

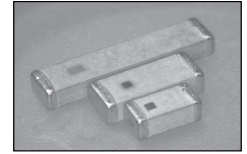
## FEATURES

- LIGHT WEIGHT, COMPACT
- WIDE BANDWIDTH
- LOW COST LTCC CONSTRUCTION
- SURFACE MOUNTABLE CONSTRUCTION
- TAPED AND REELED FOR AUTOMATIC INSERTION

**RoHS  
Compliant**

includes all homogeneous materials

\*See Part Number System for Details



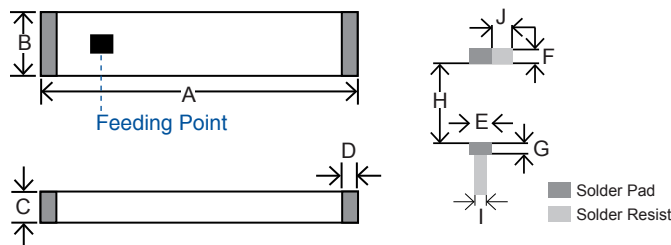
## CHARACTERISTICS

Case Code	0805	1206	5221	6020	7020
Frequency Range	2.45GHz	2.8GHz	2.35 ~ 2.78GHz	2.64GHz	2.47 ~ 2.86GHz
Case Code	8010	9020	1603	3505	5004
Frequency Range	433MHz ~ 3.01GHz	2.66GHz	433MHz	650Mhz	650Mhz
Operating Temperature Range	-40°C ~ +85°C				
Impedance	50Ω				
Power Capacity	3 Watts				
Resistance to Solder Heat	+260°C for 10 seconds				

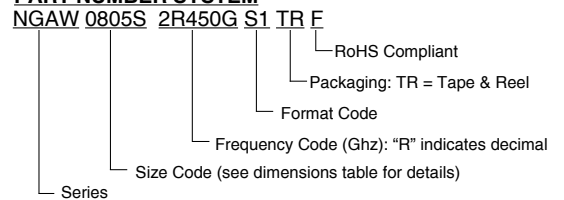
## DIMENSIONS (mm)

Case Code	A	B	C ± 0.2	D ± 0.2	E ± 0.2	F ± 0.2	G ± 0.2	H ± 0.2	I	J
NGAW0805	2.0 ± 0.2	1.25 ± 0.2	0.85	0.5	1.3	1.0	0.8	1.0	1.4	1.3
NGAW1206	3.2 ± 0.2	1.6 ± 0.2	1.2	0.5	1.6	0.8	0.8	2.6	1.4	1.6
NGAW5221	5.2 ± 0.2	2.1 ± 0.2	1.0	0.5	2.3	1.5	1.0	4.0	1.4	2.3
NGAW6020	6.0 ± 0.2	2.0 ± 0.2	1.0	0.5	2.2	1.5	1.0	5.0	1.4	2.2
NGAW7020	7.0 ± 0.2	2.0 ± 0.2	1.0	0.5	2.2	1.5	1.0	6.0	1.4	2.2
NGAW8010	8.0 ± 0.2	1.0 ± 0.2	1.0	0.5	1.5	1.5	1.0	7.0	1.4	1.5
NGAW9020	9.0 ± 0.2	2.0 ± 0.2	1.0	0.5	2.2	1.5	1.0	8.0	1.4	2.2
NGAW1603	16.0 ± 0.4	3.0 ± 0.2	2	0.5	3.2	1.5	1.0	15	1.4	3.2
NGAW3505	35.0 ± 0.2	5.0 ± 0.2	1.0	1.0	5.2	1.5	1.0	33	1.4	5.2
NGAW5004	50.0 ± 0.5	4.0 ± 0.5	1.0	1.0	4.2	1.5	1.0	48	1.4	4.2

