

1. PURPOSE 目的

1.1. The document specifies the packaging for surface mount products. These packages conform to EIA-481-1/2/3, JEDEC and IEC60286-3 standards.

本文件规定贴片产品的包装规范。包装符合 EIA-481-1/2/3，JEDEC 和 IEC60286-3 标准。

2. SCOPE 范围

2.1. This specification applies to all MPS devices.

本规范适用于所有 MPS 产品。

3. Table of Tape and Reel, Tube and Tray 编带卷盘，胶管托盘表格

3.1. For WLCSP/Bare Die.

晶圆芯片和裸芯片

AxB (A≤B)					
Package Size	Quantity /Reel	Reel Diameter	Width	Pitch	Trailer Leader/Reel
B ≤ 2.5	3000	7 in	8	4	50/50
2.5 < B ≤ 6.3	5000	13 in	12	8	50/50

3.2. For molding package.

封装产品

Part Number	Package Description	Quantity /Reel	Quantity /Tube	Quantity /Tray	Reel Diameter	Carrier Tape Width	Carrier Tape Pitch	Trailer Leader/Reel
产品号	封装	数量/卷盘	数量/胶管	数量/托盘	卷盘直径	载带宽度	载带线距	前后空带数/卷盘
MP####xH-Z	MSOP8/10 w/Exposed Pad	2500	48	N/A	13 in.	12 mm	8 mm	110&110
MP####xK-Z	MSOP8/10	2500	48	N/A	13 in.	12 mm	8 mm	110&110
MP####xP	PDIP8	N/A	50	N/A	N/A	N/A	N/A	N/A
MP####xP	PDIP16	N/A	25	N/A	N/A	N/A	N/A	N/A
MP####xP	PDIP8 w/Exposed Pad	N/A	50	N/A	N/A	N/A	N/A	N/A
MP####QD-Z	QFN 1.0x1.5	5000	N/A	N/A	13 in.	8 mm	4 mm	125&125
MP####xQFU-Z	QFN 1.2x1.6x0.55	5000	N/A	N/A	13 in.	8 mm	4 mm	125&125
MP####xQG-Z	QFN 1.4x1.8	5000	N/A	N/A	13 in.	8 mm	4 mm	125&125
MP####xQGU-Z	QFN 1.4x1.8x0.55	5000	N/A	N/A	13 in.	8 mm	4 mm	125&125
MP####QH-Z	QFN 1.5x2.0	5000	N/A	N/A	13 in.	8 mm	4 mm	125&125
MP####xQHU-Z	QFN 1.5x2.0x0.55	5000	N/A	N/A	13 in.	8 mm	4 mm	125&125
MP####xQEU-Z	QFN 1.5x2.5x0.55	5000	N/A	N/A	13 in.	8 mm	4 mm	125&125
MP####xRA-Z	QFN 1.5x2.5	5000	N/A	N/A	13 in.	8 mm	4 mm	125&125
MP####xQF-Z	QFN 1.6x1.2	5000	N/A	N/A	13 in.	8 mm	4 mm	125&125
MP####xQFU-Z	QFN 1.6x1.2x0.55	5000	N/A	N/A	13 in.	8 mm	4 mm	125&125
MP####xG-Z	QFN 2x2	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xGU-Z	QFN 2x2x0.55	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xRP-Z	QFN 2x2.5	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xD-Z	QFN 2x3	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125

