

EUROPEAN PATENT OFFICE  
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 1650

DATE: AUGUST 1, 2024

PROJECT MP12189

**The following classification changes will be effected by this Notice of Changes:**

<u>Action</u>	<u>Subclass</u>	<u>Group(s)</u>
<b>SCHEME:</b>		
Titles Changed:	D06N	2209/1664
	D06N	2211/08, 2211/18
	D07B	2301/45
	E04F	2201/044
	E05B	2015/1692
	E05B	2047/0013, 2047/0091
	E05B	2063/0026
	H01J	2217/04
	H01J	2237/002, 2237/024, 2237/0492, 2237/141, 2237/1538, 2237/16, 2237/204, 2237/2065, 2237/21, 2237/22, 2237/24528, 2237/2608, 2237/2826, 2237/30433, 2237/3045, 2237/31732, 2237/31798
	H01L	2224/0383, 2224/05187, 2224/05287, 2224/05387, 2224/05487, 2224/05687, 2224/05787, 2224/05887, 2224/05987, 2224/0912, 2224/1183, 2224/13187, 2224/13287, 2224/13387, 2224/13487, 2224/13687, 2224/13787, 2224/13887, 2224/13987, 2224/1712, 2224/2783, 2224/29021, 2224/29187, 2224/29287, 2224/29387, 2224/29487, 2224/29687, 2224/29787, 2224/29887, 2224/29987, 2224/3312, 2224/37187, 2224/37287, 2224/37387, 2224/37487, 2224/37687, 2224/37787, 2224/37887, 2224/37987, 2224/45187, 2224/45287, 2224/45387, 2224/45487, 2224/45687, 2224/45787, 2224/45887, 2224/45987, 2224/48687, 2224/48787, 2224/48887, 2224/80379, 2224/80487, 2224/80587, 2224/80687, 2224/80787, 2224/80901, 2224/81379, 2224/81487, 2224/81587, 2224/81687, 2224/81787, 2224/81901, 2224/83379, 2224/83487, 2224/83587, 2224/83687, 2224/83787, 2224/84487, 2224/84587, 2224/84687, 2224/84787, 2224/85487, 2224/85587, 2224/85687, 2224/85787
	H01L	2924/16174
	H03K	2217/96015
	H04M	2215/7886
	H04M	2250/12

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<u>Action</u>	<u>Subclass</u>	<u>Group(s)</u>
	H04N	2201/0013, 2201/0044, 2201/0074, 2201/0448, 2201/04743
	H04Q	2213/13136, 2213/13336, 2213/13402, 2213/13524, 2213/407
	H05K	2201/0133, 2201/0233, 2201/0236, 2201/0248, 2201/0251, 2201/0314, 2201/0338, 2201/0373, 2201/066, 2201/09036, 2201/09045, 2201/0919, 2201/09245, 2201/09281, 2201/09381, 2201/094, 2201/09463, 2201/09472, 2201/09563, 2201/09609, 2201/09627, 2201/09663, 2201/09672, 2201/09754, 2201/09827, 2201/09872, 2201/10234, 2201/10242, 2201/1025, 2201/10272, 2201/1034, 2201/10492, 2201/105, 2201/10575, 2201/10606, 2201/2036, 2201/2072
	H05K	2203/025, 2203/0353, 2203/04, 2203/0597, 2203/066, 2203/0709, 2203/105, 2203/1163, 2203/122, 2203/128, 2203/1372, 2203/1438
<b>DEFINITIONS:</b>		
Definitions Deleted: (no frozen (F) symbol definitions should be deleted)		
Definitions New:	D06N	2209/1664, 2211/08, 2211/18
	D07B	2301/45
	E04F	2201/044
	E05B	2015/1692, 2047/0013, 2047/0091, 2063/0026
	H01J	2217/04, 2237/1538, 2237/31798

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	H01L	2224/0383, 2224/05187, 2224/05287, 2224/05387, 2224/05487, 2224/05687, 2224/05787, 2224/05887, 2224/05987, 2224/0912, 2224/1183, 2224/13187, 2224/13287, 2224/13387, 2224/13487, 2224/13687, 2224/13787, 2224/13887, 2224/13987, 2224/1712, 2224/2783, 2224/29021, 2224/29187, 2224/29287, 2224/29387, 2224/29487, 2224/29687, 2224/29787, 2224/29887, 2224/29987, 2224/3312, 2224/37187, 2224/37287, 2224/37387, 2224/37487, 2224/37687, 2224/37787, 2224/37887, 2224/37987, 2224/45187, 2224/45287, 2224/45387, 2224/45487, 2224/45687, 2224/45787, 2224/45887, 2224/45987, 2224/48687, 2224/48787, 2224/48887, 2224/80379, 2224/80487, 2224/80587, 2224/80687, 2224/80787, 2224/80901, 2224/81379, 2224/81487, 2224/81587, 2224/81687, 2224/81787, 2224/81901, 2224/83379, 2224/83487, 2224/83587, 2224/83687, 2224/83787, 2224/84487, 2224/84587, 2224/84687, 2224/84787, 2224/85487, 2224/85587, 2224/85687, 2224/85787, 2924/16174
	H03K	2217/96015
	H04M	2215/7886, 2250/12
	H04N	2201/0013, 2201/0044, 2201/0074, 2201/0448, 2201/04743
	H04Q	2213/13136, 2213/13336, 2213/13402, 2213/13524
	H05K	2201/0133, 2201/0233, 2201/0236, 2201/0248, 2201/0251, 2201/0314, 2201/0338, 2201/0373, 2201/066, 2201/09036, 2201/09045, 2201/0919, 2201/09245, 2201/09281, 2201/09381, 2201/094, 2201/09463, 2201/09472, 2201/09563, 2201/09609, 2201/09627, 2201/09663, 2201/09672, 2201/09754, 2201/09827, 2201/09872, 2201/10234, 2201/10242, 2201/1025, 2201/10272, 2201/1034, 2201/10492, 2201/105, 2201/10575, 2201/10606, 2201/2036, 2201/2072, 2203/025, 2203/0353, 2203/04, 2203/0597, 2203/066, 2203/0709, 2203/105, 2203/1163, 2203/122, 2203/128, 2203/1372, 2203/1438