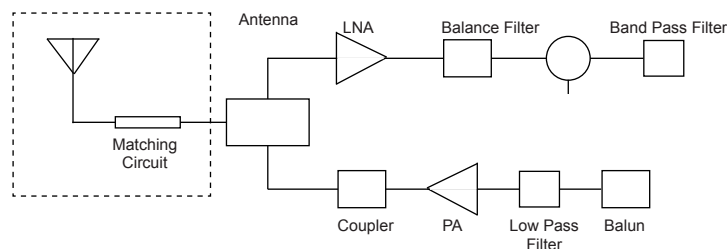
## DIMENSIONS



## PART NUMBER SYSTEM



## Typical Application

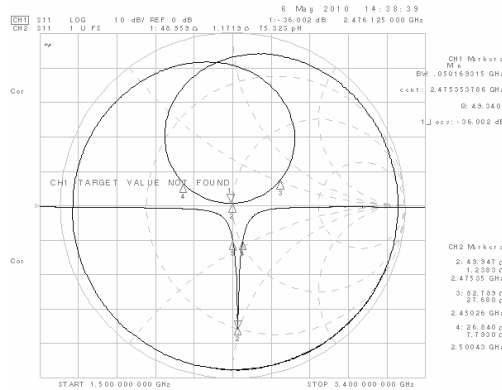


## NGAW0805 Size

Part Number	Standard Values - Case Size 21 (2.0 x 1.25 x 0.85mm)						
	Center Frequency	Bandwidth (MHz)	Peak Gain	Average Gain	VSWR	Impedance ( $\Omega$ )	Power Capacity (W)
NGAW0805S2R450GS1TRF	2.45Ghz	$\geq 100$	-3.0 dBi Typ.	-8.0dBi Typ.	<2.5	50 $\Omega$	3W

[Customization Available. Please contact NIC for any specific bandwidth & center frequency requirements]

### Characteristic Curves - NGAW0805S2R450GS1TRF

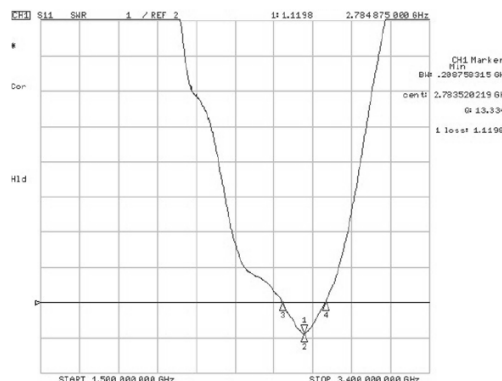


## NGAW1206 Size [Please contact NIC for any specific bandwidth & center frequency requirements]

Part Number	Standard Values - Case Size 1206 (3.2 x 1.6 x 1.2mm)						
	Center Frequency	Bandwidth (MHz)	Peak Gain	Average Gain	VSWR	Impedance ( $\Omega$ )	Power Capacity (W)
NGAW1206S2R800GS1TRF	2.80Ghz	$\geq 100$	0.5 dBi Typ.	-1dBi Typ.	<2	50 $\Omega$	3W

[Customization Available. Please contact NIC for any specific bandwidth & center frequency requirements]

