

**CONCORDANCE - United States to International Patent Classification**

U.S. Subclass	IPC Subclass	IPC Notation	U.S. Subclass	IPC Subclass	IPC Notation	U.S. Subclass	IPC Subclass	IPC Notation	U.S. Subclass	IPC Subclass	IPC Notation	U.S. Subclass	IPC Subclass	IPC Notation
<b>U.S. CLASS 12--Con.</b>														
49	A 43 D	95/06	146C	A 43 D	11/00	23-29	A 46 B	13/00	103.5	A 47 L	1/02		A 47 K	
49.1	A 43 D	25/12		A 43 D	8/00		A 47 L	11/00		A 47 L	11/02		B 25 G	
	A 43 D	95/28	146CK	A 43 D	11/00		A 47 L	21/02		B 67 C		147.1-154	A 47 L	13/20
50-50.2	A 43 D	33/00		A 43 D	8/00		A 47 L	23/02		E 01 C	23/20	154.2	A 47 L	13/20
50.3	A 43 D	25/00	146D	A 43 B	23/08	30-37	A 47 L	23/02		G 03 D	5/06		A 47 L	13/502
50.4	A 43 D	33/00	146L	A 43 D	3/00		A 47 L	23/06	104.001	A 47 L	13/00	159.1	A 46 B	5/00
50.5	A 43 D	115/00	146M	A 43 B	7/14	38	A 46 B	17/06	104.002	A 46 B		160	A 46 B	
51	A 43 D	11/00	146R	A 43 B	13/38		A 46 B			A 47 L	25/00		A 46 B	9/02
	A 43 D	13/00		A 43 B	23/02	39	A 45 D	24/40	104.011	F 23 J			A 46 B	
	A 43 D	25/00		A 43 D	11/00	39.5	A 46 B	11/00		H 01 T	21/04	161	A 46 B	
	A 43 D	8/00		A 43 D			A 46 B	3/00	104.012	F 02 B	77/04		A 47 L	23/22
	A 43 D	86/00	146S	A 43 D	31/00		A 46 B	5/00		F 23 J		164-165	A 46 B	5/00
	A 43 D	9/00	146W	A 43 B	15/00		A 46 B	7/00	104.02	F 23 J	3/00		A 46 B	
	A 43 D	95/00	147A	A 43 B	21/06		A 46 B	9/00		F 28 G	1/00	166	A 46 B	17/08
52	A 43 D	11/00	147B	A 43 D	25/12		A 47 L	11/00	104.03	B 08 B	1/00		A 46 B	
52.5-53.1	A 43 D	11/00	147R	A 43 D	25/00		A 47 L	13/00		B 08 B	7/00	167.1-167.2	A 46 B	9/04
	A 43 D	13/00		A 43 D	33/00	40	A 47 L	11/00		B 08 B	9/00	167.3	A 45 D	29/17
	A 43 D	15/00	148	A 43 D	25/00		D 06 G	1/00	104.04-104.05	B 08 B	1/00		A 46 B	9/02
	A 43 D	95/00					D 06 G			B 08 B	7/00		A 46 B	
53.2-55.1	A 43 D	11/00				41.1-48.2	A 47 L	11/32		B 08 B	9/00	168-170	A 46 B	9/08
	A 43 D	95/00					D 06 G	1/00		F 16 L	45/00		A 46 B	
57-57.1	A 43 D	85/00				49.1-50.3	A 47 L	11/00		F 16 L	55/00	171	A 46 B	3/08
57.5-57.6	A 43 D	27/00				51-52	A 47 L	11/00	104.061-104.063	B 08 B	1/00		A 46 B	
58	A 43 D	115/00	2	E 01 D	1/00		A 47 L	13/00		B 08 B	7/00	172	A 46 B	5/00
	A 43 D	8/34	2.4	E 01 D	15/12		A 47 L	13/00		B 08 B	9/04		A 46 B	