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<u>Action</u>	<u>Subclass</u>	<u>Group(s)</u>
Definitions Modified:	H01J	2237/002, 2237/024, 2237/0492, 2237/141, 2237/16, 2237/204, 2237/2065, 2237/21, 2237/22, 2237/2608, 2237/2826, 2237/30433, 2237/3045, 2237/31732

**No other subclasses/groups are impacted by this Notice of Changes.**

**This Notice of Changes includes the following [Check the ones included]:**

1. CLASSIFICATION SCHEME CHANGES

- A. New, Modified or Deleted Group(s)
- B. New, Modified or Deleted Warning(s)
- C. New, Modified or Deleted Note(s)
- D. New, Modified or Deleted Guidance Heading(s)

2. DEFINITIONS

- A. New or Modified Definitions (Full definition template)
- B. Modified or Deleted Definitions (Definitions Quick Fix)

3.  REVISION CONCORDANCE LIST (RCL)

4.  CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

5.  CHANGES TO THE CROSS-REFERENCE LIST (CRL)

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1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

**SUBCLASS D06N - WALL, FLOOR, OR LIKE COVERING MATERIALS, e.g. LINOLEUM, OILCLOTH, ARTIFICIAL LEATHER, ROOFING FELT, CONSISTING OF A FIBROUS WEB COATED WITH A LAYER OF MACROMOLECULAR MATERIAL; FLEXIBLE SHEET MATERIAL NOT OTHERWISE PROVIDED FOR**

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level</u> <u>Number of</u> <u>dots (e.g. 0,</u> <u>1, 2)</u>	<u>Title</u> <u>“CPC only” text should normally be</u> <u>enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
M	D06N2209/1664	2	Releasability	
M	D06N2211/08	1	Cleaning articles	
M	D06N2211/18	2	Medical, e.g. bandage, prostheses or catheter	

**SUBCLASS D07B - ROPES OR CABLES IN GENERAL**

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level</u> <u>Number of</u> <u>dots (e.g. 0,</u> <u>1, 2)</u>	<u>Title</u> <u>“CPC only” text should normally be</u> <u>enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
M	D07B 2301/45	1	for diagnosing	

**SUBCLASS E04F - FINISHING WORK ON BUILDINGS, e.g. STAIRS, FLOORS**

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level</u> <u>Number of</u> <u>dots (e.g. 0,</u> <u>1, 2)</u>	<u>Title</u> <u>“CPC only” text should normally be</u> <u>enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
M	E04F 2201/044	2	with tongues or grooves comprising elements which are not manufactured in one piece with the sheets, plates or panels but which are permanently fixedly connected to the sheets, plates or panels, e.g. at the factory	

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**SUBCLASS E05B - LOCKS; ACCESSORIES THEREFOR; HANDCUFFS**

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level</u> <u>Number of</u> <u>dots (e.g. 0,</u> <u>1, 2)</u>	<u>Title</u> <u>“CPC only” text should normally be</u> <u>enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
M	E05B 2015/1692	2	{Wires or straps}	
M	E05B 2047/0013	3	{more than one motor for the same function, e.g. for redundancy or increased power}	
M	E05B 2047/0091	1	{Retrofittable electric locks, e.g. an electric module can be attached to an existing manual lock}	
M	E05B 2063/0026	1	{Elongated, e.g. stud-like, striker entering into an opening in which movable detent means engage the elongated striker}	

**SUBCLASS H01J - ELECTRIC DISCHARGE TUBES OR DISCHARGE LAMPS**

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level</u> <u>Number of</u> <u>dots (e.g. 0,</u> <u>1, 2)</u>	<u>Title</u> <u>“CPC only” text should normally be</u> <u>enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
M	H01J 2217/04	1	Electrodes	
M	H01J 2237/002	1	Cooling arrangements	
M	H01J 2237/024	2	Moving components not otherwise provided for	
M	H01J 2237/0492	3	Lens systems	
M	H01J 2237/141	4	Coils	
M	H01J 2237/1538	2	Space charge (Boersch) effect compensation	
M	H01 J2237/16	1	Vessels	
M	H01J 2237/204	2	Means for introducing and/or outputting objects	
M	H01J 2237/2065	3	Temperature variations	
M	H01J 2237/21	1	Focus adjustment	
M	H01J 2237/22	1	Treatment of data	
M	H01J 2237/24528	4	Direction of beam or parts thereof in view of the optical axis, e.g. beam angle, angular distribution, beam divergence, beam convergence or beam landing angle on sample or workpiece	
M	H01J 2237/2608	4	with environmental specimen chamber	
M	H01J 2237/2826	3	Calibration	
M	H01J 2237/30433	3	System calibration	
M	H01J 2237/3045	4	Deflection calibration	
M	H01J 2237/31732	3	Depositing thin layers on selected microareas	
M	H01J 2237/31798	5	detecting pattern defects	

