

EUROPEAN PATENT OFFICE  
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 125

DATE: OCTOBER 1, 2015

PROJECT MP0117

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

<u>Action*</u>	<u>Subclass</u>	<u>Group(s)</u>
<b>Symbols deleted:</b>	H01L	21/02038
	H01L	21/36
	H01L	21/363
	H01L	21/365
	H01L	21/368
	H01L	21/58
<b>Symbols deleted pending reclassification (frozen (F)):</b>	H01L	21/312
	H01L	21/3121
	H01L	21/3122
	H01L	21/3124
	H01L	21/3125
	H01L	21/3127
	H01L	21/3128
	H01L	21/314
	H01L	21/3141
	H01L	21/3142
	H01L	21/3143
	H01L	21/3144
	H01L	21/3145
	H01L	21/3146
	H01L	21/3147
	H01L	21/3148
	H01L	2021/3149
	H01L	21/316
	H01L	21/31604
	H01L	21/31608
	H01L	21/31612
	H01L	21/31616
	H01L	21/3162
	H01L	21/31625
	H01L	21/31629
	H01L	21/31633
	H01L	21/31637
	H01L	21/31641
	H01L	21/31645
	H01L	21/3165
H01L	21/31654	
H01L	21/31658	
H01L	21/31662	
H01L	21/31666	

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<u>Action*</u>	<u>Subclass</u>	<u>Group(s)</u>
<b>Symbols deleted pending reclassification (frozen (F)):</b>	H01L	21/3167
	H01L	21/31675
	H01L	21/31679
	H01L	21/31683
	H01L	21/31687
	H01L	21/31691
	H01L	21/31695
	H01L	21/318
	H01L	21/3185
<b>Title wording changes:</b>	H01L	21/44
	H01L	21/477
	H01L	21/479
<b>Deleted Definitions:</b>	H01L	21/02038
	H01L	21/36
	H01L	21/58
<b>Scheme Warning Notices to be added/modified/deleted:</b>	H01L	Subclass
	H01L	21/02005
	H01L	21/02038
	H01L	21/02104
	H01L	21/02107
	H01L	21/02365
	H01L	21/06
	H01L	21/16
	H01L	21/20
	H01L	21/265
	H01L	21/312
	H01L	21/314
	H01L	21/316
	H01L	21/318
	H01L	21/3247
	H01L	21/36
	H01L	21/58
	H01L	21/67703
	H01L	21/6776
	H01L	21/76814
	H01L	21/76822
	H01L	23/482
	H01L	23/485
	H01L	23/49
	H01L	24/00
	H01L	24/01
	H01L	24/02
	H01L	24/18
	H01L	24/34
	H01L	24/43

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<u>Action*</u>	<u>Subclass</u>	<u>Group(s)</u>
<b>Scheme Warning Notices to be added/modified/deleted:</b>	H01L	24/44
	H01L	24/47
	H01L	24/48
	H01L	24/49
	H01L	24/50
	H01L	24/80
	H01L	24/84
	H01L	24/90
	H01L	24/93
	H01L	27/10826
	H01L	27/10847
	H01L	27/10879
	H01L	27/1116
	H01L	27/11286
	H01L	27/11504
	H01L	27/11512
	H01L	27/11514
	H01L	27/11517
	H01L	27/11556
	H01L	27/11565
	H01L	27/11575
	H01L	27/11578
	H01L	27/11582
	H01L	27/11587
	H01L	27/11595
	H01L	27/11597
	H01L	27/1214
	H01L	27/24
	H01L	27/3211
	H01L	29/0852
	H01L	29/401
	H01L	29/42356
	H01L	29/4991
	H01L	29/66681
	H01L	29/66719
	H01L	29/7803
	H01L	29/7811
	H01L	29/7815
	H01L	29/7816
	H01L	29/7828
	H01L	29/7842
	H01L	41/047
	H01L	41/053
	H01L	41/08
	H01L	41/083
	H01L	41/0906
	H01L	41/0926
	H01L	41/0986

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<u>Action*</u>	<u>Subclass</u>	<u>Group(s)</u>
<b>Scheme Warning Notices to be added/modified/deleted:</b>	H01L	41/0993
	H01L	41/113
	H01L	41/183
	H01L	41/187
	H01L	45/00
	H01L	51/5206
	H01L	51/5221
	H01L	51/5237
<b>Scheme Notes or Guidance Headings be added/modified/deleted:</b>	H01L	21/768
	H01L	31/06