	A 43 D	1/00	2.5	E 01 D	15/10	52.1-52.2	A 47 L	3/00		F 16 L	45/00	173	A 46 B	3/08
58.3	A 43 D	100/00	2.6	E 01 D	15/14	53.1-53.4	B 60 S	3/00		F 16 L	55/00		A 46 B	
	A 43 D	11/00	3-12	E 01 D	6/00	54-55	B 61 F	19/00		F 16 L	55/00	174	A 46 B	3/10
58.5-59.7	A 43 D	11/00	13-15	E 01 D	19/00		E 01 H	8/00	104.066-104.069	F 23 J	3/00		A 46 B	
61A	A 43 D	11/00	18-20	E 01 D	11/00	56	A 47 L	15/00	104.07-104.09	B 08 B	1/00	175	A 46 B	3/08
	A 43 D	8/00	21	E 01 D	11/00		B 08 B	9/20		B 08 B	7/00		A 46 B	
		8/00		E 01 D	19/14	57-58	B 08 B	9/20		B 08 B	9/00		A 46 B	
64-66	B 29 D	31/50	22	E 01 D	11/00		B 08 B	9/46		F 16 L	45/00	176.1-176.2	A 46 B	7/04
		44/00		E 01 D	19/16	59-76	A 47 L	15/00		F 16 L	55/00		A 46 B	
		47/00	23	E 01 D	21/00		B 08 B	9/20	104.095-104.098	B 08 B	1/00	176.3	A 46 B	15/00
		57/00	24-26	E 01 D	4/00	77	A 47 L	15/00		B 08 B	7/00		A 46 B	
70-79.5	A 43 D	95/00	27-30	E 01 D	15/08		A 47 L	25/00		B 08 B	9/00	176.4-176.6	A 46 B	7/04
85	A 43 D	21/00		E 01 D	15/14	78-87	E 01 H	1/02		F 16 L	45/00		A 46 B	
	A 43 D	27/00	31	E 01 D	15/00		E 01 H	1/04		F 16 L	55/00	177-178	A 46 B	3/08
	A 43 D	8/32	32-35	E 01 D	15/04	88-88.4	A 47 L	15/00		F 28 G	3/00		A 46 B	
	A 43 D	8/36	36-41	E 01 D	15/06		A 47 L	25/00	104.11-104.19	B 08 B	1/00	179-183	A 46 B	13/00
	A 43 D	93/00		E 01 D	15/08	89-92	A 47 L	11/36		B 08 B	7/00		A 46 B	
85.1-95	A 43 D	21/00		E 01 D	19/04	93.1-93.4	A 01 K	31/04		B 08 B	9/00	184	A 46 B	7/02
	A 43 D	27/00	42	E 01 D	15/02		B 08 B	9/38		F 16 L	45/00		A 46 B	
	A 43 D	8/00	43-44	E 01 D	15/10		B 23 D	79/02		F 16 L	55/00	185	A 46 B	5/00
	A 43 D	93/00	45-46	E 01 D	15/00		C 10 B	43/04	104.2	F 16 L	45/00		A 46 B	
103-120.5	A 43 D	15/00	47	E 01 D	19/06	94	A 47 L	13/502		F 16 L	55/00	186	A 46 B	7/00
	A 43 D	19/00	48	E 01 F	13/00		A 47 L		104.31	B 08 B	1/00		A 46 B	
	A 43 D	5/00	49	E 01 F	9/00		B 08 B			B 08 B	7/00	187	A 46 B	1/00
	A 43 D	95/00		G 08 B	1/00		F 28 G	7/00		B 08 B	9/02		A 46 B	
122	A 43 D	5/00	50-69	E 01 F	13/00	95-96	B 08 B	9/20	104.32	F 16 L	45/00	188	A 46 B	9/04
123	A 43 D	25/10		E 04 H	17/00	97.1	A 47 L	1/02		F 16 L	55/00		A 46 B	
	A 43 D	3/00	69.5	E 01 D	1/00		A 47 L	11/02	104.33	B 08 B	1/00	189	A 46 B	3/18