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**SUBCLASS H01L - SEMICONDUCTOR DEVICES NOT COVERED BY CLASS H10**

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level</u> <u>Number of</u> <u>dots (e.g. 0,</u> <u>1, 2)</u>	<u>Title</u> <u>“CPC only” text should normally be</u> <u>enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
M	H01L 2224/0383	5	Reworking, e.g. shaping	
M	H01L 2224/05187	8	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/05287	10	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/05387	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/05487	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/05687	8	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/05787	10	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/05887	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/05987	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/0912	6	Layout	
M	H01L 2224/1183	5	Reworking, e.g. shaping	
M	H01L 2224/13187	8	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/13287	10	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/13387	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/13487	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/13687	8	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/13787	10	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/13887	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/13987	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/1712	6	Layout	
M	H01L 2224/2783	5	Reworking, e.g. shaping	
M	H01L 2224/29021	7	the layer connector being disposed in a recess of the surface	
M	H01L 2224/29187	8	Ceramics, e.g. crystalline carbides, nitrides or oxides	

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M	H01L 2224/29287	10	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/29387	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/29487	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/29687	8	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/29787	10	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/29887	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/29987	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/3312	6	Layout	
M	H01L 2224/37187	8	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/37287	10	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/37387	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/37487	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/37687	8	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/37787	10	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/37887	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/37987	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/45187	8	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/45287	10	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/45387	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/45487	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/45687	8	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/45787	10	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/45887	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/45987	11	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/48687	9	Ceramics, e.g. crystalline carbides, nitrides or oxides	



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M	H01L 2224/48787	9	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/48887	9	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/80379	4	Material	
M	H01L 2224/80487	6	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/80587	8	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/80687	9	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/80787	9	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/80901	4	Pressing a bonding area against another bonding area by means of a further bonding area or connector	
M	H01L 2224/81379	4	Material	
M	H01L 2224/81487	6	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/81587	8	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/81687	9	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/81787	9	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/81901	4	Pressing the bump connector against the bonding areas by means of another connector	
M	H01L 2224/83379	4	Material	
M	H01L 2224/83487	6	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/83587	8	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/83687	9	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/83787	9	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/84487	6	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/84587	8	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/84687	9	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/84787	9	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/85487	6	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/85587	8	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2224/85687	9	Ceramics, e.g. crystalline carbides, nitrides or oxides	

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M	H01L 2224/85787	9	Ceramics, e.g. crystalline carbides, nitrides or oxides	
M	H01L 2924/16174	8	Ceramics, e.g. crystalline carbides, nitrides or oxides	

**SUBCLASS H03K - PULSE TECHNIQUE**

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level</u> <u>Number of</u> <u>dots (e.g. 0,</u> <u>1, 2)</u>	<u>Title</u> <u>“CPC only” text should normally be</u> <u>enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
M	H03K 2217/96015	3	Constructional details for touch switches	

**SUBCLASS H04M - TELEPHONIC COMMUNICATION**

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level</u> <u>Number of</u> <u>dots (e.g. 0,</u> <u>1, 2)</u>	<u>Title</u> <u>“CPC only” text should normally be</u> <u>enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
M	H04M 2215/7886	2	Apply cheapest or best package, e.g. selection among a available tariffs or packages	
M	H04M 2250/12	1	including a sensor for measuring a physical value, e.g. temperature or motion	

**SUBCLASS H04N - PICTORIAL COMMUNICATION, e.g. TELEVISION**

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level</u> <u>Number of</u> <u>dots (e.g. 0,</u> <u>1, 2)</u>	<u>Title</u> <u>“CPC only” text should normally be</u> <u>enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
M	H04N 2201/0013	2	Arrangements for the control of the connected apparatus by the still picture apparatus	
M	H04N 2201/0044	3	Connecting to a plurality of different apparatus; Using a plurality of different connectors	
M	H04N 2201/0074	2	Arrangements for the control of a still picture apparatus by the connected apparatus	
M	H04N 2201/0448	3	for positioning scanning elements not otherwise provided for; Aligning, e.g. using an alignment calibration pattern	

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M	H04N 2201/04743	4	by detecting the image directly	
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**SUBCLASS H04Q - SELECTING**

<b>Type*</b>	<b>Symbol</b>	<b>Indent Level Number of dots (e.g. 0, 1, 2)</b>	<b>Title “CPC only” text should normally be enclosed in {curly brackets}**</b>	<b>Transferred to#</b>
M	H04Q 2213/13136	1	Collect call	
M	H04Q 2213/13336	1	Store & forward, messaging systems	
M	H04Q 2213/13402	1	Data transmission out of voice frequency band	
M	H04Q 2213/13524	1	cost management	
M	H04Q 2213/407	1	Push-button dialling	