**The following subclasses/groups are also impacted by this Notice of Changes:**  
G02B

**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 Notice(s)
  - C. New, Modified or Deleted Note(s)
  - D. New, Modified or Deleted Guidance Heading(s)
2. DEFINITIONS (New or Modified)
  - A. DEFINITIONS (Full definition template)
  - B. DEFINITIONS (Definitions Quick Fix)
3.  REVISION CONCORDANCE LIST (RCL)
4.  CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)
5.  CROSS-REFERENCE LIST (CRL)

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## 1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)**SUBCLASS H01L – SEMICONDUCTOR DEVICES; ELECTRIC SOLID STATE DEVICES NOT OTHERWISE PROVIDED FOR**

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level Number of dots (e.g. 0, 1, 2)</u>	<u>Title (new or modified)</u> <u>“CPC only” text should normally be enclosed in {curly brackets}**</u>	<u>Transferred to<sup>#</sup></u>
D	H01L21/02038	3		<administrative transfer to H01L21/7624>
F	H01L21/312	6	Organic layers, e.g. photoresist (H01L 21/3105, H01L21/32 take precedence; {photoresists per se G03C})	H01L21/02107 – H01L21/02362
F	H01L21/3121	7	{Layers comprising organo-silicon compounds}	H01L21/02107 – H01L21/02362
F	H01L21/3122	8	{layers comprising polysiloxane compounds}	H01L21/02107 – H01L21/02362
F	H01L21/3124	9	{layers comprising hydrogen silsesquioxane}	H01L21/02107 – H01L21/02362
F	H01L21/3125	8	{layers comprising silazane compounds}	H01L21/02107 – H01L21/02362
F	H01L21/3127	7	{Layers comprising fluoro (hydro)carbon compounds, e.g. polytetrafluoroethylene}	H01L21/02107 – H01L21/02362
F	H01L21/3128	7	{by Langmuir-Blodgett techniques}	H01L21/02107 – H01L21/02362
F	H01L21/314	6	Inorganic layers (H01L 21/3105, H01L 21/32 take precedence)	H01L21/02107 – H01L21/02362
F	H01L21/3141	7	{Deposition using atomic layer deposition techniques [ALD]}	H01L21/02107 – H01L21/02362
F	H01L21/3142	8	{of nano-laminates, e.g. alternating layers of Al2O3-HfO2}	H01L21/02107 – H01L21/02362
F	H01L21/3143	7	{composed of alternated layers or of mixtures of nitrides and oxides or of oxinitrides, e.g. formation of oxinitride by oxidation of nitride layers}	H01L21/02107 – H01L21/02362
F	H01L21/3144	8	{on silicon}	H01L21/02107 – H01L21/02362
F	H01L21/3145	8	{formed by deposition from a gas or vapour}	H01L21/02107 – H01L21/02362
F	H01L21/3146	7	{Carbon layers, e.g. diamond-like layers}	H01L21/02107 – H01L21/02362
F	H01L21/3147	7	{Epitaxial deposition of insulating materials}	H01L21/02107 – H01L21/02362

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<u>Type*</u>	<u>Symbol</u>	<u>Indent Level Number of dots (e.g. 0, 1, 2)</u>	<u>Title (new or modified)</u> <u>“CPC only” text should normally be enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
F	H01L21/3148	7	{Silicon Carbide layers}	H01L21/02107 – H01L21/02362
F	H01L2021/3149	8	{Langmuir-Blodgett techniques}	H01L21/02107 – H01L21/02362
F	H01L21/316	7	composed of oxides or glassy oxides or oxide based glass	H01L21/02107 – H01L21/02362
F	H01L21/31604	8	{Deposition from a gas or vapour (H01L21/31691, H01L21/31695 take precedence)}	H01L21/02107 – H01L21/02362
F	H01L21/31608	9	{Deposition of SiO <sub>2</sub> (H01L 21/31625 , H01L 21/31629 and H01L 21/31633 take precedence)}	H01L21/02107 – H01L21/02362
F	H01L21/31612	10	{on a silicon body}	H01L21/02107 – H01L21/02362
F	H01L21/31616	9	{Deposition of Al <sub>2</sub> O <sub>3</sub> }	H01L21/02107 – H01L21/02362
F	H01L21/3162	10	{on a silicon body}	H01L21/02107 – H01L21/02362
F	H01L21/31625	9	{Deposition of boron or phosphorus doped silicon oxide, e.g. BSG, PSG, BPSG}	H01L21/02107 – H01L21/02362
F	H01L21/31629	9	{Deposition of halogen doped silicon oxide, e.g. fluorine doped silicon oxide}	H01L21/02107 – H01L21/02362
F	H01L21/31633	9	{Deposition of carbon doped silicon oxide, e.g. SiOC}	H01L21/02107 – H01L21/02362
F	H01L21/31637	9	{Deposition of Tantalum oxides, e.g. Ta <sub>2</sub> O <sub>5</sub> }	H01L21/02107 – H01L21/02362
F	H01L21/31641	9	{Deposition of Zirconium oxides, e.g. ZrO <sub>2</sub> }	H01L21/02107 – H01L21/02362
F	H01L21/31645	9	{Deposition of Hafnium oxides, e.g. HfO <sub>2</sub> }	H01L21/02107 – H01L21/02362
F	H01L21/3165	8	{formed by oxidation (H01L21/31691, H01L21/31695 take precedence)}	H01L21/02107 – H01L21/02362
F	H01L21/31654	9	{of semiconductor materials, e.g. the body itself}	H01L21/02107 – H01L21/02362
F	H01L21/31658	10	{by thermal oxidation, e.g. of SiGe}	H01L21/02107 – H01L21/02362
F	H01L21/31662	11	{of silicon in uncombined form}	H01L21/02107 – H01L21/02362
F	H01L21/31666	11	{of AIII BV compounds}	H01L21/02107 – H01L21/02362
F	H01L21/3167	10	{of anodic oxidation}	H01L21/02107 – H01L21/02362
F	H01L21/31675	11	{of silicon}	H01L21/02107 – H01L21/02362
F	H01L21/31679	11	{of AIII BV compounds}	H01L21/02107 – H01L21/02362