123.3-127	A 43 D	23/00	70	B 65 G	15/00		B 67 C			B 08 B	7/00		A 46 B	
	A 43 D	3/00	71.1-72.5	E 01 D	1/00		G 03 D	5/06		B 08 B	9/02	190	A 46 B	3/16
128B-128R	A 43 D	3/00	73	E 01 D	19/12		G 11 B	23/50	104.5-104.54	A 45 D	24/44		A 46 B	
128V	A 43 D	3/00	73.1	E 01 D	19/06	97.2	A 47 L	1/02	104.8	A 46 B	17/08	191.1	A 46 B	
	A 43 D	3/14	73.5	E 01 D	19/04		A 47 L	11/02		A 47 L	13/42		A 46 D	3/00
129.4	A 43 D	3/00	74	E 01 D	19/08		A 47 L	23/02	104.9	B 08 B	9/08	192-194	A 46 B	15/00
133A-133M	A 43 D	3/00	74.5	E 01 D	11/00		B 67 C			B 08 B	9/20		A 46 B	
	A 43 D	3/02		E 01 D	2/00		G 03 D	5/06	104.92-104.94	B 08 B	1/00	195-196	A 46 B	3/16
		3/00	75-76	E 01 D	19/02	97.3	A 47 L	1/02	105	A 46 B	15/00		A 46 B	
		23/00	77.1	E 01 D	21/00		A 47 L	11/02		A 47 L		197	A 46 B	9/06
		3/00	77.3	E 01 D	19/02		B 60 S	3/06	105.5	A 47 L			A 46 B	
142A	A 43 B	9/08	78	E 01 D	1/00		B 67 C			E 04 F	21/165	198	A 46 B	13/00
	A 43 D	85/00					G 03 D	5/06	105.51	B 25 F	1/00		A 46 B	
142B-142C	A 43 B	9/00				98	A 47 L	1/02	105.52	B 25 F	1/00	199	A 46 B	3/16
142D	A 43 B	9/04					A 47 L	11/02		B 43 L	19/00		A 46 B	
142E	A 43 B	1/10					A 47 L	11/162	105.53	B 26 B	11/00	200	A 46 B	7/10
142EV	A 43 B	3/16					B 67 C		106-115	A 47 L	13/00		A 46 B	
142F	A 43 B	9/12	1	A 47 L			G 03 D	5/06		A 47 L	23/04	201	A 46 B	7/06
142G	A 43 B	1/02		B 44 D	3/00	99	A 47 L	1/02		E 04 F	21/16		A 46 B	
142J	A 43 B	13/37		E 01 H			A 47 L	11/02	116.1	A 47 L	13/14	202	A 46 B	15/00
142K	A 43 D	11/00	1.51-1.52	A 47 L	13/40		A 47 L	11/29		A 47 L	13/58		A 46 B	
142LC	A 43 D	11/00	1.7	E 04 H	4/16		B 67 C		116.2	A 47 L	13/00	203	A 46 B	7/02
142MC	A 43 B	3/14	3	A 47 L	11/00		G 03 D	5/06	117-118	A 47 L	13/00		A 46 B	
142N	A 43 B	7/14		A 47 L	23/00	100	A 47 L	1/02		A 47 L	23/04	204	A 46 B	3/12
142P	A 43 B	5/00		A 47 L	3/00		A 47 L	11/02		E 04 F	21/16		A 46 B	
142Q	A 43 D	11/00		B 08 B	7/00		B 67 C		119.1-120.2	A 47 L	13/00	205	A 46 B	3/18
	A 43 D	95/00		B 08 B			G 03 D	15/00	121	A 47 L	13/00		A 46 B	
142R	A 43 D	11/00		D 06 F	15/00		G 03 D	5/06		A 47 L	23/04	205.2	A 46 B	11/00
	A 43 D	21/00		D 06 F	37/00	101	A 47 L	1/02		E 04 F	21/16	206-207	A 46 B	3/18
	A 43 D	9/00		D 06 F	39/00		A 47 L	11/02	141.1-141.2	A 47 L	11/36		A 46 B	