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Part Number	Package Description	Quantity /Reel	Quantity /Tube	Quantity /Tray	Reel Diameter	Carrier Tape Width	Carrier Tape Pitch	Trailer Leader/ Reel
产品号	封装	数量/卷盘	数量/胶管	数量/托盘	卷盘直径	载带宽度	载带线距	前后空带数/卷盘
MP####xDU-Z	QFN 2x3x0.55	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xQA-Z	QFN 2.2x2.6	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xQBU-Z	QFN 2.5x3.0x0.55	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xRG-Z	QFN 2.5x3.2	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xRH-Z	QFN 2.5x3.5	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xD-Z	QFN 3x2	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xQ-Z	QFN 3x3	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xQU-Z	QFN 3x3x0.55	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xL-Z	QFN 3x4	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xQV-Z	QFN 3x5	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xRJ-Z	QFN 3x6	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xQC-Z	QFN 3.5x3.5	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xRN-Z	QFN 3.5x4	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xRM-Z	QFN 3.5x4.5	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xR-Z	QFN 4x4	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xV-Z	QFN 4x5	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xQW-Z	QFN 4x6	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xV-Z	QFN 5x4	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xU-Z	QFN 5x5	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xQJ-Z	QFN 5x6	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xQX-Z	QFN 5x8	5000	N/A	N/A	13 in.	16 mm	8 mm	125&125
MP####xQK-Z	QFN 6x6	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xQM-Z	QFN 6x7	5000	N/A	N/A	13 in.	16 mm	8 mm	125&125
MP####xQY-Z	QFN 6x8	5000	N/A	N/A	13 in.	16 mm	8 mm	125&125
MP####xQN-Z	QFN 7x7	2500	N/A	N/A	13 in.	16 mm	12 mm	125&125
MP####xRK-T	QFN 10x10	N/A	N/A	240	N/A	N/A	N/A	N/A
MP####xE-Z	SC70	3000	N/A	N/A	7 in.	8 mm	4 mm	125&125
MP####xS-Z	SOD123	2500	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xTF-Z	SOT563	5000	N/A	N/A	7 in.	8 mm	4 mm	125&125
MP####xTL-Z	SOT583	5000	N/A	N/A	7 in.	8 mm	4 mm	125&125
MP####xS-Z	SOIC8 (Narrow Body)	2500	100	N/A	13 in.	12 mm	8 mm	110&110
MP####xN-Z	SOIC8 w/Exposed Pad (Narrow Body)	2500	100	N/A	13 in.	12 mm	8 mm	110&110
MP####xS-Z	SOIC14 (Narrow Body)	2500	50	N/A	13 in.	16 mm	8 mm	110&110
MP####xS-Z	SOIC16 (Narrow Body)	2500	48	N/A	13 in.	16 mm	8 mm	110&110
MP####xN-Z	SOIC16 w/Exposed Pad (Narrow Body)	2500	48	N/A	13 in.	16 mm	8 mm	110&110
MP####xY-Z	SOIC8 (Wide Body)	1000	80	N/A	13 in.	16 mm	12 mm	110&110
MP####xY-Z	SOIC16 (Wide Body)	1000	44	N/A	13 in.	24 mm	12 mm	110&110
MP####xY-Z	SOIC18 (Wide Body)	1000	40	N/A	13 in.	24 mm	12 mm	110&110
MP####xY-Z	SOIC20 (Wide Body)	1000	36	N/A	13 in.	24 mm	12 mm	110&110
MP####xWR-Z	SOIC24 w/Heat Slug and Reverse Lead Bend (Wide Body)	1000	31	N/A	13 in.	24 mm	12 mm	110&110
MP####xY-Z	SOIC28 (Wide Body)	1000	27	N/A	13 in.	24 mm	12 mm	110&110
MP####xT-Z	SOT23-3/5/6/8	3000	N/A	N/A	7 in.	8 mm	4 mm	125&125
MP####xJ-Z	TSOT23-4/5/6/8	3000	N/A	N/A	7 in.	8 mm	4 mm	125&125
MP####xJS-Z	TSOT23-6-SL	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125