### Characteristic Curves - NGAW1206S2R800GS1TRF

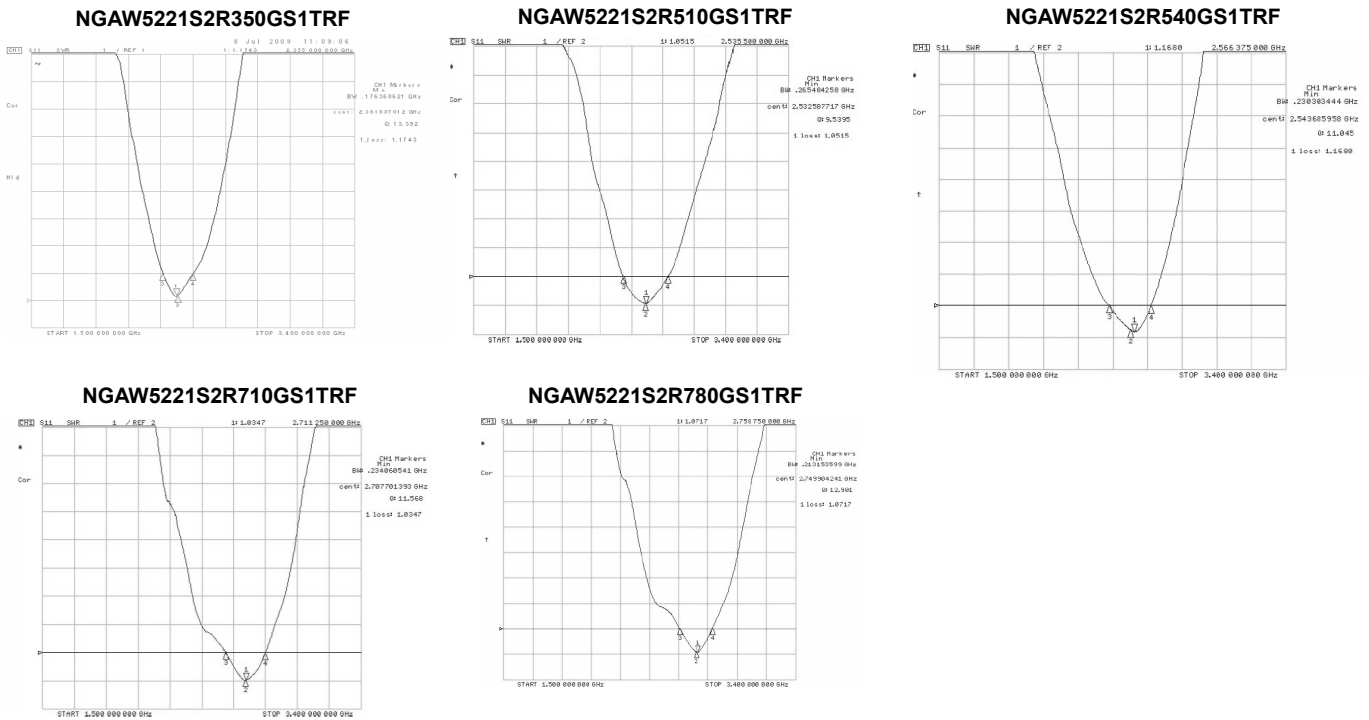


## NGAW5221 Size

Part Number	Standard Values - Case Size 5221 (5.2 x 2.1 x 1.0mm)						
	Center Frequency	Bandwidth (MHz)	Peak Gain	Average Gain	VSWR	Impedance ( $\Omega$ )	Power Capacity (W)
NGAW5221S2R350GS1TRF	2.35Ghz	$\geq 150$	2.5 dBi Typ.	0.5dBi Typ.	<2	50 $\Omega$	3W
NGAW5221S2R510GS1TRF	2.51Ghz	$\geq 200$	2.5 dBi Typ.	0.5dBi Typ.	<2	50 $\Omega$	3W
NGAW5221S2R540GS1TRF	2.54Ghz	$\geq 200$	2.5 dBi Typ.	0.5dBi Typ.	<2	50 $\Omega$	3W
NGAW5221S2R710GS1TRF	2.71Ghz	$\geq 200$	2.5 dBi Typ.	0.5dBi Typ.	<2	50 $\Omega$	3W
NGAW5221S2R780GS1TRF	2.78Ghz	$\geq 200$	2.5 dBi Typ.	0.5dBi Typ.	<2	50 $\Omega$	3W

(Customization Available. Please contact NIC for any specific bandwidth & center frequency requirements)

### Characteristic Curves -

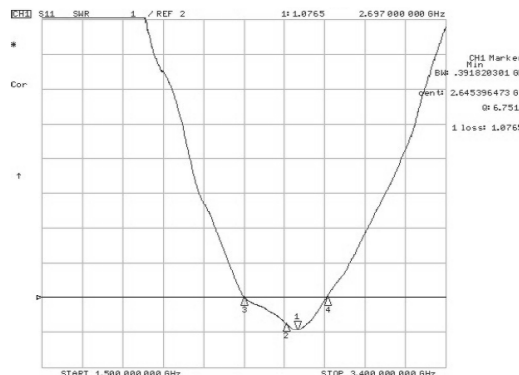


## NGAW6020 Size

Part Number	Standard Values - Case Size 6020 (6.0 x 2.0 x 1.0mm)						
	Center Frequency	Bandwidth (MHz)	Peak Gain	Average Gain	VSWR	Impedance ( $\Omega$ )	Power Capacity (W)
NGAW6020S2R640GS1TRF	2.64Ghz	$\geq 200$	2.6 dBi Typ.	0.7dBi Typ.	<2	50 $\Omega$	3W

(Customization Available. Please contact NIC for any specific bandwidth & center frequency requirements)

