

## ■ Minimum Quantity Guide

Part Number	Dimensions (mm)			Quantity (pcs.)						
				ø180mm Reel		ø330mm Reel		Bulk Case	Bulk Bag	
Packaging Code	L	W	T	Paper Tape	Embossed Tape	Paper Tape	Embossed Tape			C
For General Purpose	GRM02	0.4	0.2	0.2	-	40,000 <sup>1)</sup>	-	-	-	1,000
	GRM03	0.6	0.3	0.3	15,000	-	50,000	-	-	1,000
	GRM15	1.0	0.5	0.25/0.3	10,000	-	50,000	-	-	1,000
				0.5	10,000	-	50,000	-	50,000	1,000
	GRM18	1.6	0.8	0.5	4,000	-	10,000	-	-	1,000
				0.8	4,000	-	10,000	-	15,000 <sup>2)</sup>	1,000
	GRM21	2.0	1.25	0.6	4,000	-	10,000	-	10,000	1,000
				0.85	4,000	-	10,000	-	-	1,000
	GRM31	3.2	1.6	1.0/1.25	-	3,000	-	10,000	5,000 <sup>2)</sup>	1,000
				0.6/0.85	4,000	-	10,000	-	-	1,000
				1.15	-	3,000	-	10,000	-	1,000
	GRM32	3.2	2.5	1.6	-	2,000	-	6,000	-	1,000
				0.85	4,000	-	10,000	-	-	1,000
				1.15	-	3,000	-	10,000	-	1,000
				1.35	-	2,000	-	8,000	-	1,000
	GRM43	4.5	3.2	1.6	-	2,000	-	6,000	-	1,000
				1.8/2.0	-	1,000	-	4,000	-	1,000
				2.5	-	1,000	-	5,000	-	1,000
				1.15	-	1,000	-	4,000	-	1,000
	GRM55	5.7	5.0	1.35/1.6	-	1,000	-	4,000	-	1,000
1.8/2.0				-	500	-	2,000	-	500	
2.5				-	500	-	1,500	-	500	
3.2				-	300	-	1,500	-	500	
High Power Type	GJM03	0.6	0.3	0.3	15,000	-	50,000	-	1,000	
	GJM15	1.0	0.5	0.5	10,000	-	50,000	-	50,000	
High Frequency	GQM18	1.6	0.8	0.7/0.8	4,000	-	10,000	-	1,000	
	GQM21	2.0	1.25	0.85	4,000	-	10,000	-	1,000	
Microchip	GQA0D	0.38	0.38	0.3	-	-	-	-	400 <sup>3)</sup>	
	GMA05	0.5	0.5	0.35	-	-	-	-	400 <sup>3)</sup>	
	GMA08	0.8	0.8	0.5	-	-	-	-	400 <sup>3)</sup>	
	GMD03	0.6	0.3	0.3	15,000	-	50,000	-	1,000	
	GMD15	1.0	0.5	0.5	10,000	-	50,000	-	1,000	
Array	GNM0M	0.9	0.6	0.45	10,000	-	50,000	-	1,000	
	GNM1M	1.37	1.0	0.5/0.6/0.8	4,000	-	10,000	-	1,000	
	GNM21	2.0	1.25	0.5/0.6/0.85	4,000	-	10,000	-	1,000	
	GNM31	3.2	1.6	0.8/0.85	4,000	-	10,000	-	1,000	
Low ESL	LLL15	0.5	1.0	0.3	10,000 <sup>4)</sup>	-	50,000 <sup>4)</sup>	-	1,000	
	LLL18/LLR18	0.8	1.6	0.5	-	4,000	-	10,000	-	1,000
				0.5/0.6	-	4,000	-	10,000	-	1,000
	LLL21	1.25	2.0	0.85	-	3,000	-	10,000	-	1,000
				0.5/0.7	-	4,000	-	10,000	-	1,000
	LLL31	1.6	3.2	1.15	-	3,000	-	10,000	-	1,000
				0.5	-	4,000	-	10,000	-	1,000
	LLA18	1.6	0.8	0.5	-	4,000	-	10,000	-	1,000
				0.5	-	4,000	-	10,000	-	1,000
	LLA21	2.0	1.25	0.85	-	3,000	-	10,000	-	1,000
				0.5	-	4,000	-	10,000	-	1,000
LLA31	3.2	1.6	0.85	-	3,000	-	10,000	-	1,000	
			1.15	-	3,000	-	10,000	-	1,000	
LLM21	2.0	1.25	0.5	-	4,000	-	10,000	-	1,000	
LLM31	3.2	1.6	0.5	-	4,000	-	10,000	-	1,000	

