

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT6123139

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
Name		Execution Date
PANASONIC CORPORATION		05/21/2020
RECEIVING PARTY DATA		
Name:	PANASONIC SEMICONDUCTOR SOLUTIONS CO., LTD.	
Street Address:	1, KOTARI-YAKEMACHI, NAGAOKAKYO-SHI,	
City:	KYOTO	
State/Country:	JAPAN	
Postal Code:	617-8520	
PROPERTY NUMBERS Total: 1052		
Property Type	Number	
Application Number:	09586992	
Application Number:	09711884	
Application Number:	09819646	
Application Number:	09911831	
Application Number:	09791729	
Application Number:	09983076	
Application Number:	09828936	
Application Number:	09602180	
Application Number:	09981981	
Application Number:	09794771	
Application Number:	10040788	
Application Number:	09774342	
Application Number:	09870467	
Application Number:	09695773	
Application Number:	10635534	
Application Number:	11653419	
Application Number:	09865492	
Application Number:	09820842	
Application Number:	09921912	
Application Number:	09946480	

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Property Type	Number
Application Number:	09880797
Application Number:	10003430
Application Number:	09986288
Application Number:	10238107
Application Number:	09942948
Application Number:	09599354
Application Number:	10043324
Application Number:	10186760
Application Number:	09899548
Application Number:	09721873
Application Number:	10021006
Application Number:	09713175
Application Number:	09709929
Application Number:	10173155
Application Number:	09791568
Application Number:	10262003
Application Number:	09984914
Application Number:	10323746
Application Number:	10218307
Application Number:	10159725
Application Number:	10098566
Application Number:	09973887
Application Number:	10038901
Application Number:	10122366
Application Number:	10011704
Application Number:	10166246
Application Number:	09584542
Application Number:	10336814
Application Number:	10057878
Application Number:	09984908
Application Number:	10215159
Application Number:	10369548
Application Number:	10002673
Application Number:	10053552
Application Number:	10139327
Application Number:	10095579
Application Number:	10101267
Application Number:	10358202

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Property Type	Number
Application Number:	10418049
Application Number:	10286814
Application Number:	10253524
Application Number:	10162211
Application Number:	10377509
Application Number:	10142599
Application Number:	10306588
Application Number:	10245012
Application Number:	10307376
Application Number:	09833061
Application Number:	10354700
Application Number:	10164409
Application Number:	10330160
Application Number:	10430050
Application Number:	10200950
Application Number:	10226375
Application Number:	10428586
Application Number:	10234250
Application Number:	10350069
Application Number:	10017389
Application Number:	10252563
Application Number:	10750862
Application Number:	10600596
Application Number:	10667455
Application Number:	10183367
Application Number:	10153699
Application Number:	10197021
Application Number:	10345973
Application Number:	10701422
Application Number:	10119951
Application Number:	10006718
Application Number:	09785502
Application Number:	10377314
Application Number:	09938528
Application Number:	10119123
Application Number:	10686597
Application Number:	10372971
Application Number:	10223316

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Property Type	Number
Application Number:	10717640
Application Number:	10484904
Application Number:	10460175
Application Number:	10365502
Application Number:	09697429
Application Number:	10208628
Application Number:	10673479
Application Number:	09968942
Application Number:	10620614
Application Number:	10902133
Application Number:	10434063
Application Number:	10282862
Application Number:	10628168
Application Number:	10959972
Application Number:	10625302
Application Number:	10376291
Application Number:	10943125
Application Number:	10690705
Application Number:	10685700
Application Number:	10947274
Application Number:	10368206
Application Number:	10860112
Application Number:	10520155
Application Number:	10935278
Application Number:	10750359
Application Number:	10821979
Application Number:	10316122
Application Number:	10805072
Application Number:	10633040
Application Number:	10881883
Application Number:	10455431
Application Number:	10699986
Application Number:	10125082
Application Number:	10243915
Application Number:	09680943
Application Number:	10715848
Application Number:	10727676
Application Number:	10960092