### Characteristic Curves - NGAW6020S2R640GS1TRF

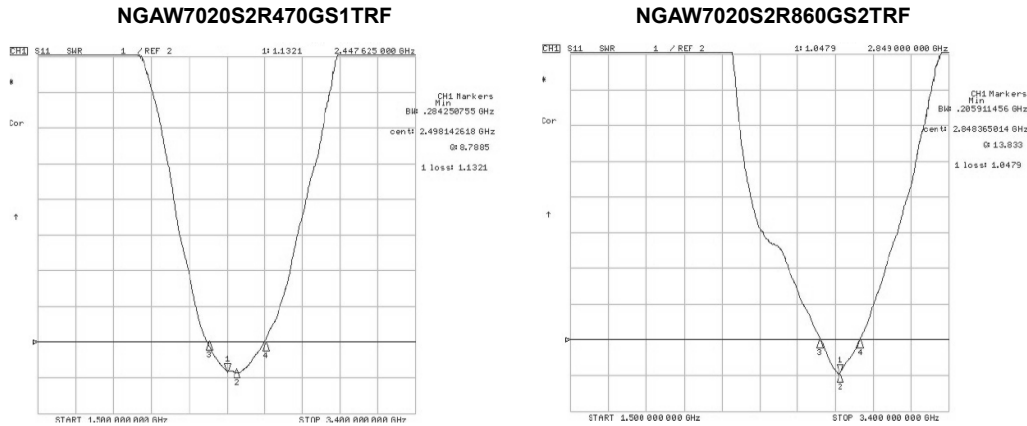


## NGAW7020 Size

Part Number	Standard Values - Case Size 7020 (7.0 x 2.0 x 1.0mm)						
	Center Frequency	Bandwidth (MHz)	Peak Gain	Average Gain	VSWR	Impedance ( $\Omega$ )	Power Capacity (W)
NGAW7020S2R470GS1TRF	2.47Ghz	$\geq 200$	2.7 dBi Typ.	1.0dBi Typ.	<2	50 $\Omega$	3W
NGAW7020S2R860GS2TRF	2.86Ghz	$\geq 200$	2.7 dBi Typ.	1.0dBi Typ.	<2	50 $\Omega$	3W

[Customization Available. Please contact NIC for any specific bandwidth & center frequency requirements]

### Characteristic Curves -

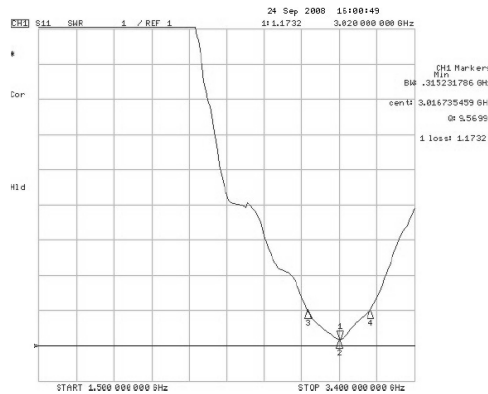


## NGAW8010 Size

Part Number	Standard Values - Case Size 8010 (8.0 x 1.0 x 1.0mm)						
	Center Frequency	Bandwidth (MHz)	Peak Gain	Average Gain	VSWR	Impedance ( $\Omega$ )	Power Capacity (W)
NGAW8010S3R010GS1TRF	3.01Ghz	$\geq 200$	2.0 dBi Typ.	0.5dBi Typ.	<2	50 $\Omega$	3W

[Customization Available. Please contact NIC for any specific bandwidth & center frequency requirements]

### Characteristic Curves - NGAW8010S3R010GS1TRF

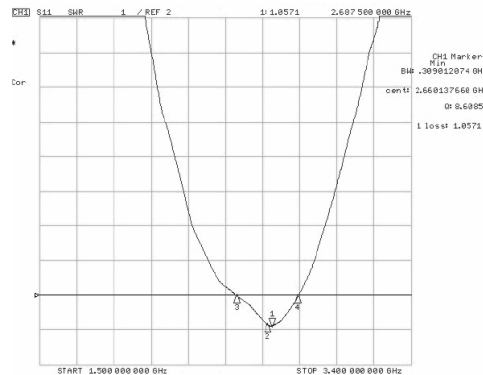


## NGAW9020 Size

Part Number	Standard Values - Case Size 9020 (9.0 x 2.0 x 1.0mm)						
	Center Frequency	Bandwidth (MHz)	Peak Gain	Average Gain	VSWR	Impedance ( $\Omega$ )	Power Capacity (W)
NGAW9020S2R660GS1TRF	2.66Ghz	$\geq 200$	3.0 dBi Typ.	1.0dBi Typ.	<2	50 $\Omega$	3W