1) 4mm width 1mm pitch Embossed Taping.

2) There are parts number without bulk case.

3) Tray

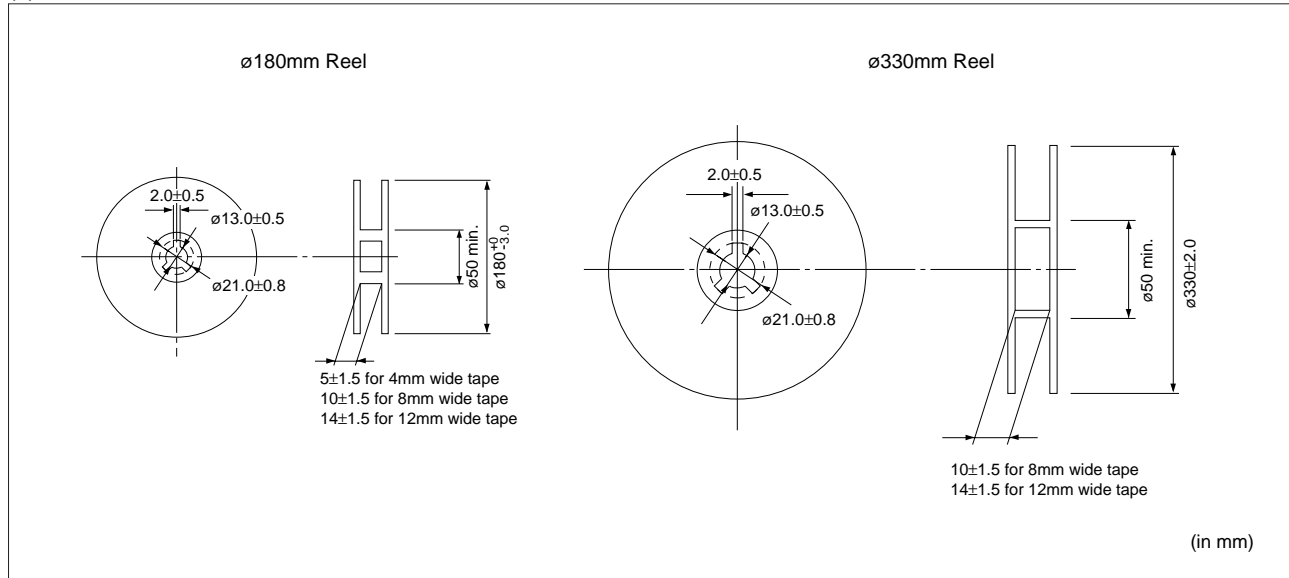
4) LLL15: ø180mm Reel Paper Taping Packaging Code: E, ø330mm Reel Paper Taping Packaging Code: F