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Property Type	Number
Application Number:	10129809
Application Number:	11012724
Application Number:	11148381
Application Number:	11280314
Application Number:	10098895
Application Number:	11153230
Application Number:	10973254
Application Number:	10636595
Application Number:	10902120
Application Number:	10831426
Application Number:	11214343
Application Number:	11232869
Application Number:	10791805
Application Number:	11204378
Application Number:	10515433
Application Number:	11099605
Application Number:	10804807
Application Number:	10960161
Application Number:	10510216
Application Number:	10994436
Application Number:	11137414
Application Number:	11198089
Application Number:	10890154
Application Number:	10829580
Application Number:	11100244
Application Number:	10676135
Application Number:	10961118
Application Number:	10602724
Application Number:	11063533
Application Number:	10861487
Application Number:	11245336
Application Number:	11245091
Application Number:	10713213
Application Number:	09867766
Application Number:	10773315
Application Number:	11191963
Application Number:	10962573
Application Number:	11097359

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Property Type	Number
Application Number:	11396608
Application Number:	10914334
Application Number:	10931206
Application Number:	11202230
Application Number:	11070267
Application Number:	11072310
Application Number:	10970533
Application Number:	11104789
Application Number:	10945920
Application Number:	10915391
Application Number:	10922176
Application Number:	09639157
Application Number:	11101572
Application Number:	11008960
Application Number:	10990545
Application Number:	11062699
Application Number:	10819873
Application Number:	10927715
Application Number:	11242000
Application Number:	11444438
Application Number:	11074722
Application Number:	11324243
Application Number:	10619191
Application Number:	10914225
Application Number:	11038702
Application Number:	10849554
Application Number:	11085575
Application Number:	11224034
Application Number:	11175450
Application Number:	10420985
Application Number:	11261927
Application Number:	11122094
Application Number:	11258128
Application Number:	11523699
Application Number:	11180679
Application Number:	11090885
Application Number:	10825407
Application Number:	11491032

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Property Type	Number
Application Number:	10496297
Application Number:	11495778
Application Number:	10527084
Application Number:	11159155
Application Number:	11204051
Application Number:	11195835
Application Number:	11305074
Application Number:	11229771
Application Number:	10980269
Application Number:	11398771
Application Number:	11124261
Application Number:	11370038
Application Number:	10550954
Application Number:	10814347
Application Number:	11708478
Application Number:	11375814
Application Number:	10573573
Application Number:	10983661
Application Number:	11242904
Application Number:	11016713
Application Number:	11132272
Application Number:	11705448
Application Number:	11466843
Application Number:	11405060
Application Number:	11503956
Application Number:	11501818
Application Number:	11583848
Application Number:	11716704
Application Number:	11068834
Application Number:	10993812
Application Number:	11159134
Application Number:	11489616
Application Number:	11345396
Application Number:	11484756
Application Number:	11501064
Application Number:	11523564
Application Number:	10847442
Application Number:	11878971

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Property Type	Number
Application Number:	11510638
Application Number:	11000904
Application Number:	11404802
Application Number:	11534288
Application Number:	11706343
Application Number:	11501822
Application Number:	11558706
Application Number:	11642965
Application Number:	11545424
Application Number:	10952862
Application Number:	10594398
Application Number:	11258743
Application Number:	11502430
Application Number:	11539251
Application Number:	11727915
Application Number:	11783956
Application Number:	11516509
Application Number:	10793795
Application Number:	11359480
Application Number:	11216003
Application Number:	11826566
Application Number:	11484775
Application Number:	10983737
Application Number:	10569960
Application Number:	11792081
Application Number:	11722110
Application Number:	11389117
Application Number:	11175137
Application Number:	11843896
Application Number:	11783799
Application Number:	11481861
Application Number:	11790009
Application Number:	11376186
Application Number:	11978201
Application Number:	11649206
Application Number:	11139590
Application Number:	11001075
Application Number:	11805556