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Part Number	Package Description	Quantity /Reel	Quantity /Tube	Quantity /Tray	Reel Diameter	Carrier Tape Width	Carrier Tape Pitch	Trailer Leader/ Reel
产品号	封装	数量/卷盘	数量/胶管	数量/托盘	卷盘直径	载带宽度	载带线距	前后空带数/卷盘
MP####xJL-Z	TSOT23-LL-6	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xJR-Z	TSOT23-RL-6	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xE-Z	SC70-5	3000	N/A	N/A	7 in.	8 mm	4 mm	125&125
MP####xM-Z	TSSOP8	2500	100	N/A	13 in.	12 mm	8 mm	110&110
MP####xM-Z	TSSOP14	2500	94	N/A	13 in.	16 mm	8 mm	110&110
MP####xF-Z	TSSOP14 w/Exposed Pad	2500	94	N/A	13 in.	16 mm	8 mm	110&110
MP####xM-Z	TSSOP16	2500	96	N/A	13 in.	16 mm	8 mm	110&110
MP####xF-Z	TSSOP16 w/Exposed Pad	2500	96	N/A	13 in.	16 mm	8 mm	110&110
MP####xM-Z	TSSOP20	2500	70	N/A	13 in.	16 mm	8 mm	110&110
MP####xF-Z	TSSOP20 w/Exposed Pad	2500	70	N/A	13 in.	16 mm	8 mm	110&110
MP####xM-Z	TSSOP28	2500	50	N/A	13 in.	16 mm	8 mm	110&110
MP####xF-Z	TSSOP28 w/Exposed Pad	2500	50	N/A	13 in.	16 mm	8 mm	110&110
MP####xFR-Z	TSSOP38 w/Exposed Pad, Reverse Lead	2500	31	N/A	13 in.	16 mm	8 mm	110&110
MP####xZ	TO220	N/A	50	N/A	N/A	N/A	N/A	N/A
MP####xZD	TO252-5	2500	N/A	N/A	13 in.	12 mm	8 mm	50/50
MP####xFQ-T	TQFP 7x7-1.0	N/A	N/A	250	N/A	N/A	N/A	N/A
MP####xFQ-T	LQFP10x10x1.4	N/A	N/A	168	N/A	N/A	N/A	N/A
MPM####xG-Z	MPM QFN2x2x0.9	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MPM####xG-Z	MPM QFN2x2x1.6	2500	N/A	N/A	13 in.	12 mm	8 mm	125&125
MPM####xQA-Z	MPM QFN2.2x2.6x1.6	2500	N/A	N/A	13 in.	12 mm	8 mm	125&125
MPM####xQB-Z	MPM QFN2.5x3.0x0.9	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MPM####xRH-Z	MPM QFN2.5x3.5x1.6	2500	N/A	N/A	13 in.	12 mm	8 mm	125&125
MPM####xLE-Z	MPM QFN3x4x1.6	2500	N/A	N/A	13 in.	12 mm	8 mm	125&125
MPM####xQV-Z	MPM QFN3x5x1.6	2500	N/A	N/A	13 in.	12 mm	8 mm	125&125
MPM####xR-Z	MPM QFN4x4x1.6	2500	N/A	N/A	13 in.	12 mm	8 mm	125&125
MPM####xQW-Z	MPM QFN4x6x1.6	2500	N/A	N/A	13 in.	12 mm	8 mm	125&125
MPM####xQN-T	MPM QFN7x7x4.0	N/A	N/A	416	N/A	N/A	N/A	N/A
MPM####xQQ-T	MPM QFN8x8x1.6	N/A	N/A	348	N/A	N/A	N/A	N/A
MPM####xRF-T	MPM QFN10x12x4.0	N/A	N/A	210	N/A	N/A	N/A	N/A
MPM####xRB-T	MPM QFN12x12x3.82	N/A	N/A	168	N/A	N/A	N/A	N/A
MPM####xRB-T	MPM QFN12x12x4.0	N/A	N/A	168	N/A	N/A	N/A	N/A
MPM####xRU-T	MPM QFN12x15x4.0	N/A	N/A	136	N/A	N/A	N/A	N/A
MPM####xMK-T	MPM LGA6x6x2.0	N/A	N/A	490	N/A	N/A	N/A	N/A
MPM####xMN-T	MPM LGA7x7x2.0	N/A	N/A	260	N/A	N/A	N/A	N/A
MPM####xMN-T	MPM LGA7x7x4.4	N/A	N/A	260	N/A	N/A	N/A	N/A
MPM####xMQ-T	MPM LGA8x8x2.0	N/A	N/A	250	N/A	N/A	N/A	N/A
MPM####xLA-T	MPM LGA8x14x4.4	N/A	N/A	135	N/A	N/A	N/A	N/A
MPM####xLD-T	MPM LGA10x10x4.2	N/A	N/A	168	N/A	N/A	N/A	N/A
MPM####xLD-T	MPM LGA10x10x4.4	N/A	N/A	168	N/A	N/A	N/A	N/A
MPM####xLB-T	MPM LGA12x12x4.2	N/A	N/A	168	N/A	N/A	N/A	N/A
MPM####xPA-Z	ECLGA 2.5x2.5x1.2	2500	N/A	N/A	13 in.	12 mm	8 mm	125&125
MPM####xPQ-Z	ECLGA 3x3x1.45	2500	N/A	N/A	13 in.	12 mm	8 mm	125&125
MPM####xPQ-Z	ECLGA 3x3x1.85	2500	N/A	N/A	13 in.	12 mm	8 mm	125&125
MPM####xPQ-Z	ECLGA 3x3x2.0	2500	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xLM-Z	LGA 2x2	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125