**SUBCLASS H05K - PRINTED CIRCUITS; CASINGS OR CONSTRUCTIONAL DETAILS OF ELECTRIC APPARATUS; MANUFACTURE OF ASSEMBLAGES OF ELECTRICAL COMPONENTS**

<b>Type*</b>	<b>Symbol</b>	<b>Indent Level Number of dots (e.g. 0, 1, 2)</b>	<b>Title “CPC only” text should normally be enclosed in {curly brackets}**</b>	<b>Transferred to#</b>
M	H05K 2201/0133	3	Elastomeric or compliant polymer	
M	H05K 2201/0233	4	Deformable particles	
M	H05K 2201/0236	4	Plating catalyst as filler in insulating material	
M	H05K 2201/0248	4	Needles or elongated particles; Elongated cluster of chemically bonded particles	
M	H05K 2201/0251	4	Non-conductive microfibers	
M	H05K 2201/0314	3	Elastomeric connector or conductor, e.g. rubber with metallic filler	
M	H05K 2201/0338	4	Layered conductor, e.g. layered metal substrate, layered finish layer or layered thin film adhesion layer	
M	H05K 2201/0373	4	Conductors having a fine structure, e.g. providing a plurality of contact points with a structured tool	
M	H05K 2201/066	2	Heat sink mounted on the surface of the printed circuit board [PCB]	
M	H05K 2201/09036	3	Recesses or grooves in insulating substrate	
M	H05K 2201/09045	3	Locally raised area or protrusion of insulating substrate	
M	H05K 2201/0919	3	Exposing inner circuit layers or metal planes at the side edge of the printed circuit board [PCB] or at the walls of large holes	
M	H05K 2201/09245	4	Crossing layout	

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M	H05K 2201/09281	4	Layout details of a single conductor	
M	H05K 2201/09381	4	Shape of non-curved single flat metallic pad, land or exposed part thereof; Shape of electrode of leadless component	
M	H05K 2201/094	4	Array of pads or lands differing from one another, e.g. in size, pitch or thickness; Using different connections on the pads	
M	H05K 2201/09463	4	Partial lands, i.e. lands or conductive rings not completely surrounding the hole	
M	H05K 2201/09472	4	Recessed pad for surface mounting; Recessed electrode of component	
M	H05K 2201/09563	4	Metal filled via	
M	H05K 2201/09609	4	Via grid, i.e. two-dimensional array of vias or holes in a single plane	
M	H05K 2201/09627	4	Special connections between adjacent vias, not for grounding vias	
M	H05K 2201/09663	4	Divided layout, i.e. conductors divided in two or more parts	
M	H05K 2201/09672	4	Superposed layout, i.e. in different planes	
M	H05K 2201/09754	4	Connector integrally incorporated in the printed circuit board [PCB] or in housing	
M	H05K 2201/09827	3	Tapered, e.g. tapered hole, via or groove	
M	H05K 2201/09872	3	Insulating conformal coating	
M	H05K 2201/10234	3	Metallic balls	
M	H05K 2201/10242	3	Metallic cylinders	
M	H05K 2201/1025	3	Metallic discs	
M	H05K 2201/10272	3	Busbars, i.e. thick metal bars mounted on the printed circuit board [PCB] as high-current conductors	
M	H05K 2201/1034	3	Edge terminals, i.e. separate pieces of metal attached to the edge of the printed circuit board [PCB]	
M	H05K 2201/10492	4	Electrically connected to another device	
M	H05K 2201/105	4	Mechanically attached to another device	
M	H05K 2201/10575	3	Insulating foil under component	
M	H05K 2201/10606	3	Permanent holder for component or auxiliary printed circuits mounted on a printed circuit board [PCB]	
M	H05K 2201/2036	2	Permanent spacer or stand-off in a printed circuit or printed circuit assembly	
M	H05K 2201/2072	2	Anchoring, i.e. one structure gripping into another	
M	H05K 2203/025	2	Abrading, e.g. grinding or sand blasting	
M	H05K 2203/0353	2	Making conductive layer thin, e.g. by etching	
M	H05K 2203/04	1	Soldering or other types of metallurgic bonding	
M	H05K 2203/0597	3	Resist applied over the edges or sides of conductors, e.g. for protection during etching or plating	
M	H05K 2203/066	2	Transfer laminating of insulating material, e.g. resist as a whole layer, not as a pattern	

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M	H05K 2203/0709	3	Catalytic ink or adhesive for electroless plating	
M	H05K 2203/105	2	Using an electrical field; Special methods of applying an electric potential	
M	H05K 2203/1163	2	Chemical reaction, e.g. heating solder by exothermic reaction	
M	H05K 2203/122	2	Organic non-polymeric compounds, e.g. oil, wax or thiol	
M	H05K 2203/128	2	Molten metals, e.g. casting thereof, or melting by heating and excluding molten solder	
M	H05K 2203/1372	3	Coating by using a liquid wave	
M	H05K 2203/1438	2	Treating holes after another process, e.g. coating holes after coating the substrate	

\*N = new entries where reclassification into entries is involved; C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; T = existing entries with enlarged file scope, which receive documents from C or D entries, e.g. when a limiting reference is removed from the entry title; M = entries with no change to the file scope (no reclassification); D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed; U = entries that are unchanged.