142RS	A 43 B	13/04	3.1-3.21	A 01 K	43/00		A 47 L	15/00		A 47 L	13/36	207.2	A 46 B	
	A 43 B	9/00		A 23 N</										

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U.S.			IPC			U.S.			IPC			U.S.			IPC		
Subclass	Subclass	Notation	Subclass	Subclass	Notation	Subclass	Subclass	Notation	Subclass	Subclass	Notation	Subclass	Subclass	Notation	Subclass	Subclass	Notation
<b>U.S. CLASS 15--Con.</b>																	
209.1-210.1	A 47 L	23/04		B 44 D	5/00	313-315	A 47 L	15/00	2.5	H 01 R	13/00				E 05 D	15/00	
	A 47 L	25/00	231	A 47 L	13/46		A 47 L	5/38	4-11	A 47 G	27/04	95R-95W			A 47 H	1/04	
	B 43 L	21/00	232-233	A 47 L	1/06		B 60 S	1/54	12-15	A 47 G	27/06				A 47 H	15/00	
210.5-219	A 47 K	7/02	234-235	A 47 L	13/38		B 60 S	1/64	16-17.1	A 47 G	27/04				E 05 D	15/00	
	A 47 L	1/06	235.3	E 04 G	21/20	316.1	A 47 L	15/00	18A-18B	B 60 B	33/00	96D			A 47 H	1/04	
	A 47 L	13/10	235.4-235.8	B 05 C	17/10		A 47 L	5/38	18CG	B 60 B	33/00				A 47 H	15/00	
	A 47 L	17/08		E 01 C	19/12		D 06 G	1/00	18R	A 47 L	9/00	96L			E 05 D	15/00	
	A 47 L	23/04	236.01-241	A 47 L	13/02		F 23 J	3/02		B 60 B	33/00	96R			B 61 D	19/00	
	A 47 L	25/00		A 47 L	17/06	317-318	A 47 L	15/00		B 60 B	33/04				E 05 D	15/06	
	B 43 L	21/00		A 47 L	23/22		A 47 L	5/38	19	B 60 B	33/04				E 06 B	3/46	
220.1-220.2	A 47 L	1/00		B 05 C	17/10		F 23 J	3/02	20-23	B 60 B	33/00	97-107			A 47 H	15/00	
220.3	A 47 L	1/15	244.1-244.3	A 47 K	7/02	318.1	A 47 L	15/00	24-28	B 60 B	33/08				E 05 D	15/06	
	A 47 L	4/00		A 47 L	13/46		A 47 L	5/38	29-31	B 60 B	33/00				E 05 D	15/16	
220.4	A 47 L	25/00		B 43 L	21/00		D 06 G	1/00	31R	A 45 C	5/14	108-109			F 16 L	11/10	
	F 01 M	11/12	244.4	A 47 K	7/02		F 23 J	3/02		B 60 B	33/00				F 16 L	57/00	
221-228	A 47 K	7/02		A 47 L	13/16	319	A 47 L	5/00		B 60 B	33/02	110.1-114.1			A 47 B	95/02	
	A 47 L	1/06		B 43 L	21/00	320-322	A 47 L	7/00	32-34	B 60 B	33/06				A 47 J	45/00	
	A 47 L	13/10	245	A 47 L	1/06	323-338	A 47 L	5/00			33/00				B 65 D	25/28	
	A 47 L	17/08	245.1	B 05 C	17/10		A 47 L	9/00	40	B 60 B	37/00				E 05 B	1/00	
	A 47 L	23/04		B 05 C		339	A 47 L	5/00	41	B 60 B	33/00				E 05 B	7/00	
	A 47 L	25/00	246	A 47 L	1/00		A 47 L	7/00	42R	A 47 B	91/04	193-219			E 05 D	13/00	