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Part Number	Package Description	Quantity /Reel	Quantity /Tube	Quantity /Tray	Reel Diameter	Carrier Tape Width	Carrier Tape Pitch	Trailer Leader/ Reel
产品号	封装	数量/卷盘	数量/胶管	数量/托盘	卷盘直径	载带宽度	载带线距	前后空带数/卷盘
MP####xLN-Z	LGA 2x3	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xLQ-Z	LGA 3x3	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xLK-Z	LGA 3x4	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xLJ-Z	LGA 3x6	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xLR-Z	LGA 4x4	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xLV-Z	LGA 4x5	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xMW-Z	LGA 4x6	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xLU-Z	LGA 5x5	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xMJ-Z	LGA 5x6	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xMA-Z	LGA 5x7	5000	N/A	N/A	13 in.	16 mm	8 mm	125&125
MP####xMJ-Z	LGA 6x5	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xMMT-Z	LGA 6x7	5000	N/A	N/A	13 in.	16 mm	8 mm	125&125
MP####xBR-Z	BGA 4x4x0.87	5000	N/A	N/A	13 in.	12 mm	8 mm	125&125
MP####xBN-T	BGA 7x7x1.1	N/A	N/A	260	N/A	N/A	N/A	N/A
MP####xBJ-T	BGA 8x9x2.58	N/A	N/A	275	N/A	N/A	N/A	N/A
MP####xBD-T	BGA 10x10x1.1	N/A	N/A	168	N/A	N/A	N/A	N/A
MP####xBS-T	BGA 9x15x5.0	N/A	N/A	170	N/A	N/A	N/A	N/A
MP####xBC-T	BGA 9.5x16x4.98	N/A	N/A	112	N/A	N/A	N/A	N/A
MP####xBF-T	BGA 16x16x5.18	N/A	N/A	90	N/A	N/A	N/A	N/A
MP####xBH-T	BGA 15x30x5.18	N/A	N/A	48	N/A	N/A	N/A	N/A
MPC22161-T	Module 10x9x7.65	N/A	N/A	160	N/A	N/A	N/A	N/A
MPC1100-Z	Module 18x27x6.1	300	N/A	39	13 in.	44 mm	24 mm	25&25

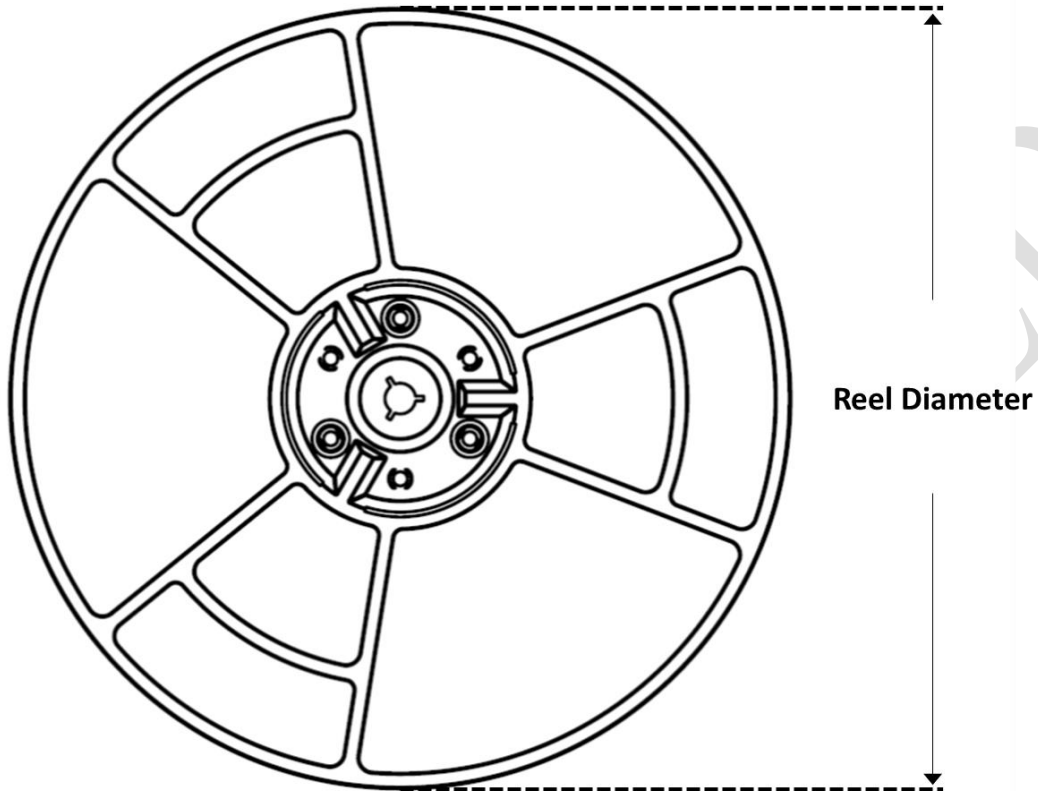
➤ N/A indicates “not available” for the packing method. For 500-piece tape & reel prototype quantities, see factory specification. (Order code for 500-piece partial reel is “-P”, tape & reel dimensions same as full reel.)