NOTES:

- \*\*No {curly brackets} are used for titles in CPC only subclasses, e.g. C12Y, A23Y; 2000 series symbol titles of groups found at the end of schemes (orthogonal codes); or the Y section titles. The {curly brackets} are used for 2000 series symbol titles found interspersed throughout the main trunk schemes (breakdown codes).
- U groups: it is obligatory to display the required “anchor” symbol (U group), i.e. the entry immediately preceding a new group or an array of new groups to be created (in case new groups are not clearly subgroups of C-type groups). Always include the symbol, indent level and title of the U group in the table above.
- All entry types should be included in the scheme changes table above for better understanding of the overall scheme change picture. Symbol, indent level, and title are required for all types.
- “Transferred to” column must be completed for all C, D, F, and Q type entries. F groups will be deleted once reclassification is completed.
- When multiple symbols are included in the “Transferred to” column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: “<administrative transfer to XX>”, “<administrative transfer to XX and YY simultaneously>”, or “<administrative transfer to XX, YY, ...and ZZ simultaneously>” when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be “additional information”.
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations “ADD” or “INV”: <administrative transfer to XX ADD>, <administrative transfer to XX INV>, or <administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the “D” entries of 2000-series or Y-series groups may not require a destination (“Transferred to”) symbol, however it is required to specify “<no transfer>” in the “Transferred to” column for such cases.
- For finalization projects, the deleted “F” symbols should have <no transfer> in the “Transferred to” column. or more details about the types of scheme change, see CPC Guide.

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## 2. A. DEFINITIONS (new)

### D06N 2209/1664

#### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Adhesive allowing removal of the whole carpet	<a href="#">D06N 2213/066</a>
Releasability between at least two of the layers of the backing in carpets, rugs or synthetic lawn	<a href="#">D06N 2213/068</a>

### D06N 2211/08

#### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Personal care	<a href="#">D06N 2211/24</a>
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### D06N 2211/18

#### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Patches, e.g. medical patches or repair patches	<a href="#">D06N 2211/22</a>
Packaging for decorative or sun protection articles	<a href="#">D06N 2211/20</a>

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**D07B 2301/45**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Signals indicating failure or excessive conditions, e.g. overheating	<a href="#">D07B 2301/30</a>
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**E04F 2201/044**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Separate tongues or interlocking keys, e.g. joining mouldings of circular, square or rectangular shape	<a href="#">E04F 2201/0523</a>
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**E05B 2015/1692**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Wound springs arrangements in locks	<a href="#">E05B 2015/0403</a>
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**E05B 2047/0013**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Electric spare devices, e.g. auxiliary batteries or capacitors for back up	<a href="#">E05B 2047/0087</a>
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**E05B 2047/0091**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Devices of electrically driving keys, e.g. to facilitate opening	<a href="#">E05B 2047/0083</a>
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**E05B 2063/0026**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Stud-like keepers	<a href="#">E05B 2015/0235</a>
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**H01J 2217/04****References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Electrodes for display panels, e.g. not making use of alternating current	<a href="#">H01J 2217/49207</a>
Electrodes common to discharge tubes	<a href="#">H01J 2201/00</a>

**H01J 2237/1538****References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Neutralising arrangements	<a href="#">H01J 2237/0041</a>
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**H01J 2237/31798****References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Pattern inspection	<a href="#">H01J 2237/2817</a>
Direct-write microstructures	<a href="#">H01J 2237/31735</a>
Etching microareas	<a href="#">H01J 2237/3174</a>

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## H01L 2224/0383

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Thermal post-treatment of the bonding area, e.g. reflowing	<a href="#">H01L 2224/03849</a>
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## H01L 2224/05187

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Material with principal constituent being glasses, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/05188</a>
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## H01L 2224/05287

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/05288</a>
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**H01L 2224/05387**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/05388</a>
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**H01L 2224/05487**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/05488</a>
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**H01L 2224/05687**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/05688</a>
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**H01L 2224/05787**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/05788</a>
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**H01L 2224/05887**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/05888</a>
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**H01L 2224/05987**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/05988</a>
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**H01L 2224/0912**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Layout of bonding areas prior to the connecting process	<a href="#">H01L 2224/0612</a>
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**H01L 2224/1183**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Thermal post-treatment of the bump connector, e.g. reflowing	<a href="#">H01L 2224/11849</a>
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**H01L 2224/13187**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/13188</a>
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**H01L 2224/13287**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/13288</a>
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**H01L 2224/13387**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/13388</a>
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**H01L 2224/13487**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/13488</a>
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**H01L 2224/13687**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/13688</a>
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**H01L 2224/13787**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/13788</a>
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**H01L 2224/13887**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/13888</a>
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**H01L 2224/13987**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/13988</a>
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**H01L 2224/1712**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Layout of bump connectors prior to the connecting process	<a href="#">H01L 2224/1412</a>
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**H01L 2224/2783**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Thermal post-treatment of the layer connector, e.g. reflowing	<a href="#">H01L 2224/27849</a>
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## H01L 2224/29021