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<b>Type*</b>	<b>Symbol</b>	<b>Indent Level Number of dots (e.g. 0, 1, 2)</b>	<b>Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**</b>	<b>Transferred to#</b>
F	H01L21/31683	9	{of metallic layers, e.g. Al deposited on the body, e.g. formation of multi-layer insulating structures}	H01L21/02107 – H01L21/02362
F	H01L21/31687	10	{by anodic oxidation}	H01L21/02107 – H01L21/02362
F	H01L21/31691	8	{with perovskite structure}	H01L21/02107 – H01L21/02362
F	H01L21/31695	8	{Deposition of porous oxides or porous glassy oxides or oxide based porous glass}	H01L21/02107 – H01L21/02362
F	H01L21/318	7	composed of nitrides	H01L21/02107 – H01L21/02362
F	H01L21/3185	8	{of siliconnitrides}	H01L21/02107 – H01L21/02362
D	H01L21/36	4		<administrative transfer to H01L21/02521>
D	H01L21/363	5		<administrative transfer to H01L21/02521 and H01L21/02631 simultaneously>
D	H01L21/365	5		<administrative transfer to H01L21/02521 and H01L21/0262 simultaneously>
D	H01L21/368	5		<administrative transfer to H01L21/02521 and H01L21/02623 simultaneously>
M	H01L21/44	4	Manufacture of electrodes on semiconductor bodies using processes or apparatus not provided for in groups H01L21/38 to H01L21/428	
M	H01L21/477	5	Thermal treatment for modifying the properties of semiconductor bodies, e.g. annealing, sintering (H01L21/38 to H01L21/449 and H01L21/461 to H01L21/475 take precedence)	
M	H01L21/479	5	Application of electric currents or fields, e.g. for electroforming (H01L21/38 to H01L21/449 and H01L21/461 to H01L21/475 take precedence)	
D	H01L21/58	4		<administrative transfer to H01L24/80>

\*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; E= 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

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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).
- For U groups, the minimum requirement is to include the U group located immediately prior to the N group or N group array, in order to show the N group hierarchy and improve the readability and understanding of the scheme. 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 except “D” which requires only a symbol.
- #“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>” or “<administrative transfer to XX and YY simultaneously>” when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be “invention information”, unless otherwise indicated, and to 2000 series groups is assumed to be “additional information”.



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B. New, Modified or Deleted Warning notice(s)**SUBCLASS H01L – SEMICONDUCTOR DEVICES; ELECTRIC SOLID STATE DEVICES NOT OTHERWISE PROVIDED FOR**