N/A 表示该产品不适用该包装方式出货。对于每卷 500 个的编带&卷盘，参见工厂规范。（针对 500 每卷的订单编号.应带后缀-P，外观尺寸与整卷出货一致）

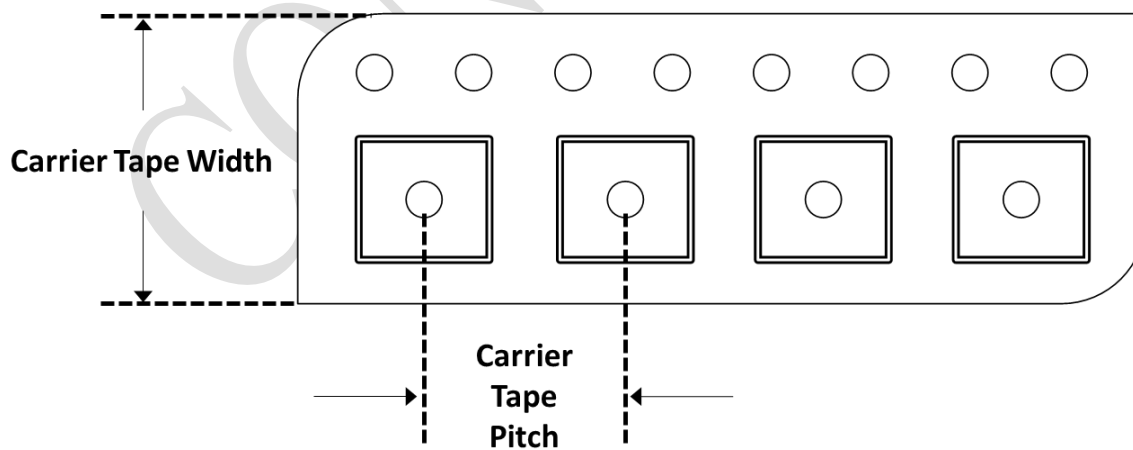
➤ If any package doesn't follow the above specification, it needs to get EM manager approval before process. 任何不符合以上标准的包装，需要得到 EM 经理的批准后方可执行。