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Layer connector being at least partially embedded in the surface	<a href="#">H01L 2224/29022</a>
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## H01L 2224/29187

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/29188</a>
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## H01L 2224/29287

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/29288</a>
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## H01L 2224/29387

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/29388</a>
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## H01L 2224/29487

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/29488</a>
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## H01L 2224/29687

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/29688</a>
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**H01L 2224/29787**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/29788</a>
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**H01L 2224/29887**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/29888</a>
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**H01L 2224/29987**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/29988</a>
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## H01L 2224/3312

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Layout of layer connectors prior to the connecting process	<a href="#">H01L 2224/3012</a>
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## H01L 2224/37187

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/37188</a>
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## H01L 2224/37287

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/37288</a>
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**H01L 2224/37387**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/37388</a>
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**H01L 2224/37487**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/37488</a>
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**H01L 2224/37687**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/37688</a>
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**H01L 2224/37787**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/37788</a>
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**H01L 2224/37887**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/37888</a>
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**H01L 2224/37987**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/37988</a>
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## H01L 2224/45187

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/45188</a>
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## H01L 2224/45287

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/45288</a>
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## H01L 2224/45387

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/45388</a>
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**H01L 2224/45487**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/45488</a>
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**H01L 2224/45687**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/45688</a>
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**H01L 2224/45787**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/45788</a>
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**H01L 2224/45887**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/45888</a>
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**H01L 2224/45987**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/45988</a>
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**H01L 2224/48687**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/48688</a>
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**H01L 2224/48787**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/48788</a>
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**H01L 2224/48887**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/48888</a>
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**H01L 2224/80379**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Material of the bonding area prior to the connecting process	<a href="#">H01L 2224/05099</a> , <a href="#">H01L 2224/05599</a>
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## H01L 2224/80487

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/80488</a>
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## H01L 2224/80587

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/80588</a>
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## H01L 2224/80687

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/80688</a>
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**H01L 2224/80787**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/80788</a>
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**H01L 2224/80901**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Detachable connecting means consisting of mechanical auxiliary parts connecting the device, e.g. pressure contacts using springs or clips	<a href="#">H01L 2224/72</a>
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**H01L 2224/81379**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Material of the bump connector prior to the connecting process	<a href="#">H01L 2224/13099</a> , <a href="#">H01L 2224/13599</a>
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## H01L 2224/81487

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/81488</a>
--	---------------------------------

## H01L 2224/81587

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/81588</a>
--	---------------------------------

## H01L 2224/81687

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/81688</a>
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## H01L 2224/81787

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/81788</a>
--	---------------------------------

## H01L 2224/81901

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Detachable connecting means consisting of mechanical auxiliary parts connecting the device, e.g. pressure contacts using springs or clips	<a href="#">H01L 2224/72</a>
---	------------------------------

## H01L 2224/83379

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Core member material of the layer connector prior to the connecting process	<a href="#">H01L 2224/29099</a>
Coating material of the layer connector prior to the connecting process	<a href="#">H01L 2224/29599</a>

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## H01L 2224/83487

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/83488</a>
--	---------------------------------

## H01L 2224/83587

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/83588</a>
--	---------------------------------

## H01L 2224/83687

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/83688</a>
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**H01L 2224/83787**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/83788</a>
--	---------------------------------

**H01L 2224/84487**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/84488</a>
--	---------------------------------

**H01L 2224/84587**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/84588</a>
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**H01L 2224/84687**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/84688</a>
--	---------------------------------

**H01L 2224/84787**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/84788</a>
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**H01L 2224/85487**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/85488</a>
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**H01L 2224/85587**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/85588</a>
--	---------------------------------

**H01L 2224/85687**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/85688</a>
--	---------------------------------

**H01L 2224/85787**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Glass ceramics, e.g. amorphous oxides, nitrides or fluorides	<a href="#">H01L 2224/85788</a>
--	---------------------------------

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**H01L 2924/16174**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

The bump connector connecting between a semiconductor or solid-state body and an item not being a semiconductor or solid-state body, the item being metallic	<a href="#">H01L 2224/16175</a>
--	---------------------------------

**H03K 2217/96015**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Capacitive touch switches	<a href="#">H03K 2217/9607</a>
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**H04M 2215/7886**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Least cost routing, i.e. provision for selecting the lowest cost tariff	<a href="#">H04M 2215/42</a>
---	------------------------------

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**H04M 2250/12**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Telephonic subscriber devices including a GPS signal receiver	<a href="#">H04M 2250/10</a>
---	------------------------------

**H04N 2201/0013**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Arrangements for the control of a still picture apparatus by the connected apparatus	<a href="#">H04N2201/0074</a>
Control of image communication with the connected apparatus, e.g. signalling capability	<a href="#">H04N 2201/0015</a>

**H04N 2201/0044**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Connection via a network	<a href="#">H04N 2201/0039</a>
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**H04N 2201/0074**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Arrangements for the control of the connected apparatus by the still picture apparatus	<a href="#">H04N 2201/0013</a>
Control of image communication with the connected apparatus, e.g. signalling capability	<a href="#">H04N 2201/0015</a>

**H04N 2201/0448**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Arrangements for positioning elements within a scanning head	<a href="#">H04N 2201/02406</a>
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**H04N 2201/04743**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Detection of scanning velocity or position on the scanned sheet, e.g. a reference sheet	<a href="#">H04N 2201/04717</a>
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## H04Q 2213/13136