<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
D	H01L21/02005	Not complete, see H01L21/30 and subgroups	<delete warning>
D	H01L21/02038	Not complete, see H01L21/7624 and subgroups	<delete warning>
M	H01L21/02104	Group H01L 21/02104 and subgroups are not complete pending reorganization. See also groups H01L 21/20, H01L 21/36, H01L 21/06, H01L 21/16 and subgroups	Groups H01L21/02104 – H01L21/02694 are incomplete pending reclassification of documents from groups H01L21/06, H01L21/16, and H01L21/20. Groups H01L21/02104 – H01L21/02694, H01L21/06, H01L 21/20, and H01L21/16 should be considered in order to perform a complete search.
M	H01L21/02107	This group and subgroups are not complete pending the completion of a reclassification; see also H01L 21/312 , H01L 21/314 , H01L 21/316 , and H01L 21/318 and subgroups thereof	Groups H01L21/02107 – H01L21/02326 are incomplete pending reclassification of documents from groups H01L21/312, H01L21/314, H01L 21/316, and H01L 21/318. Groups H01L21/02107 – H01L21/02326, H01L21/312, H01L21/314, H01L21/316, and H01L21/318 should be considered in order to perform a complete search.
M	H01L21/02365		Group H01L21/02365 is incomplete pending reclassification of documents from groups H01L21/06, H01L21/16, and H01L21/20. Groups H01L21/06, H01L21/16, and H01L21/20 should be considered in order to perform a complete search.
M	H01L21/06	This group is no longer used for the classification of new documents as from December 1, 2009. The backlog of this group is being continuously reclassified to H01L21/02365 and subgroups	Group H01L21/06 is impacted by reclassification into groups H01L21/02365 – H01L21/02694. Groups H01L21/06 and H01L21/02365 – H01L21/02694 should be considered in order to perform a complete search.
M	H01L21/16	This group is no longer used for the classification of new documents as from December 1, 2009. The backlog of this group is being continuously reclassified to H01L21/02365 and subgroups	Group H01L21/16 is impacted by reclassification into groups H01L21/02365 – H01L21/02694. Groups H01L21/16 and H01L21/02365 – H01L21/02694 should be considered in order to perform a complete search.
M	H01L21/20	This group is no longer used for the classification of new documents as from December 1, 2009. The backlog of this group is being continuously reclassified to H01L21/02365 and subgroups	Group H01L21/20 is impacted by reclassification into groups H01L21/02365 – H01L21/02694. Groups H01L21/20 and H01L21/02365 – H01L21/02694 should be considered in order to perform a complete search.

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<b>Type*</b>	<b>Location</b>	<b>Old Warning notice</b>	<b>New/Modified Warning notice</b>
M	H01L21/265	The groups H01L 21/265 C, H01L 21/2658 and H01L 21/26593 are not complete, see provisionally also H01L 21/26506 and H01L 21/2654 and their subgroups	Groups H01L21/26566, H01L21/2658 and H01L21/26593 are incomplete pending reclassification of documents from groups H01L21/26506 and H01L 21/2654. Groups H01L21/26566, H01L21/2658, H01L21/26593, H01L21/26506 and H01L21/2654 should be considered in order to perform a complete search
M	H01L21/312	This group and subgroups are no longer used for the classification of new documents as from May 1, 2011. The backlog of this group is being continuously reclassified to H01L 21/02107 and subgroups thereof	Groups H01L21/312 – H01L21/3128 are no longer used for the classification of documents as of May 1, 2011. The content of these groups is being reclassified into groups H01L21/02107 – H01L21/02326. Groups H01L21/02107 – H01L21/02326 should be considered in order to perform a complete search
M	H01L21/314	This group and subgroups are no longer used for the classification of new documents as from May 1, 2011. The backlog of this group is being continuously reclassified to H01L 21/02107 and subgroups thereof	Groups H01L21/314 – H01L21/3185 are no longer used for the classification of documents as of May 1, 2011. The content of these groups is being reclassified into groups H01L21/02107 – H01L21/02326. Groups H01L21/02107 – H01L21/02326 should be considered in order to perform a complete search
M	H01L21/316	This group and subgroups are no longer used for the classification of new documents as from May 1, 2011. The backlog of this group is being continuously reclassified to H01L21/02107 and subgroups thereof	Group H01L21/316 is no longer used for the classification of documents as of May 1, 2011. The content of this group is being reclassified into groups H01L21/02107 – H01L21/02326. Groups H01L21/02107 – H01L21/02326 should be considered in order to perform a complete search
M	H01L21/318	This group and subgroups are no longer used for the classification of new documents as from May 1, 2011. The backlog of this group is being continuously reclassified to H01L21/02107 and subgroups thereof	Group H01L21/318 is no longer used for the classification of documents as of May 1, 2011. The content of this group is being reclassified into groups H01L21/02107 – H01L21/02326. Groups H01L21/02107 – H01L21/02326 should be considered in order to perform a complete search
M	H01L21/3247	Not complete, see provisionally also H01L 21/324	Group H01L21/3247 is incomplete pending reclassification of documents from group H01L21/324. Groups H01L21/324 and H01L21/3247 should be considered in order to perform a complete search
D	H01L21/36	This group is no longer used for the classification of new documents as from December 1, 2009. The backlog of this group is being continuously reclassified to H01L 21/02365 and subgroups	<delete warning>