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Property Type	Number
Application Number:	10576423
Application Number:	11084526
Application Number:	11374093
Application Number:	10592427
Application Number:	11519221
Application Number:	11733645
Application Number:	11557788
Application Number:	11733566
Application Number:	11643696
Application Number:	10714358
Application Number:	11531381
Application Number:	11723064
Application Number:	11896816
Application Number:	11712480
Application Number:	11819784
Application Number:	11198950
Application Number:	10764513
Application Number:	11515745
Application Number:	11219716
Application Number:	12136267
Application Number:	10808615
Application Number:	11963944
Application Number:	11270615
Application Number:	11826810
Application Number:	12007298
Application Number:	12035344
Application Number:	11683121
Application Number:	11905532
Application Number:	11798367
Application Number:	10790699
Application Number:	11529271
Application Number:	11755094
Application Number:	11882173
Application Number:	10957982
Application Number:	11219774
Application Number:	11883539
Application Number:	11792777
Application Number:	11727692

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Property Type	Number
Application Number:	11889920
Application Number:	12043310
Application Number:	10696621
Application Number:	10805194
Application Number:	11092946
Application Number:	11320827
Application Number:	12030480
Application Number:	11812292
Application Number:	11354331
Application Number:	11700124
Application Number:	11607908
Application Number:	10764484
Application Number:	11127250
Application Number:	11822906
Application Number:	11846634
Application Number:	11953412
Application Number:	10712770
Application Number:	11889130
Application Number:	11484753
Application Number:	11898701
Application Number:	11222222
Application Number:	11998602
Application Number:	11958966
Application Number:	11491260
Application Number:	10957599
Application Number:	11558632
Application Number:	11698100
Application Number:	10802914
Application Number:	12149136
Application Number:	12076788
Application Number:	11902880
Application Number:	11594098
Application Number:	11648627
Application Number:	15201883
Application Number:	11547487
Application Number:	11200193
Application Number:	11453827
Application Number:	11500464

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Property Type	Number
Application Number:	11600149
Application Number:	12186573
Application Number:	11224982
Application Number:	11127116
Application Number:	11488628
Application Number:	11643704
Application Number:	11773066
Application Number:	11964943
Application Number:	12233853
Application Number:	10581038
Application Number:	11866724
Application Number:	11660517
Application Number:	12055714
Application Number:	10768623
Application Number:	11526057
Application Number:	11882974
Application Number:	11000973
Application Number:	12241896
Application Number:	11488196
Application Number:	11806300
Application Number:	12166688
Application Number:	11905646
Application Number:	12123933
Application Number:	11686892
Application Number:	11808157
Application Number:	12120462
Application Number:	11919746
Application Number:	11797405
Application Number:	12056860
Application Number:	12401904
Application Number:	11569683
Application Number:	11783643
Application Number:	10901107
Application Number:	11826562
Application Number:	11907340
Application Number:	12191011
Application Number:	11703717
Application Number:	11297406

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Property Type	Number
Application Number:	12199831
Application Number:	12369953
Application Number:	12127384
Application Number:	12118803
Application Number:	10624481
Application Number:	10584620
Application Number:	11243979
Application Number:	12216274
Application Number:	11916319
Application Number:	11739254
Application Number:	11896973
Application Number:	11792946
Application Number:	11667299
Application Number:	11712479
Application Number:	12281034
Application Number:	12209661
Application Number:	11526816
Application Number:	11889210
Application Number:	11968909
Application Number:	10739305
Application Number:	12208833
Application Number:	11665075
Application Number:	11727229
Application Number:	12268891
Application Number:	11459727
Application Number:	11633635
Application Number:	12186934
Application Number:	11918745
Application Number:	11533561
Application Number:	11933695
Application Number:	11223939
Application Number:	11414374
Application Number:	11614113
Application Number:	12167559
Application Number:	12262623
Application Number:	10574345
Application Number:	11195286
Application Number:	12092675