	B 43 L	21/00		B 60 S	1/00		A 47 L	9/00		A 47 B	91/06				E 05 F	1/00	
229.1	A 47 K	7/02	246.2-246.4	A 47 L	5/00	340.1-340.4	B 08 B	5/00	42T	A 47 B	91/06	220			E 05 B	3/58	
	A 47 L	1/06		A 47 L	7/00		A 47 L	9/00	43-48	A 47 B	91/00	221			E 06 D	7/00	
	A 47 L	13/20		A 47 L	9/00		E 01 H	1/08		B 60 B	33/00				E 05 D		
	A 47 L	17/00	246.5	F 22 B	37/48	341-343	A 47 L	5/02	48.5	E 05 F	15/20	222-223			E 05 D	11/00	
229.11-229.13	A 47 L	13/10	247	A 46 B	17/04		A 47 L	5/08	49	E 05 F	3/00	224			E 05 D	7/00	
	A 47 L	17/08		A 47 L	13/44	344	A 47 L	5/24	50	E 05 F	3/20	225-227			E 05 D	1/00	
229.14	A 45 D	33/34	248.1-248.2	A 46 B	17/00	345-346	A 47 L	5/14	51	E 05 F	3/04	228			G 02 C	5/22	
	A 45 D		249.1-249.3	F 23 J	3/00	347-353	A 47 L	9/10	52-53	E 05 F	3/10	229			E 05 D	7/10	
229.2-229.4	A 47 K	7/02	250.001	A 47 L	1/00	354-361	A 47 L	5/34	54-55	E 05 F	3/20	230-232			E 05 D	15/50	
	A 47 L	1/06		B 08 B		362	A 47 L	5/00		E 05 F	3/22	233-234			E 05 D	7/00	
	A 47 L	13/20		B 60 S	1/02	363-382	A 47 L	5/00	56	E 05 F	3/20	235-238			E 05 D	7/04	
	A 47 L	17/00	250.002	A 47 L	1/00		A 47 L	9/04	57-58	E 05 F	3/22	239-241			E 05 D	7/06	
229.5	A 47 K	7/02		B 08 B		383-392	A 47 L	9/06	59-65	E 05 F	3/00	242-249			E 05 D	7/04	
	A 47 L	1/06		B 60 S	1/02		A 47 L	5/10	66-67	E 05 F	3/00	250-251			E 05 D	11/00	
	A 47 L	13/252		B 60 S	1/60	393-403	A 47 L	5/26		E 05 F	3/22	252-253			E 05 D	5/02	
	A 47 L	17/00	250.003	A 47 L	1/00		A 47 L	5/00	68	E 05 F	3/02	254-258			E 05 D	7/10	
229.6-229.8	A 47 K	7/02		B 08 B		404-405	A 47 L	5/00	69-70	E 05 F	3/00	259-267			E 05 D	7/10	
	A 47 L	1/06		B 60 R	1/06	406	A 47 L	5/00	71	E 05 F	1/00	268-269			E 05 D	1/06	
	A 47 L	13/20		B 60 S	1/02		B 08 B	9/02	72	E 05 F	1/08	270-272			E 05 D	7/12	
	A 47 L	17/00	250.01-250.48	A 47 L	1/00		F 23 J		73-80	E 05 F	1/10	273			E 05 D	11/00	
	A 47 K	7/02		B 60 S	1/02	407	A 47 L	5/00	81	E 05 F	1/00	274			E 05 D	11/02	
	A 47 L	1/06		A 46 B	15/00		B 02 C	18/34	82	E 05 F	5/02	275-276			E 05 D	11/04	
	A 47 L	13/20	256.5-256.6	B 21 B	45/02		F 23 J		83	E 05 F	5/04	277-279			E 05 F	1/08	
	A 47 L	17/00		B 60 S	1/28	408	A 47 L	5/00	84	E 05 F	3/00	280-285			E 05 F	1/14	
230	B 05 C	1/00		A 46 B	17/00		A 47 L	5/46	85	E 05 F	5/06	286-308			E 05 F	1/08	