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<b>Type*</b>	<b>Location</b>	<b>Old Warning notice</b>	<b>New/Modified Warning notice</b>
D	H01L21/58	This group is no longer used for the classification of new documents as from June 1, 2010. The backlog of this group is being continuously reclassified to H01L24/80 and subgroups	<delete warning>
D	H01L21/67703	This group and subgroups are not complete pending completion of reorganization; see also H01L 21/677	<delete warning>
D	H01L21/6776	This group and subgroups are not complete pending completion of reorganization; see also H01L 21/677	<delete warning>
D	H01L21/76814	Groups H01L 21/76814 - H01L 21/76817 are not complete; see provisionally H01L 21/76802	<delete warning>
D	H01L21/76822	Groups H01L 21/76822 - H01L 21/76837 are not complete; see provisionally H01L 21/76801	<delete warning>
D	H01L23/482	The documents of this group dealing with arrangements for connecting semiconductor or other solid state bodies are being continuously reclassified to H01L24/01 and subgroups	<delete warning>
D	H01L23/485	The documents of this group dealing with arrangements for connecting semiconductor or other solid state bodies are being continuously reclassified to H01L24/01 and subgroups	<delete warning>
D	H01L23/49	This group is no longer used for the classification of new documents as from June 1, 2010. The backlog of this group is being continuously reclassified to H01L23/00C2W and subgroups	<delete warning>
D	H01L24/00	H01L21/4885, H01L21/58, H01L23/48, H01L23/482, H01L23/485, H01L23/488	<delete warning>
D	H01L24/01	1. Not complete, see provisionally also H01L 23/482 , H01L 23/485 and subgroups 2. Pending reorganisation subgroups of this group are not complete; see also this group and the other subgroups	<delete warning>
M	H01L24/02	1. Pending reorganisation see provisionally also H01L 24/10 for Under Bump Metallization [UBM] 2. Pending reorganisation, subgroups of this group are not complete; see also this group	Groups H01L24/02 – H01L24/09 are incomplete pending reclassification of documents from groups H01L24/02 and H01L24/10. Groups H01L24/02 – H01L24/09 and H01L24/10 should be considered in order to perform a complete search.

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<b>Type*</b>	<b>Location</b>	<b>Old Warning notice</b>	<b>New/Modified Warning notice</b>
M	H01L24/18	1. Pending reorganisation, see provisionally also H01L 24/82 2. Pending reorganisation, subgroups of this group are not complete; see also this group	Groups H01L24/18 – H01L24/25 are incomplete pending reclassification of documents from groups H01L24/18 and H01L24/82. Groups H01L24/18 – H01L24/25 and H01L24/82 should be considered in order to perform a complete search.
M	H01L24/34	1. Pending reorganisation see provisionally also H01L24/01, H01L24/42, H01L24/85 2. Pending reorganisation, subgroups of this group are not complete; see also this group	Groups H01L24/34 – H01L24/41 are incomplete pending reclassification of documents from groups H01L24/34, H01L24/01, H01L24/42, and H01L24/85. Groups H01L24/34 – H01L24/41 and H01L24/01, H01L24/42, H01L24/85 should be considered in order to perform a complete search.
M	H01L24/43	H01L21/4885 and subgroups, H01L24/42 , H01L24/85	Group H01L24/43 is incomplete pending reclassification of documents from groups H01L21/4885 and H01L24/42, H01L24/85. Groups H01L24/43 and H01L21/4885, H01L24/42, H01L24/85 should be considered in order to perform a complete search.
M	H01L24/44	H01L24/42 , H01L24/85	Group H01L24/44 is incomplete pending reclassification of documents from groups H01L24/42 and H01L24/85. Groups H01L24/44 and H01L24/42, H01L24/85 should be considered in order to perform a complete search.
M	H01L24/47	H01L24/42 , H01L24/85 ]	Group H01L24/47 is incomplete pending reclassification of documents from groups H01L24/42 and H01L24/85. Groups H01L24/47 and H01L24/42, H01L24/85 should be considered in order to perform a complete search.
D	H01L24/48	H01L24/42 , H01L24/85	<delete warning>
D	H01L24/49	H01L24/42 , H01L24/85 ]	<delete warning>
M	H01L24/50	H01L24/86	Group H01L24/50 is incomplete pending reclassification of documents from group H01L24/86. Groups H01L24/50 and H01L24/86 should be considered in order to perform a complete search.
D	H01L24/80	1. Pending reorganisation see provisionally also H01L 21/60 2. Subgroups of this group are not complete; see also this group and the other	<delete warning>
M	H01L24/84	H01L24/85	Group H01L24/84 is incomplete pending reclassification of documents from group H01L24/85. Groups H01L24/84 and H01L24/85 should be considered in order to perform a complete search.
D	H01L24/90	H01L21/60 E	<delete warning>