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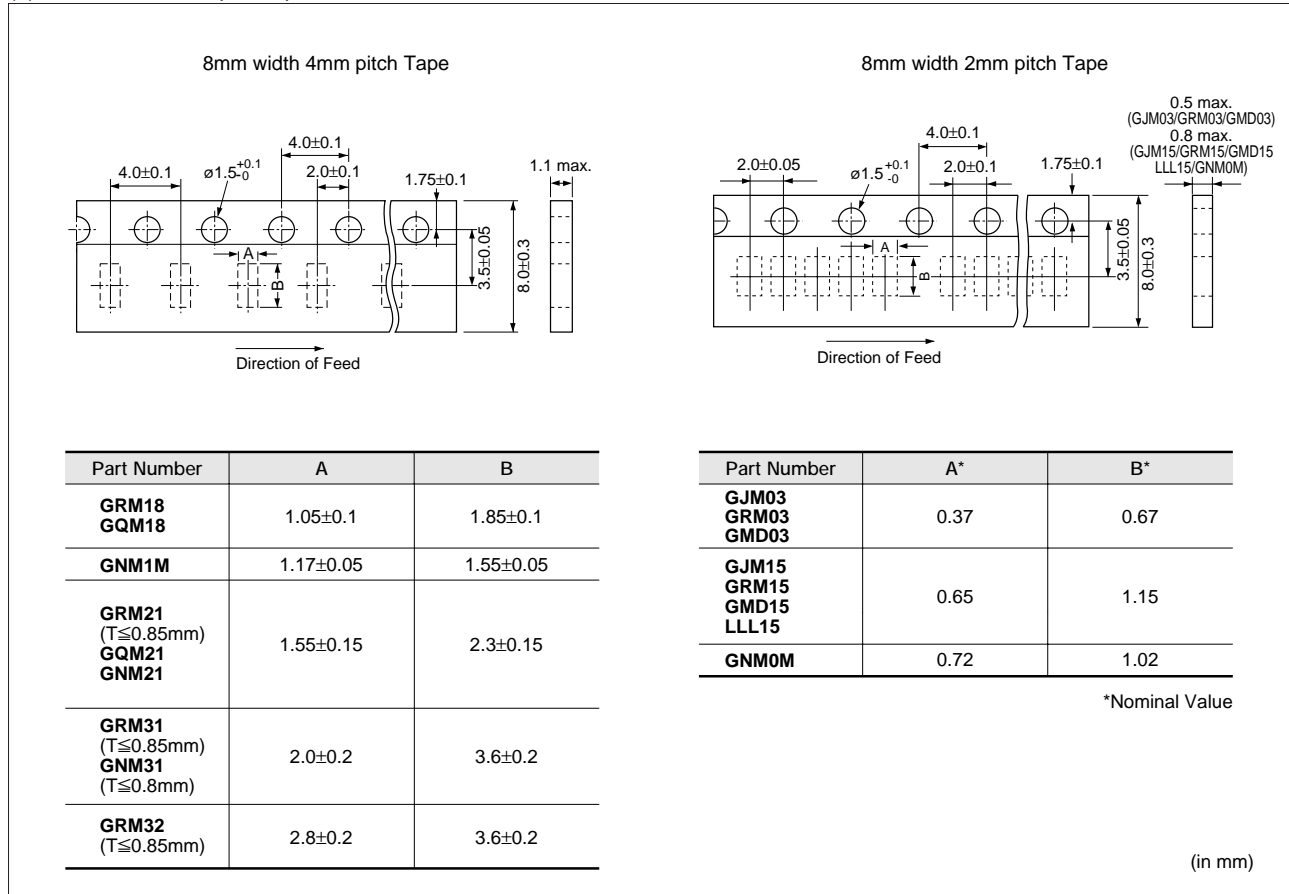
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## ■ Tape Carrier Packaging

### (1) Dimensions of Reel



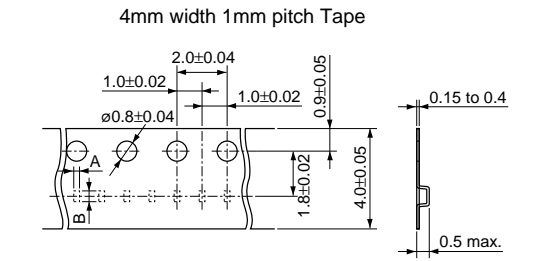
### (2) Dimensions of Paper Tape



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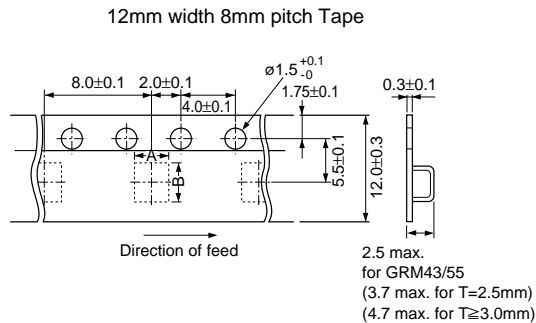
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### (3) Dimensions of Embossed Tape



