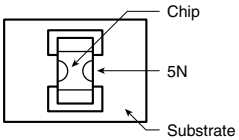
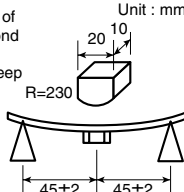


PERFORMANCE AND TEST METHOD

Item	Performance				Testing method and conditions (In accordance with JIS C5101-1)															
	CG, UJ	R	F																	
Dissipation Factor	2.5% or less *1)			5% or less *1)	CG : 1MHz UJ, R, F : 1kHz Measurement voltage : 0.5~2Vrms															
Withstanding voltage	No insulation breakdown and no failure.				Application time is 1~5seconds. CG, UJ : 300% of rated voltage R, F : 250% of rated voltage															
Insulation resistance	No less than 10,000MΩ or 500MΩ • μF, whichever is smaller.				Rated voltage is applied for 1 minute.															
Adhesion strength of termination	 <p>Chip 5N Substrate</p> <p>No peeling-off or exfoliation shall be manifest or recognizable in its incipient stages.</p>				Solder a specimen on the testing jig shown on the left and apply a force of 5N (0.51kgf) in the direction indicated by arrow.															
Vibration resistance	Visual	No remarkable damage			Vibration frequency : 10~55Hz Full amplitude : 1.5mm, 10~55~10Hz 1min. XYZ direction 2hrs for each total 6hrs.															
	Capacitance	Within specified tolerance																		
	Dissipation factor	Initial standard values must be satisfied.																		
Resistance to soldering heat	Visual	No remarkable damage			Solder : H60A or H63A (JIS Z 3282) Soldering temperature : 270±5°C Immersion time : 10±1sec. Preheat : 80~100°C (1~2min.) and 170~200°C (1~min.) Immersion into solder should be carried out continuously after preheating.															
	Capacitance	No more than ±2.5% or ±0.25pF, whichever is larger.	Within ±7.5%	Within ±20%																
	Dissipation factor	Initial standard values be satisfied.																		
	Insulation resistance	Initial standard values be satisfied.																		
	Withstanding voltage	No damage or insulation breakdown.																		
Solderability	Termination surface should be covered with new solder to over 75%.				Solder : H60A or H63 (JIS Z 3282A) Soldering temperature : 230±5°C Immersion time : 2±1sec.															
Temperature cycling	Visual	No remarkable damage			<table border="1"> <tr> <th>Step</th> <th>Temperature</th> <th>Time</th> </tr> <tr> <td>1</td> <td>Lower limit temp.*</td> <td>30min.</td> </tr> <tr> <td>2</td> <td>Room temp.</td> <td>3min.</td> </tr> <tr> <td>3</td> <td>Upper limit temp.*</td> <td>30min.</td> </tr> <tr> <td>4</td> <td>Room temp.</td> <td>3min.</td> </tr> </table> <p>These four temperatures in the above order completes one cycle. The cycle is repeated 25 times.</p>	Step	Temperature	Time	1	Lower limit temp.*	30min.	2	Room temp.	3min.	3	Upper limit temp.*	30min.	4	Room temp.	3min.
	Step	Temperature	Time																	
	1	Lower limit temp.*	30min.																	
	2	Room temp.	3min.																	
	3	Upper limit temp.*	30min.																	
4	Room temp.	3min.																		
Capacitance	No more than ±2.5% or ±0.25pF, whichever is larger.	Within ±7.5%	Within ±20%																	
Dissipation factor	Initial standard values must be satisfied.																			
Insulation resistance	Initial standard values must be satisfied.																			
Withstanding voltage	No damage or insulation breakdown.																			
Humidity load test	Visual	No remarkable damage			Test temp : 40±2°C Relative humidity : 90~95% Testing time : 1000 +48, -0 100% of rated voltage is applied															
	Capacitance	No more than ±5% or ±0.5pF, whichever is larger.	Within ±12.5%	Within ±30%																
	Dissipation factor	Less than 5% *1)		Less than 7.5% *1)																
Life test at high temperature load	Visual	No remarkable damage			Test temp : Upper limit temp.±3°C Testing time : 1000 +48, -0 200% of rated voltage is applied.*2)															
	Capacitance	No more than ±3% or ±0.3pF, whichever is larger	Within ±12.5%	Within ±30%																
	Dissipation factor	Less than 4% *1)		Less than 7.5% *1)																
	Insulation resistance	No less than 10,000MΩ or 500MΩ • μF, whichever is smaller.																		
Flexion	Visual	No mechanical damage			<p>Add load at a speed of about 1mm per second until flexion amount reaches 1mm and keep the condition for 5 minutes. Have a capacitance meter connected to both ends of sample during a test.</p>  <p>Unit : mm</p>															
	Capacitance	No more than ±5% or ±0.5pF, whichever is larger.	Within ±12.5%	Within ±30%																

*1) Dielectric dissipation factor

Type name	Temperature characteristics	Rated voltage	Initial	Moistureproof load	High-temperature load
CNH20R224M-□M	R	16V	5% max.	7.5% max.	7% max.
CNH20R474M-□M					
CNH20R105M-□M					
CNH20R475M-□M		6.3V	9% max.	12.5% max.	12.5% max.
CNH20R106M-□M					
CNH10R105M-□M					

*2) The following products are applied voltage 150%.

- CNH20R224M-□M
- CNH20R474M-□M
- CNH20R105M-□M

The following product is applied rated voltage

- CNH20R475M-□M
- CNH20R106M-□M
- CNH10R105M-□M