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<b>Type*</b>	<b>Location</b>	<b>Old Warning notice</b>	<b>New/Modified Warning notice</b>
M	H01L24/93	H01L 24/80 and subgroups and H01L 24/90	Group H01L24/93 is incomplete pending reclassification of documents from groups H01L24/80 – H01L24/90. Groups H01L24/93 and H01L24/80 – H01L24/90 should be considered in order to perform a complete search.
D	H01L27/10826	not complete pending completion of reclassification; see also H01L 27/10823	<delete warning>
D	H01L27/10847	not complete pending completion of reclassification; see also H01L 27/10844	<delete warning>
D	H01L27/10879	not complete pending completion of reclassification; see also H01L 27/10876	<delete warning>
D	H01L27/1116	not complete, pending reorganisation, see provisionally also H01L 27/105	<delete warning>
D	H01L27/11286	not complete, pending reorganisation, see provisionally also H01L 27/105	<delete warning>
D	H01L27/11504	Not complete, see H01L 27/11502	<delete warning>
D	H01L27/11512	Not complete, see H01L 27/11502	<delete warning>
D	H01L27/11514	Not complete, see H01L 27/11502	<delete warning>
D	H01L27/11517	Group H01L 27/11517 and subgroups are not complete pending reorganisation. See also H01L 27/115	<delete warning>
D	H01L27/11556	not complete pending reorganisation, see provisionally also H01L 27/11551	<delete warning>
D	H01L27/11565	Not complete, see H01L 27/115	<delete warning>
D	H01L27/11575	Not complete, see H01L 27/115	<delete warning>
D	H01L27/11578	Not complete, see H01L 27/115	<delete warning>
D	H01L27/11582	not complete pending reorganisation, see provisionally also H01L 27/11578	<delete warning>
D	H01L27/11587	Not complete, see H01L 27/11585	<delete warning>
D	H01L27/11595	Not complete, see H01L 27/11585	<delete warning>
D	H01L27/11597	Not complete, see H01L 27/11585	<delete warning>
M	H01L27/1214	Subgroups of H01L 27/1214 are not complete, pending reorganization see provisionally also this group	Groups H01L27/1218 – H01L27/1296 are incomplete pending reclassification of documents from group H01L27/1214. Groups H01L27/1218 – H01L27/1296 and H01L27/1214 should be considered in order to perform a complete search.
D	H01L27/24	Groups H01L 27/2409 to H01L 27/249 are not complete pending reclassification; see provisionally also group H01L 27/24	<delete warning>
M	H01L27/3211	The subgroups of H01L 27/3211 are not complete pending a reorganization, see provisionally also this group	Groups H01L27/3213 – H01L27/3218 are incomplete pending reclassification of documents from group H01L27/3211. Groups H01L27/3213 – H01L27/3218 and H01L27/3211 should be considered in order to perform a complete search.

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<b>Type*</b>	<b>Location</b>	<b>Old Warning notice</b>	<b>New/Modified Warning notice</b>
M	H01L29/0852	This group and subgroups thereof are not complete, see provisionally also H01L 29/0847 and H01L 29/7801 and subgroups thereof	Groups H01L29/0852 – H01L29/0886 are incomplete pending reclassification of documents from group H01L29/0847 and H01L29/7801. Groups H01L29/0852 – H01L29/0886 and H01L29/0847, H01L29/7801 should be considered in order to perform a complete search.
D	H01L29/401	H01L21/28026 and subgroups	<delete warning>
D	H01L29/42356	This group and subgroup thereof are not complete, see provisionally also H01L 29/78 , H01L 29/7801 and subgroups thereof, H01L 29/7827 and H01L 29/7834	<delete warning>
M	H01L29/4991	Not complete, see provisionally also H01L 29/4983	Group H01L29/4991 is incomplete pending reclassification of documents from group H01L29/4983. Groups H01L29/4991 and H01L29/4983 should be considered in order to perform a complete search.
D	H01L29/66681	H01L29/66674	<delete warning>
D	H01L29/66719	H01L29/66712	<delete warning>
M	H01L29/7803	This group and subgroups thereof are not complete, see provisionally also H01L 29/7802	Groups H01L29/7803 – H01L29/7808 are incomplete pending reclassification of documents from group H01L29/7802. Groups H01L29/7803 – H01L29/7808 and H01L29/7802 should be considered in order to perform a complete search.
M	H01L29/7811	This group is not complete, see provisionally also H01L 29/7802, H01L 29/7809 and H01L 29/7813	Group H01L29/7811 is incomplete pending reclassification of documents from group H01L29/7802. Groups H01L29/7811 and H01L29/7802 should be considered in order to perform a complete search.
M	H01L29/7815	This group is not complete, see provisionally also H01L 29/7802, H01L 29/7809 and H01L 29/7813	Group H01L29/7815 is incomplete pending reclassification of documents from group H01L29/7802. Groups H01L29/7815 and H01L29/7802 should be considered in order to perform a complete search.
D	H01L29/7816	This group and subgroups thereof are not complete, see provisionally also H01L 29/7801	<delete warning>
D	H01L29/7828	This group is not complete, see provisionally also H01L 29/7827	<delete warning>
D	H01L29/7842	The groups H01L 29/7843 to H01L 29/7849 are not complete, see provisionally also H01L 29/7842	<delete warning>
D	H01L41/047	Pending reorganisation, the groups H01L41/0471 to H01L41/0477 are not complete, see provisionally also H01L41/047	<delete warning>