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Reel Diagram



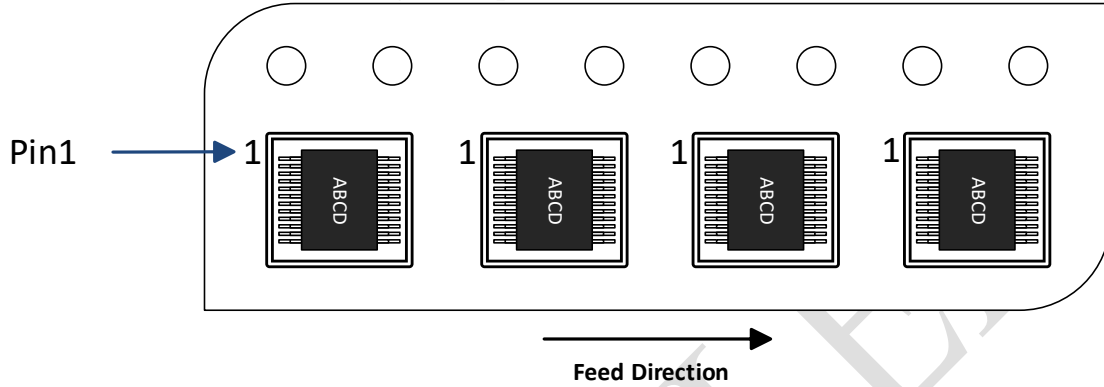
Carrier Tape Diagram



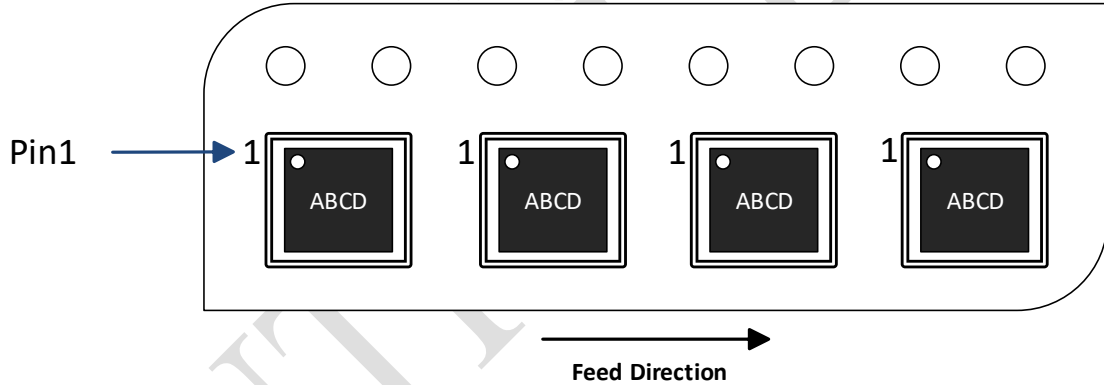
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Pin 1 Orientation by Package Type

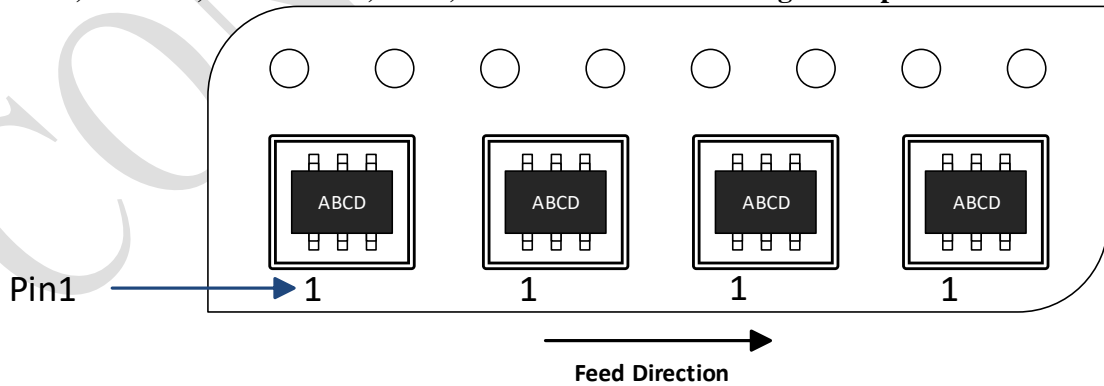
- **SOIC, TSSOP and MSOP Packages in tape**



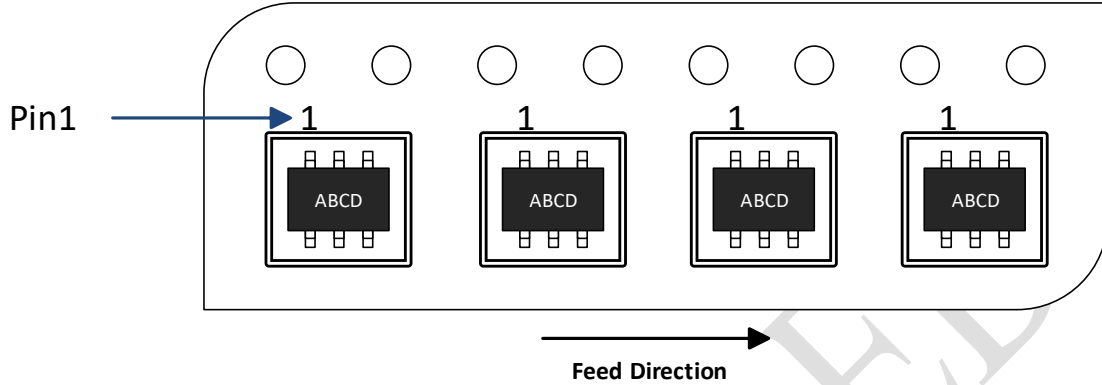
- **QFN, LGA, BGA and WLCSP Packages in tape**



