric condition limit:

1. Ambient temperature: 25 ± 10°C

2. Relative humidity: 25% R.H to 85% R.H

3. Air pressure: 86KPa to 106KPa

## 6.0 PERFORMANCE

item	Test Items	Requirement	Procedures
1	Examination of Product	Meets requirements of product drawing. No physical damage.	Visual. Dimensional and functional per applicable quality inspection plan.

### Electrical Requirements

	Test Items	Requirement	Procedures
1	Current rated Voltage rated	350 mA Max. per terminal 57 VDC Max per contact	
2	Temperature Rise	30°C rise maximum from initial	Mate connector and measure the temperature rise at the rated current and voltage applied. EIA 364-70 B

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3	<b>Contact Resistance</b>	20 mOhms Max.	Connect with applicable connector. And measurement between each coupled terminals. 5V / 1A D.C Per EIA 364-23
4	<b>Insulation Resistance</b>	1000 MOhms Min.	Test between adjacent terminals with impressed voltage 500 VDC for 1minute.EIA 364-20
5	<b>Dielectric strength</b>	No creeping discharge nor flashover occur.	Connect with applicable connector. Test between jack side terminals and shell applied with 2250 VDC or 1500VAC for 1 minute. Cut off Current : 1mA max EIA 364-21

## Mechanical Requirements

	Test Items	Requirement	Procedures
6	<b>Total insertion / withdrawal Force</b>	Insertion 35.6N Max.	After 3 cycles insertion and withdrawal. Measure the force required to mate connectors. Operation Speed: 25-100 mm/min. Per EIA 364-13
		Withdrawal 35.6N Min.	
7	<b>Durability</b>	Mate connectors up to 1000 cycles at a maximum rate of 10 cycles per minute prior to Environmental Tests.	12 Ω MAXIMUM
8	<b>Appearance</b>	Meets requirements of product drawing.	Visual inspection No physical damage

## Application Requirements

9	<b>Resistance to flux penetration</b>	Meet all electrical and mechanical requirements. No flux into test specimens.	Test connector on PWB, thickness of PWB is 1.6mm. 1.Immersed in the flux 3 to 4s 2.Electricity performance test 3.Use automatic soldering device , 250-260℃ for 4-5s 4.Place 24 hrs or more 5.Disassemble connector
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## Environment Requirements and Endurance Characteristics

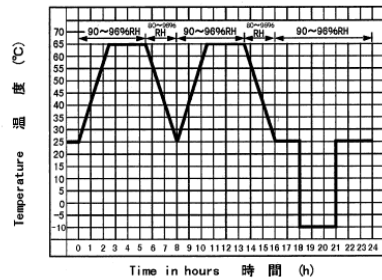
	Test Items	Requirement	Procedures
10	Vibration	No electrical discontinuity greater than 1μsec. Contact resistance: 40 mohms max changed from initial value. And without distinct damage	Amplitude: 1.5mm Vibration direction is in 3 mutually perpendicular axis's. Each axis period is 2 hours (total 6 hrs for 3 axes). One cycle for vibration: 10 to 55Hz and back to 10Hz in 1 minute. Per EIA 364-28/JIS C 0040
11	Physical Shock	No electrical discontinuity greater than 1μsec. Contact resistance: 40 mohms max changed from initial value. And without distinct damage.	Waveform: Half-sine shock Accelerated Velocity: 50G Duration: 11 m sec. Velocity Change: 3.4m/s Number of drops: 3 drops each to normal and reversed directions of X.Y and Z axes. totally 18 drops. EIA 364-27/JIS C 0041
12	Temperature Life (Cold Aging)	Contact resistance: 40 mohms max changed from initial value. And without distinct damage.	Product in following state: -25±3℃, 48 hours. After test, place room situation for 60 minutes. Per EIA-364-17/ JIS C 0020
13	Temperature Life (Heat Aging)	Contact resistance: 40 mohms max changed from initial value. And without distinct damage.	Product in following state: 85±2℃ 96 hours. After test, place room situation for 60 minutes. Per EIA-364-17 / JIS C 0021
14	Humidity, Steady State	Contact resistance: 40 mohms max changed from initial value without distinct damage. and meet item 4,5	Product in following state: 90~95%.R.H.40±2℃ 96 hours. After test, place room situation for 60 minutes. Per EIA-364-31 / JIS C 0022
15	Salt mist	By visual inspection without noticeable rust	Test the mated connector to a fine mist of salt solution at a temperature of 35±2℃ for 48h. Salt solution : 5 ±1 % After treatment, place room situation for 60 minutes. And check if meet requirement.