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Property Type	Number
Application Number:	11291781
Application Number:	11541677
Application Number:	11700121
Application Number:	11896974
Application Number:	12059789
Application Number:	12268028
Application Number:	11941365
Application Number:	12363156
Application Number:	12066000
Application Number:	10970724
Application Number:	12267878
Application Number:	11861545
Application Number:	11878836
Application Number:	12096019
Application Number:	11971334
Application Number:	11407084
Application Number:	11582441
Application Number:	11889219
Application Number:	12048895
Application Number:	12204317
Application Number:	12401929
Application Number:	11852672
Application Number:	11976672
Application Number:	12169462
Application Number:	11854197
Application Number:	12212186
Application Number:	11908000
Application Number:	12075359
Application Number:	12041817
Application Number:	11727651
Application Number:	11898443
Application Number:	12056378
Application Number:	12261393
Application Number:	12326179
Application Number:	11193337
Application Number:	12195204
Application Number:	11513023
Application Number:	11525716

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Property Type	Number
Application Number:	11917821
Application Number:	12258835
Application Number:	11712974
Application Number:	11797128
Application Number:	11822781
Application Number:	11898971
Application Number:	12021317
Application Number:	12357720
Application Number:	11400936
Application Number:	11620883
Application Number:	11716743
Application Number:	11597794
Application Number:	11662090
Application Number:	11808448
Application Number:	12375353
Application Number:	12105879
Application Number:	12269583
Application Number:	11393667
Application Number:	12201369
Application Number:	12398551
Application Number:	10800716
Application Number:	12184949
Application Number:	10564288
Application Number:	11908430
Application Number:	11651962
Application Number:	11979122
Application Number:	12105027
Application Number:	12326462
Application Number:	11213990
Application Number:	11905399
Application Number:	12197615
Application Number:	10579136
Application Number:	11568565
Application Number:	11997700
Application Number:	11699422
Application Number:	12054800
Application Number:	10599615
Application Number:	12065433

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Property Type	Number
Application Number:	12368622
Application Number:	12369283
Application Number:	12298258
Application Number:	11949919
Application Number:	12175047
Application Number:	12183887
Application Number:	11704357
Application Number:	11822780
Application Number:	12392452
Application Number:	12081889
Application Number:	11742159
Application Number:	12261544
Application Number:	12258881
Application Number:	11571112
Application Number:	11995634
Application Number:	11562126
Application Number:	11785293
Application Number:	11808957
Application Number:	11902089
Application Number:	12067953
Application Number:	12550368
Application Number:	12430469
Application Number:	11652140
Application Number:	12405656
Application Number:	11912173
Application Number:	12442649
Application Number:	12445357
Application Number:	12264539
Application Number:	10962499
Application Number:	12144122
Application Number:	12332081
Application Number:	11918040
Application Number:	12566186
Application Number:	12090349
Application Number:	11699567
Application Number:	11676747
Application Number:	11714762
Application Number:	12033538

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Property Type	Number
Application Number:	12341296
Application Number:	12159786
Application Number:	11802625
Application Number:	12402085
Application Number:	11210866
Application Number:	11483746
Application Number:	12722317
Application Number:	11646420
Application Number:	12295500
Application Number:	11662927
Application Number:	11592150
Application Number:	11885410
Application Number:	12071082
Application Number:	10953063
Application Number:	11793626
Application Number:	11996015
Application Number:	12651061
Application Number:	12014316
Application Number:	11812869
Application Number:	12120802
Application Number:	11659107
Application Number:	12172548
Application Number:	12416506
Application Number:	11783465
Application Number:	12195059
Application Number:	11995924
Application Number:	11703719
Application Number:	11826877
Application Number:	11907999
Application Number:	12445383
Application Number:	12209233
Application Number:	12425029
Application Number:	12298664
Application Number:	12446964
Application Number:	12524313
Application Number:	12332844
Application Number:	12709148
Application Number:	11905063