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Information service, downloading of information or 0800/0900 services	<a href="#">H04Q 2213/13376</a>
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## H04Q 2213/13336

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Electronic mail	<a href="#">H04Q 2213/13375</a>
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## H04Q 2213/13402

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Asymmetrical two-way transmission, e.g. ADSL or HDSL	<a href="#">H04Q 2213/13039</a>
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**H04Q 2213/13524**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Least cost routing or LCR	<a href="#">H04Q 2213/13138</a>
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**H05K 2201/0133**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Elastomeric connector or conductor, e.g. rubber with metallic filler	<a href="#">H05K 2201/0314</a>
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**H05K 2201/0233**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Insulating particles having an electrically conductive coating	<a href="#">H05K 2201/0221</a>
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**H05K 2201/0236**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Catalytic ink or adhesive for electroless plating	<a href="#">H05K 2203/0709</a>
---	--------------------------------

**H05K 2201/0248**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Non-conductive microfibers	<a href="#">H05K 2201/0251</a>
Stacked conductors	<a href="#">H05K 2201/0379</a>

**H05K 2201/0251**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Needles or elongated particles	<a href="#">H05K 2201/0248</a>
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## H05K 2201/0314

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Elastomeric or compliant polymer	<a href="#">H05K 2201/0133</a>
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## H05K 2201/0338

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Etched tri-metal structure, i.e. metal layers or metal patterns on both sides of a different central metal layer which is later at least partly etched	<a href="#">H05K 2201/0361</a>
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## H05K 2201/0373

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Providing micro- or nanometer scale roughness on a metal surface, e.g. by plating of nodules or dendrites	<a href="#">H05K 2203/0307</a>
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**H05K 2201/066**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Metallic blocks or heatsinks completely inserted in a printed circuit board [PCB]	<a href="#">H05K 2201/10416</a>
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**H05K 2201/09036**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Recess in conductor, e.g. in pad or in metallic substrate	<a href="#">H05K 2201/09745</a>
---	---------------------------------

**H05K 2201/09045**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Rigid curved substrate	<a href="#">H05K 2201/09018</a>
------------------------	---------------------------------

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**H05K 2201/0919**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Shielding provided by an inner layer of printed circuit board [PCB]	<a href="#">H05K 2201/0723</a>
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**H05K 2201/09245**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Alternating conductors, e.g. alternating different shaped pads, twisted pairs or alternating components	<a href="#">H05K 2201/097</a>
---	-------------------------------

**H05K 2201/09281**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Meander	<a href="#">H05K 2201/09263</a>
Layout details of angles or corners	<a href="#">H05K 2201/09272</a>

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**H05K 2201/09381**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Notches in edge pads	<a href="#">H05K 2201/09181</a>
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**H05K 2201/094**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Using different types of conductors	<a href="#">H05K 2201/0391</a>
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**H05K 2201/09463**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Plated through-holes or blind vias without lands	<a href="#">H05K 2201/09545</a>
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**H05K 2201/09472**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Recess in conductor, e.g. in pad or in metallic substrate	<a href="#">H05K 2201/09745</a>
---	---------------------------------

**H05K 2201/09563**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Plated through-holes or plated blind vias filled with insulating material	<a href="#">H05K 2201/0959</a>
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**H05K 2201/09609**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Interposers attached to or integrated in a printed circuit board [PCB]	<a href="#">H05K 2201/10378</a>
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**H05K 2201/09627**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Redundant conductors or connections, i.e. more than one current path between two points	<a href="#">H05K 2201/0979</a>
---	--------------------------------

**H05K 2201/09663**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Branched layout	<a href="#">H05K 2201/09254</a>
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**H05K 2201/09672**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Parallel layout	<a href="#">H05K 2201/09236</a>
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**H05K 2201/09754**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Non-printed connector	<a href="#">H05K 2201/10189</a>
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**H05K 2201/09827**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Bevelled, chamfered or tapered edge	<a href="#">H05K 2201/09154</a>
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**H05K 2201/09872**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Foil encapsulation, e.g. of mounted components	<a href="#">H05K 2203/1311</a>
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**H05K 2201/10234**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Solder performs in the shape of solder balls	<a href="#">H05K 2203/041</a>
--	-------------------------------

**H05K 2201/10242**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Small performs other than balls, e.g. discs, cylinders or pillars	<a href="#">H05K 2203/0415</a>
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**H05K 2201/1025**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Small performs other than balls, e.g. discs, cylinders or pillars	<a href="#">H05K 2203/0415</a>
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## H05K 2201/10272

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Thin metal strips as connectors or conductors	<a href="#">H05K 2201/1028</a>
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## H05K 2201/1034

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Structure of the conductor or tab	<a href="#">H05K 2201/0397</a>
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## H05K 2201/10492

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Mounted components directly electrically connected to each other, i.e. not via the printed circuit board [PCB]	<a href="#">H05K 2201/1053</a>
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## H05K 2201/105

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Attached components	<a href="#">H05K 2201/10537</a>
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## H05K 2201/10575