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16	<b>Thermal Shock</b>	Contact resistance: 40 mohms max changed from initial value. And without distinct damage.	Test the mated connector with 5 temperature cycles. Condition as following: 1. $-55^{\circ}\text{C} \pm 3^{\circ}\text{C}$ for 0.5hours. 2. $20 \pm 2^{\circ}\text{C}$ for 10-15 minutes 3. $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 0.5hours. 4. $20 \pm 2^{\circ}\text{C}$ for 10-15 minutes 1→2→3→4 is one cycle Per EIA-364-32/JIS C0025
17	<b>Composite Temperature/ Humidity Cycle Test</b>	Contact resistance: 40 mohms max changed from initial value. And without distinct damage.	Mated connector, and put specimen in following state: --Left for 15 days at $85^{\circ}\text{C}$ --Left for 10 days at $60^{\circ}\text{C}$ --10 cycles, duration condition:  (25°C down to $-10^{\circ}\text{C}$ in 30minutes) After test, place room situation for 60 minutes. Per EIA-364-31/ JIS C0022
18	<b>Stress corrosion cracking of copper or copper alloy</b>	Contact resistance: 40 mohms max changed from initial value. And without distinct damage on appearance.	Refer to SS-00126 test standard
19	<b>Mechanical operation</b>	Contact resistance: 40 mohms max changed from initial value. And meets item 6.	Operation Speed: 10 cycles/min. 30cycles insertion and withdrawal without load. EIA 364-09
20	<b>Rock</b>	Meet all electrical and mechanical requirements. And no discontinuity. Upwards displacement less than 0.2mm after test.	Insert the plug and apply force 50N-m,1sec in 4 direction on 10mm of plug from jack.

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21	Solderability	Wet solder coverage: 90% Min of the surface being immersed.	Solder temperature: 260±5℃ Immersion Duration in Flux: 3±0.5 sec. Per EIA 364-52/ SS-00254-1
22	Resistance to soldering heat	Meet all electrical and mechanical requirements. And without distinct deformation in terminals and appearance	Test connector on PWB, thickness of PWB is 1.6mm. <u>Wave flow soldering (solder bath):</u> Solder Temperature: 260±3℃ Immersion Duration: 5(+1/-0) sec. Cycle: 2 times <u>Manual soldering iron method:</u> Temperature: 380±10℃ For 3 (+1/-0) Seconds. Per EIA 364-56 / SS-00254-4
23	Whisker	50µm Max.	Per SS-00254-8 test standard
24	RJ11 Connector Keepout Force	35.6N Min	Measure the force required to mate connectors. Operation speed: 25±6 mm/min.

## 7.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and Storage. See packaging appropriate drawings.

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## 文件制訂、修訂、廢止申請單

B

文件編號	RD-PS-A-001-15	文件名稱	GD127-N3-090A300 (PS-GD-0009)		
申請部門	工程	申請人	林佳慧	日期	8/21/13
制訂單位	工程	制訂人	林佳慧	日期	8/21/13
<input type="checkbox"/> 制訂 <input checked="" type="checkbox"/> 修訂 <input type="checkbox"/> 廢止 原因說明	<p>依 ECN: RD-130165 修訂</p> <p>設變前： RATINGS A. Operating temperature range at rated voltage and current: -40°C to +85°C B. Storage Temperature Range: 0°C to +70°C</p> <p>設變後： RATINGS A. Operating Temperature Range: 0°C to +70°C B. Storage Temperature Range: -40°C to +85°C</p>				
相關單位審查	<p>Jeff 8/22/13</p> <p>王林 8/22/13</p> <p>Intake 8/22/13</p>				
核准	<p>Sam 8/22/13</p>				