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Property Type	Number
Application Number:	12514025
Application Number:	11956715
Application Number:	12513914
Application Number:	12194053
Application Number:	12505799
Application Number:	12065468
Application Number:	11610007
Application Number:	11889818
Application Number:	12178324
Application Number:	12370057
Application Number:	12488867
Application Number:	11886432
Application Number:	11798325
Application Number:	12090310
Application Number:	12877540
Application Number:	12153028
Application Number:	11945464
Application Number:	12408291
Application Number:	11494705
Application Number:	12091245
Application Number:	11570658
Application Number:	11652607
Application Number:	12054968
Application Number:	12304075
Application Number:	11916474
Application Number:	11887648
Application Number:	11527681
Application Number:	12518388
Application Number:	12342707
Application Number:	11474379
Application Number:	11593650
Application Number:	11606185
Application Number:	12526910
Application Number:	12458311
Application Number:	12445380
Application Number:	12776459
Application Number:	12607697
Application Number:	11653326

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Property Type	Number
Application Number:	12376256
Application Number:	11951441
Application Number:	12516703
Application Number:	12248156
Application Number:	12847732
Application Number:	12260562
Application Number:	12510785
Application Number:	12161124
Application Number:	12491658
Application Number:	12240313
Application Number:	12536120
Application Number:	12939704
Application Number:	11621276
Application Number:	12294177
Application Number:	12669812
Application Number:	11898305
Application Number:	12094494
Application Number:	11979483
Application Number:	12019367
Application Number:	12602414
Application Number:	12139715
Application Number:	10855346
Application Number:	12791543
Application Number:	12579955
Application Number:	11206947
Application Number:	12667092
Application Number:	12208595
Application Number:	12767369
Application Number:	12190949
Application Number:	12726791
Application Number:	12427952
Application Number:	11514151
Application Number:	12280013
Application Number:	12974577
Application Number:	12489870
Application Number:	12470666
Application Number:	12137894
Application Number:	12161612

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Property Type	Number
Application Number:	12518400
Application Number:	12519476
Application Number:	12352977
Application Number:	12400376
Application Number:	12421125
Application Number:	12093076
Application Number:	12066472
Application Number:	11712904
Application Number:	11798678
Application Number:	11873436
Application Number:	12307211
Application Number:	12666722
Application Number:	12861411
Application Number:	11270604
Application Number:	11790736
Application Number:	11996888
Application Number:	12375118
Application Number:	12364111
Application Number:	11661273
Application Number:	11188855
Application Number:	12090762
Application Number:	12159232
Application Number:	11678889
Application Number:	12626056
Application Number:	12683917
Application Number:	11798326
Application Number:	12949346
Application Number:	11813370
Application Number:	11812291
Application Number:	12063637
Application Number:	12302468
Application Number:	12886056
Application Number:	12336879
Application Number:	12429768
Application Number:	12128184
Application Number:	12938108
Application Number:	10593446
Application Number:	11970796

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Property Type	Number
Application Number:	12113571
Application Number:	12212836
Application Number:	12899164
Application Number:	12485253
Application Number:	12133911
Application Number:	12207790
Application Number:	12364797
Application Number:	12539245
Application Number:	11579596
Application Number:	12694897
Application Number:	12018590
Application Number:	12135645
Application Number:	12239119
Application Number:	13069708
Application Number:	12513638
Application Number:	12529103
Application Number:	12529466
Application Number:	12676933
Application Number:	12427162
Application Number:	12715916
Application Number:	13117838
Application Number:	11907167
Application Number:	12336043
Application Number:	12089289
Application Number:	12677421
Application Number:	12539251
Application Number:	12472726
Application Number:	12330686
Application Number:	12918874
Application Number:	12711660
Application Number:	12867392
Application Number:	12706636
Application Number:	12348543
Application Number:	11333339
Application Number:	12442241
Application Number:	12600793
Application Number:	12193326
Application Number:	12571838