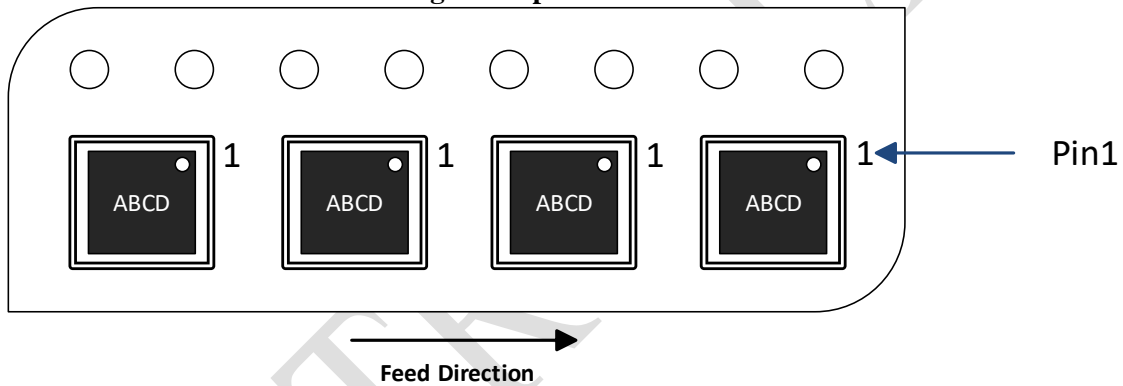
- **SOT23, TSOT23, TSOT23-LL, SC70, SOT563&SOT583 Packages in tape**



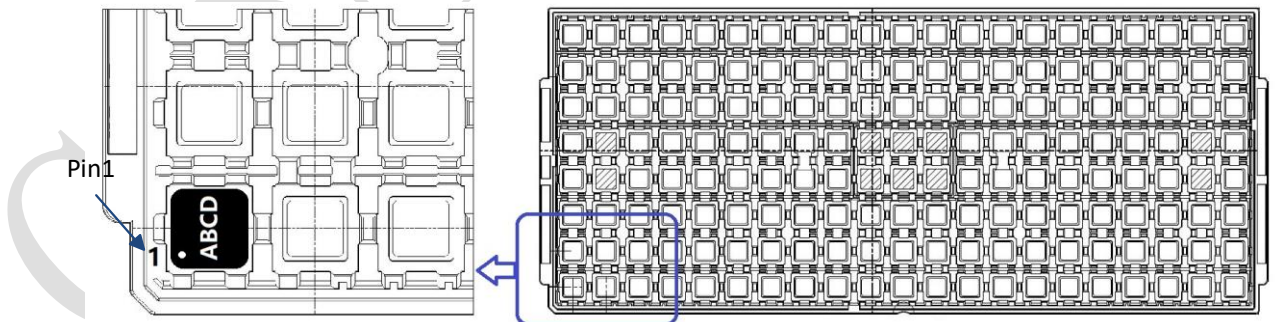
- **TSOT23-RL Package in tape**



- **Bare Die and Module 18x27 Packages in tape**



- **All packages in Tray**



4. Partial Reels 非完整卷盘

4.1. MPS may offer partial reel with only 500 units in the reel.

MPS 会提供只含 500 颗产品的非完整卷盘。

- 4.2. The reel size of partial reel will be the same as standard Tape and Reel, as exhibited on the table in section 3.0. However, the reel size of partial reel of QFN packages shipped out from MPS/USA might be 7".
- 非完整卷盘的尺寸与 3.0 表中的标准的 T&R 一样，然而，从 MPS/USA 出货的 QFN 封装的非完整卷盘的尺寸可能是 7"。

CONTROLLED