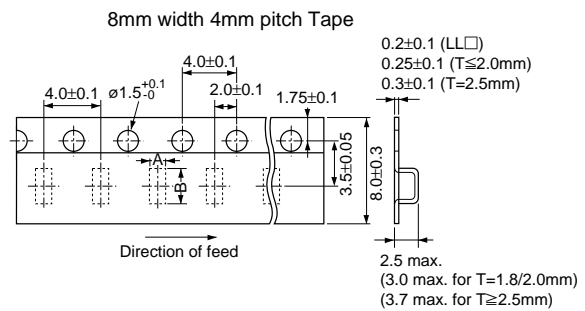
Part Number	A*	B*
<b>GRM02</b>	0.23	0.43

\*Nominal Value



Part Number	A*	B*
<b>GRM43</b>	3.6	4.9
<b>GRM55</b>	5.2	6.1

\*Nominal Value



Part Number	A	B
<b>LLL18, LLR18 LLA18</b>	1.05±0.1	1.85±0.1
<b>GRM21 (T≥1.0mm) LLA21, LLM21</b>	1.45±0.2	2.25±0.2
<b>GRM31 (T≥1.15mm) LLL31 LLA31, LLM31 GNM31 (T≥1.0mm)</b>	1.9±0.2	3.5±0.2
<b>GRM32 (T≥1.0mm)</b>	2.8±0.2	3.5±0.2
<b>GQM22</b>	2.8*	3.5*

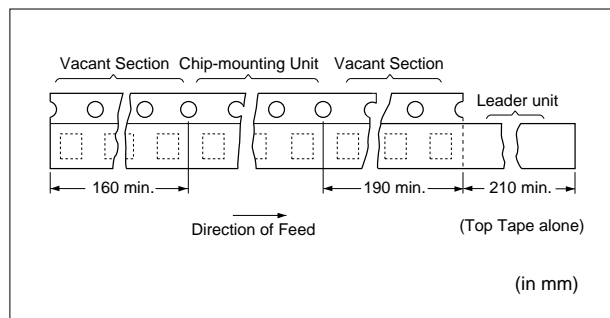
\*Nominal Value

(in mm)

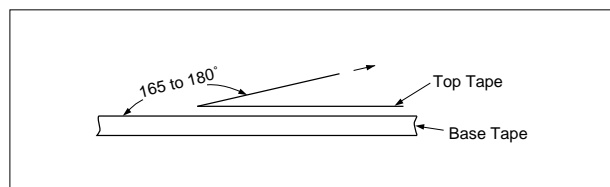
### (4) Taping Method

- Tapes for capacitors are wound clockwise. The sprocket holes are to the right as the tape is pulled toward the user.
- Part of the leader and part of the empty tape should be attached to the end of the tape as follows.
- The top tape and base tape are not attached at the end of the tape for a minimum of 5 pitches.
- Missing capacitors number within 0.1% of the number per reel or 1 pc, whichever is greater, and are not continuous.
- The top tape and bottom tape should not protrude beyond the edges of the tape and should not cover sprocket holes.
- Cumulative tolerance of sprocket holes, 10 pitches: ±0.3mm.
- Peeling off force: 0.1 to 0.6N\* in the direction shown below.

\*GRM02  
GRM03  
GJM03  
GMD03 } : 0.05 to 0.5N



(in mm)



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### ■ Dimensions of Bulk Case Packaging

The bulk case uses antistatic materials. Please contact Murata for details.