[Customization Available. Please contact NIC for any specific bandwidth & center frequency requirements]

### Characteristic Curves - NGAW9020S2R660GS1TRF

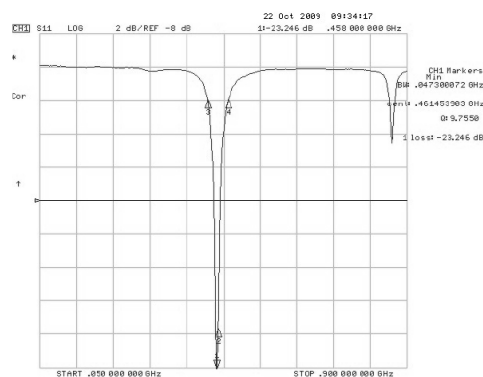


## NGAW1603 Size

Part Number	Standard Values - Case Size 1603 (16.0 x 3.0 x 2.0mm)						
	Center Frequency	Bandwidth (MHz)	Peak Gain	Average Gain	VSWR	Impedance ( $\Omega$ )	Power Capacity (W)
NGAW1603S0R433GS1TRF	433Mhz	$\geq 20$	3.0 dBi Typ.	1.0dBi Typ.	<2	50 $\Omega$	3W

[Customization Available. Please contact NIC for any specific bandwidth & center frequency requirements]

### Characteristic Curves - NGAW1603S0R433GS1TRF

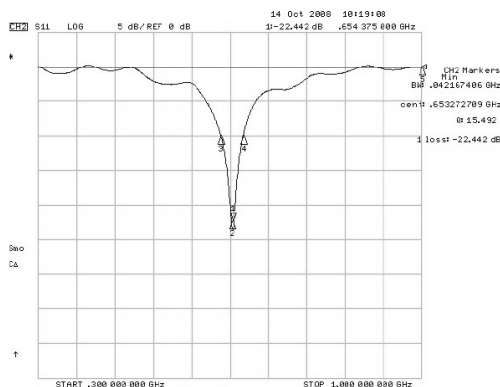


## NGAW3505 Size

Part Number	Standard Values - Case Size 3505 (35.0 x 5.0 x 1.0mm)						
	Center Frequency	Bandwidth (MHz)	Peak Gain	Average Gain	VSWR	Impedance ( $\Omega$ )	Power Capacity (W)
NGAW3505S0R650GS1TRF	650Mhz	$\geq 50$	-2.0 dBi Typ. (710MHz)	-7.0dBi Typ. (474MHz)	<3	50 $\Omega$	3W

(Customization Available. Please contact NIC for any specific bandwidth & center frequency requirements)