	B 05 C	17/02	257.01	A 47 G	29/08		F 04 F		86A-86B	E 05 F	5/02	309-318			E 05 F	1/02	
	B 24 D	13/14		A 47 L	23/14		F 23 J		86C	E 05 C	17/22	319-336			E 05 D	11/10	
	B 44 D	5/00		A 47 L	25/00		F 23 J		87-80	E 05 F	1/08	337-342			E 05 C	17/64	
230.1	A 47 L			B 05 C	21/00	409	A 47 L	5/16	81	E 05 F	1/00	343-344			E 05 D	11/10	
	B 05 C	1/00	257.05-257.06	A 47 L	13/56	410-411	A 47 L	9/00	82	E 05 F	5/02	345			E 05 D	15/30	
	B 05 C	17/02		B 43 L	3/12		A 47 L	9/22	83	E 05 F	5/04	346-353			E 05 D	11/10	
	B 24 D	13/18		B 44 D	5/00		A 47 L	9/28	84	E 05 F	3/00	354			E 05 D	7/00	
	B 44 D	5/00	257.07	B 43 L	25/04		A 63 B	47/04	86R	E 05 F	5/00	355-356			E 05 D	1/04	
	A 47 L	1/00	257.073-257.076	B 43 L	25/00	413	A 63 D	5/10		E 05 F	5/02	357-360			E 05 D	11/06	
	B 05 C	17/02		A 47 L	13/52		A 47 L	11/00		E 05 F	5/06	361			E 05 D	15/06	
	B 44 D	5/00	257.1-257.9	A 47 L	23/28		A 47 L	13/00	86.1	E 05 D	13/00	362-363			E 05 D	15/00	
230.12-230.13	A 47 L		258-259	A 47 L	23/28		A 63 B	47/04	86.2	E 05 D	15/00	364			E 05 D	15/06	
	B 05 C	1/00	260-263	A 47 L	13/14		A 63 D	5/10	87B	E 05 D	15/58	365			E 05 D	7/00	
	B 05 C	17/02		A 47 L	13/58	414-422.2	A 47 L	9/02	87R	E 05 D	15/06	366			E 05 D	3/06	
	B 24 D	13/08	264	A 47 J	47/18		B 43 K	13/00		B 61 D	19/00	367			E 05 D	3/10	
	B 44 D	5/00		A 47 L	13/50		B 43 K	5/00	87.2	E 05 D	15/06	368-369			E 05 D	15/00	
230.14	A 47 L		265-267	A 47 L	23/16	424-426	B 43 L	19/00	87.4R	A 47 H	13/00	370			E 05 D	15/32	
	B 05 C	1/00		A 47 L	23/18		B 43 K	29/02		A 47 H	15/00	371			E 05 D	11/06	
	B 05 C	17/02	268	A 46 B	17/02	427-432	B 43 K	19/00		E 05 D	15/26	372			E 05 D	5/00	
	B 24 D	13/04		A 47 L	13/54	433-434	B 43 L	19/00		E 05 D	15/00	373			E 05 D	7/00	
	B 44 D	5/00		A 47 L	21/06		B 43 K	3/00		A 47 H	15/00	374-377			E 05 D	11/06	
230.15	A 47 L			A 47 L	21/06		B 43 K	3/04		E 05 D	15/16	378-379			E 05 D	7/08	
	B 05 C	1/00		B 08 B	9/20	437-444	B 43 K	3/00		E 05 D	15/06	380-381			E 05 D	5/12	
	B 05 C	17/02		B 08 B	9/46	445-446	B 43 K	1/00		E 05 D	15/06	382-384			E 05 D	5/00	
	B 24 D	13/08	300.1	A 47 L	5/00		B 43 K	1/02	87.4W	A 47 H	1/04	385			E 05 D	9/00	
	B 44 D	5/00		A 47 L	9/00				87.6R	A 47 H	1						