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Permanent spacer or stand-off in a printed circuit or printed circuit assembly	<a href="#">H05K 2201/2036</a>
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## H05K 2201/10606

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Clamping a component by an element or a set of elements	<a href="#">H05K 2201/10393</a>
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## H05K 2201/2036

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Pattern for applying drops or paste or applying a pattern made of drops or paste	<a href="#">H05K 2203/0545</a>
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## H05K 2201/2072

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Providing micro- or nanometer scale roughness on a metal surface, e.g. by plating of nodules or dendrites	<a href="#">H05K 2203/0307</a>
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## H05K 2203/025

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Deburring, rounding, bevelling or smoothing conductor edges	<a href="#">H05K 2203/0346</a>
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## H05K 2203/0353

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Etching selective parts of metal substrate through part of its thickness, e.g. using etch resist	<a href="#">H05K 2203/0369</a>
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## H05K 2203/04

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Molten metals, e.g. casting thereof, or melting by heating and excluding molten solder	<a href="#">H05K 2203/128</a>
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## H05K 2203/0597

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Shape or layout details	<a href="#">H05K 2201/09818</a>
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## H05K 2203/066

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Transfer of pre-fabricated insulating pattern	<a href="#">H05K 2203/0537</a>
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## H05K 2203/0709

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Plating catalyst as filler in insulating material	<a href="#">H05K 2201/0236</a>
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## H05K 2203/105

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Electroplating, e.g. finish plating	<a href="#">H05K 2203/0723</a>
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## H05K 2203/1163

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Oxidising metal	<a href="#">H05K 2203/0315</a>
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## H05K 2203/122

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Using solvent, e.g. for cleaning or regulating solvent content of pastes or coatings for adjusting the viscosity	<a href="#">H05K 2203/0783</a>
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## H05K 2203/128

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Spraying small metal particles or droplets of molten metal	<a href="#">H05K 2203/1344</a>
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## H05K 2203/1372

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Soldering or other types of metallurgic bonding	<a href="#">H05K 2203/04</a>
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## H05K 2203/1438

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Metal used as mask for etching vias, e.g. by laser ablation	<a href="#">H05K 2203/0554</a>
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## 2. A. DEFINITIONS (modified)

### H01J 2237/002

#### References

Delete: The Limiting references section.

Insert: The following new Informative references section:

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Maintaining constant desired temperature of objects being observed or treated	<a href="#">H01J 2237/2001</a>
---	--------------------------------

### H01J 2237/024

#### References

Delete: The Limiting references section.

Insert: The following new Informative references section:

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Movable supports of diaphragms, i.e. for changing between differently sized apertures	<a href="#">H01J 2237/0458</a>
Movement of the objects being observed or treated	<a href="#">H01J 2237/202</a>



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## H01J 2237/0492

### References

Delete: The Limiting references section.

Insert: The following new Informative references section:

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Individual lenses	<a href="#">H01J 2237/10</a>
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## H01J 2237/141

### References

Delete: The Limiting references section.

Insert: The following new Informative references section:

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Magnetic lenses with superconducting coils	<a href="#">H01J 2237/142</a>
--	-------------------------------

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**H01J 2237/16**

**References**

Delete: The Limiting references section.

Insert: The following new Informative references section:

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Liner tubes of shields	<a href="#">H01J 2237/0268</a>
------------------------	--------------------------------

**H01J 2237/204**

**References**

Delete: The Limiting references section.

Insert: The following new Informative references section:

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Vacuum locks	<a href="#">H01J 2237/184</a>
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## H01J 2237/2065

### References

Delete: The Limiting references section.

Insert: The following new Informative references section:

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Maintaining constant desired temperature of the objects being observed or treated	<a href="#">H01J 2237/2001</a>
---	--------------------------------

## H01J 2237/21

### References

Delete: The Limiting references section.

Insert: The following new Informative references section:

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Individual lenses	<a href="#">H01J 2237/10</a>
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## H01J 2237/22

### References

Delete: The Limiting references section.

Insert: The following new Informative references section:

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Signal processing, e.g. mixing of two or more signals	<a href="#">H01J 2237/24495</a>
Image data processing or generation	<a href="#">G06T</a>

## H01J 2237/2608

### References

Delete: The Limiting references section.

Insert: The following new Informative references section:

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Environmental cells	<a href="#">H01J 2237/2003</a>
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## H01J 2237/2826

### References

Delete: The Limiting references section.

Insert: The following new Informative references section:

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

System calibration of electron or ion beam tubes for processing objects	<a href="#">H01J 2237/30433</a>
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## H01J 2237/30433

### References

Delete: The Limiting references section.

Insert: The following new Informative references section:

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Calibration of electron or ion microscopes	<a href="#">H01J 2237/2826</a>
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CPC NOTICE OF CHANGES 1650

DATE: AUGUST 1, 2024

PROJECT MP12189

**H01J 2237/3045**

**References**

Delete: The Limiting references section.

***Informative references***

Replace: The Informative references table with the following revised table:

Means for deflecting or directing discharge	<a href="#">H01J 2237/15</a>
Scanning the beam	<a href="#">H01J 2237/30483</a>

**H01J 2237/31732**

**References**

Delete: The Limiting references section.

Insert: The following new Informative references section:

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Ion plating	<a href="#">H01J 2237/3142</a>
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