### Characteristic Curves - NGAW3505S0R650GS1TRF

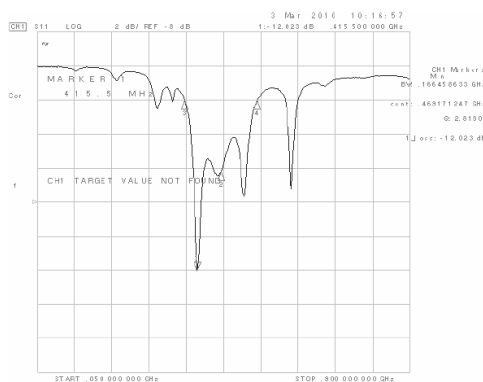


## NGAW5004 Size

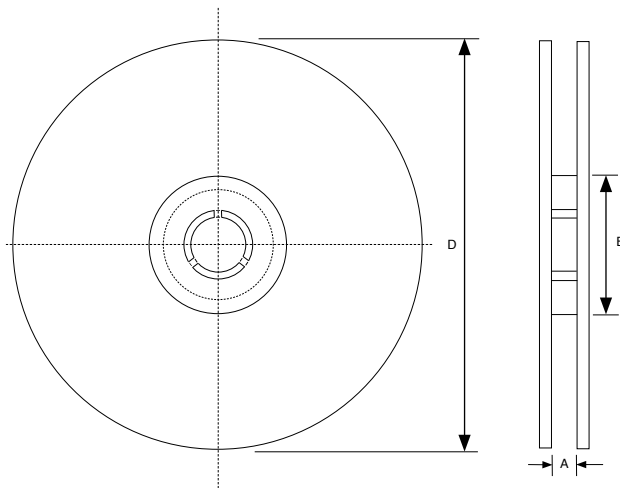
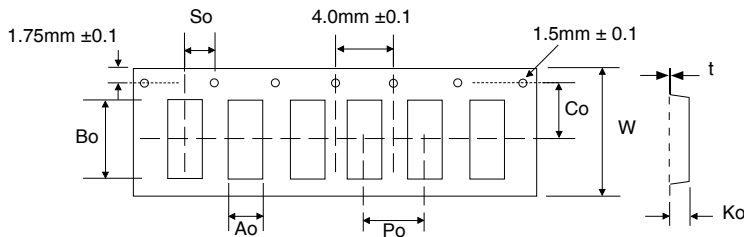
Part Number	Standard Values - Case Size 5004 (50.0 x 4.0 x 1.0mm)						
	Center Frequency	Bandwidth (MHz)	Peak Gain	Average Gain	VSWR	Impedance ( $\Omega$ )	Power Capacity (W)
NGAW5004S0R650GS1TRF	650Mhz	474-862	-6.0 dBi (862 MHz).	-3.0 dBi (474 MHz)	<5	50 $\Omega$	3W

(Customization Available. Please contact NIC for any specific bandwidth & center frequency requirements)

### Characteristic Curves - NGAW5004S0R650GS1TRF



Case Size	CARRIER TAPING DIMENSIONS (mm) AND REEL QUANTITY										
	Ao	Bo	Po	So	Co	Ko	t	W	Quantity		
NGAW0805	1.42 ± 0.05	2.25 ± 0.05	4.0 ± 0.1	2.0 ± 0.05	3.5 ± 0.1	1.14 max.	0.27 max.	8.0 ± 0.3	4,000		
NGAW1206	1.8 ± 0.1	3.5 ± 0.1	4.0 ± 0.1			1.25 max.			3,000		
NGAW5221	2.35 ± 0.1	5.50 ± 0.1	8.0 ± 0.1		5.5 ± 0.1	8.0 ± 0.3			0.35 max.	12.0 ± 0.3	4,000
NGAW6020	2.35 ± 0.1	6.30 ± 0.1	8.0 ± 0.1			12.0 ± 0.3					4,000
NGAW7020	2.30 ± 0.1	7.50 ± 0.1	8.0 ± 0.1	2.0 ± 0.1	7.5 ± 0.1	1.9 ± 0.1	16.0 ± 0.3	4,000			
NGAW8010	1.20 ± 0.1	8.40 ± 0.1	8.0 ± 0.1			1.6 ± 0.1		4,000			
NGAW9020	2.30 ± 0.1	9.30 ± 0.1	8.0 ± 0.1		2.4 ± 0.1	4,000					
NGAW1603	3.40 ± 0.1	16.40 ± 0.1	8.0 ± 0.1	2.0 ± 0.2	14.25 ± 0.1	2.4 ± 0.1	32.0 ± 0.3	4,000			
NGAW3505	5.70 ± 0.1	35.80 ± 0.1	12.0 ± 0.1	2.0 ± 0.15	26.20 ± 0.1	3.4 ± 0.1	56.0 ± 0.3	4,000			
NGAW5004	4.10 ± 0.1	51.00 ± 0.1	8.0 ± 0.1	2.0 ± 0.2	34.20 ± 0.1	3.0 ± 0.15	72.0 ± 0.3	4,000			



Tape Width	REEL DIMENSIONS (mm)		
	A(mm)	B(mm)	D(mm)
NGAW0805	9.0 ± 1.5	58 ± 2.0	178 ± 2.0
NGAW1206			
NGAW5221	12.5 ± 1.5	100 ± 2.0	330 ± 2.0
NGAW6020			
NGAW7020			
NGAW8010	16.5 ± 1.5	100 ± 2.0	330 ± 2.0
NGAW9020			
NGAW1603	32.5 ± 1.5	100 ± 2.0	330 ± 2.0
NGAW3505	56.5 ± 1.5		
NGAW5004	72.5 ± 1.5	100 ± 2.0	330 ± 2.0

### REFLOW SOLDERING PROFILE