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<b><u>Type*</u></b>	<b><u>Location</u></b>	<b><u>Old Warning notice</u></b>	<b><u>New/Modified Warning notice</u></b>
D	H01L41/053	Pending reorganisation, the groups H01L41/0533 to H01L41/0536 are not complete, see provisionally also H01L41/053	<delete warning>
D	H01L41/08	Pending reorganisation, the groups H01L41/08 C, H01L41/08 F, and H01L41/0825 are not complete, see provisionally also H01L41/08	<delete warning>
D	H01L41/083	Pending reorganisation, the groups H01L41/0831 to H01L41/0838 are not complete, see provisionally also H01L41/083	<delete warning>
D	H01L41/0906	Pending reorganisation, the groups H01L41/0913 to H01L41/092 are not complete, see provisionally also H01L41/09 B	<delete warning>
D	H01L41/0926	Pending reorganisation, the groups H01L41/0933 to H01L41/098 are not complete, see provisionally also H01L41/0926	<delete warning>
D	H01L41/0986	Pending reorganisation, this group is not complete, see provisionally also H01L41/09	<delete warning>
D	H01L41/0993	Pending reorganisation, this group is not complete, see provisionally also H01L41/09	<delete warning>
D	H01L41/113	Pending reorganisation, the groups H01L41/113 to H01L41/1138 are not complete, see provisionally also H01L41/113 and H02N2/18	<delete warning>
D	H01L41/183	Pending reorganisation, this group is not complete, see provisionally also H01L41/18	<delete warning>
D	H01L41/187	Pending reorganisation, the groups H01L41/1871 to H01L41/1878 are not complete, see provisionally also H01L41/187 ]	<delete warning>
D	H01L45/00	Groups H01L45/04 - H01L45/16 do not correspond to former or current IPC groups. IPC concordance of said groups is - H01L45/04 - H01L45/16 : H01L45/00. Groups H01L45/06 to H01L45/1691 are not complete pending reclassification; see provisionally also group H01L45/04	<delete warning>
M	H01L51/5206	The subgroups of H01L51/5206 are not complete pending a reorganisation, see provisionally also this group	Groups H01L51/5209 – H01L51/5218 are incomplete pending reclassification of documents from group H01L51/5206. Groups H01L51/5209 – H01L51/5218 and H01L51/5206 should be considered in order to perform a complete search.

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<b><u>Type*</u></b>	<b><u>Location</u></b>	<b><u>Old Warning notice</u></b>	<b><u>New/Modified Warning notice</u></b>
M	H01L51/5221	The subgroups of H01L51/5221 are not complete pending a reorganisation, see provisionally also this group	Groups H01L51/5225 – H01L51/5234 are incomplete pending reclassification of documents from group H01L51/5221. Groups H01L51/5225 – H01L51/5234 and H01L51/5221 should be considered in order to perform a complete search.
M	H01L51/5237	The subgroups of H01L51/5237 are not complete pending a reorganisation, see provisionally also this group	Groups H01L51/524 – H01L51/5259 are incomplete pending reclassification of documents from group H01L51/5237. Groups H01L51/524 – H01L51/5259 and H01L51/5237 should be considered in order to perform a complete search.

\*N = new warning, M = modified warning, D = deleted warning

NOTE: The “Location” column only requires the symbol PRIOR to the location of the warning. No further directions such as “before” or “after” are required.



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C. New, Modified or Deleted Note(s)

**SUBCLASS H01L - SEMICONDUCTOR DEVICES; ELECTRIC SOLID STATE DEVICES NOT OTHERWISE PROVIDED FOR**

<u>Type*</u>	<u>Location</u>	<u>Old Note</u>	<u>New/Modified Note</u>
M	H01L21/768	Groups H01L21/768 to H01L21/76898 cover multi-step processes for manufacturing interconnections. Information peculiar to single-step processes should also be classified in the corresponding group, e.g. - cleaning H01L21/02 F - etching H01L21/311, H01L21/3213 - masking H01L21/027, H01L21/033, H01L21/311 D, H01L21/3213 D - planarizing H01L21/3105, H01L21/321	Groups H01L21/768 to H01L21/76898 cover multi-step processes for manufacturing interconnections. Information peculiar to single-step processes should also be classified in the corresponding group, e.g. - cleaning H01L21/02041 - etching H01L21/311, H01L21/3213 - masking H01L21/027, H01L21/033, H01L21/31144, H01L21/32139 - planarizing H01L21/3105, H01L21/321
D	H01L31/06	Groups H01L31/061 to 31/078 are based on [IPC2012.01]	<delete note>

\*N = new note, M = modified note, D = deleted note

NOTE: The "Location" column only requires the symbol PRIOR to the location of the note. No further directions such as "before" or "after" are required.

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2. B. DEFINITIONS QUICK FIX

<u>Symbol</u>	<u>Location of change</u> (e.g., section title)	<u>Existing reference symbol or text</u>	<u>Action; New symbol; New text</u>
H01L21/02038	<u>Entire Definition</u>		DELETE
H01L21/30	“References relevant...”	H01L21/36	H01L21/02365
H01L21/36	Entire Definition		DELETE
H01L21/58	Entire Definition		DELETE

NOTES:

- The table above is used for corrections or modifications to existing definitions, e.g. delete an entire definition or part thereof; propose new wording or modify wording of a section, change the symbol the definition is associated with, change or delete a reference symbol, etc.
- Do not delete (F) symbol definitions.

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## 3. REVISION CONCORDANCE LIST (RCL)

<b>Type*</b>	<b>From CPC Symbol (existing)</b>	<b>To CPC Symbol(s)</b>
D	H01L21/02038	<administrative transfer to H01L21/7624>
D	H01L21/36	<administrative transfer to H01L21/02521>
D	H01L21/363	<administrative transfer to H01L21/02521 and H01L21/02631 simultaneously>
D	H01L21/365	<administrative transfer to H01L21/02521 and H01L21/0262 simultaneously>
D	H01L21/368	<administrative transfer to H01L21/02521 and H01L21/02623 simultaneously>
D	H01L21/58	<admin. transfer to H01L24/80>

\* 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; D = deleted entries.

## NOTES:

- Only C, D, and Q type entries are included in the table above.
- When multiple symbols are included in the “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>” or “<administrative transfer to XX and YY simultaneously>” when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be “invention information”, unless otherwise indicated, and to 2000 series groups is assumed to be “additional information”.

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

<u>CPC</u>	<u>IPC</u>	<u>Action*</u>
H01L21/02038		DELETE
H01L21/36		DELETE
H01L21/363		DELETE
H01L21/365		DELETE
H01L21/368		DELETE
H01L21/58		DELETE

\*Action column:

- For an (N) or (Q) entry, provide an IPC symbol and complete the Action column with "NEW."
- For an existing CPC main trunk entry or indexing entry where the existing IPC symbol needs to be changed, provide an updated IPC symbol and complete the Action column with "UPDATED."
- For a (D) CPC entry or indexing entry complete the Action column with "DELETE." IPC symbol does not need to be included in the IPC column.
- For an (N) 2000 series CPC entry which is positioned within the main trunk scheme (breakdown code) provide an IPC symbol and complete the action column with "NEW".
- For an (N) 2000 series CPC entry positioned at the end of the CPC scheme (orthogonal code), with no IPC equivalent, complete the IPC column with "CPCONLY" and complete the action column with "NEW".

NOTES:

- F symbols are not included in the CICL table above.
- E and M symbols are not included in the CICL table above unless a change to the existing IPC is desired.

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5. CROSS-REFERENCE LIST (CRL)

Scheme references impacted by this revision project

<u>Location of reference to be changed</u>	<u>Referenced subclass or group to be changed</u>	<u>Action; New reference symbol; New text</u>
G02B6/131	H01L21/36	H01L21/02365
H01L24/00	H01L21/58	H01L24/80

Definitions references impacted by this revision project

<u>Location of reference to be changed</u>	<u>Referenced subclass or group to be changed</u>	<u>Section of definition</u>	<u>Action; New reference symbol; New text</u>
H01L21/30	References relevant to classification in this group	H01L21/36	H01L21/02365

NOTES:

- The CRL tables above are used for changes to locations **outside** of the project scope. Changes to references in scheme titles or definitions **inside** the project scope will be reflected in the “scheme change” template or one of the “definition” templates.
- In addition to other changes proposed in the tables above, in the column titled “Referenced subclass or group to be changed,” **referenced** D symbols should indicate an action of “delete” or should indicate a replacement symbol and **referenced** F symbols should indicate a replacement symbol.
- When a reference is deleted, text related to that reference will also be deleted unless other references or a range of references associated with the same text remain.