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Property Type	Number
Application Number:	13165551
Application Number:	13089673
Application Number:	12305299
Application Number:	12671162
Application Number:	12865193
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Application Number:	12170160
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Application Number:	12677404
Application Number:	12613150
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Application Number:	12994462
Application Number:	13166405
Application Number:	12857157

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Property Type	Number
Application Number:	12669174
Application Number:	12721851
Application Number:	13234326
Application Number:	12999019
Application Number:	13042906
Application Number:	12935455
Application Number:	11405449
Application Number:	12875495
Application Number:	13007033
Application Number:	13327389
Application Number:	12993706
Application Number:	12750232
Application Number:	13001905
Application Number:	13106571
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Application Number:	13067721
Application Number:	13137380
Application Number:	13014360
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Application Number:	12816686
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Application Number:	13179331
Application Number:	12726808
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Application Number:	13373241
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Application Number:	13070106
Application Number:	12904399
Application Number:	13209086

PATENT

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Property Type	Number
Application Number:	12934018
Application Number:	12934033
Application Number:	12745190
Application Number:	13417548
Application Number:	13485203
Application Number:	12331467
Application Number:	13155786
Application Number:	13001840
Application Number:	12763464
Application Number:	13129215
Application Number:	12665182
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Application Number:	13596154
Application Number:	13001943
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Application Number:	13243312
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Application Number:	13516875
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Application Number:	13205408
Application Number:	13126975

PATENT

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Property Type	Number
Application Number:	13132058
Application Number:	13168515
Application Number:	13147321
Application Number:	13170645
Application Number:	13010355
Application Number:	13224056
Application Number:	13574254
Application Number:	13193075
Application Number:	12713689
Application Number:	13496895
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Application Number:	12832684
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Application Number:	13737655
Application Number:	13596743
Application Number:	13649727
Application Number:	13483808
Application Number:	12861569
Application Number:	13752601
Application Number:	13400899
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Application Number:	13388612
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Application Number:	12984415
Application Number:	13046173
Application Number:	13218226
Application Number:	13290638
Application Number:	13166494
Application Number:	13708501
Application Number:	13394974

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Property Type	Number
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Application Number:	13774816
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Application Number:	13071186
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PATENT

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Property Type	Number
Application Number:	13509616
Application Number:	13575313
Application Number:	12866359
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Application Number:	13777670
Application Number:	13634161

PATENT

REEL: 052755 FRAME: 0943

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Property Type	Number
Application Number:	13641719
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Application Number:	14721010
Application Number:	14612271
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PATENT

REEL: 052755 FRAME: 0944

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Application Number:	14332394
Application Number:	14807488
Application Number:	62976709
Application Number:	62980033
Application Number:	62989469
Application Number:	16859848

CORRESPONDENCE DATA

Fax Number:
Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Email: iprecordals@cpaglobal.com

Correspondent Name: CPA GLOBAL LIMITED

Address Line 1: LIBERATION HOUSE

Address Line 2: CASTLE STREET

Address Line 4: ST HELIER, JERSEY JE1 1BL

NAME OF SUBMITTER:	HEIDI WHITTINGHAM
SIGNATURE:	/IPR/PS/NGBPanaSemicond2020-058AG1052P/
DATE SIGNED:	05/27/2020

Total Attachments: 35

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PATENT
REEL: 052755 FRAME: 0946

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TSMC v AICP, IPR2025-00828
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UNITED STATES OF AMERICA

ASSIGNMENT

WHEREAS, **Panasonic Corporation** ("ASSIGNOR"), a Corporation organized under the laws of **Japan**, with a place of business at **1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501, Japan**, owns the United States Patent(s) (the "Patent(s)") listed on the attached Schedule A; and

WHEREAS, **Panasonic Semiconductor Solutions Co., Ltd.** ("ASSIGNEE"), a Limited Company organized under the laws of **Japan**, with a place of business at **1, Kotari-yakemachi, Nagaokakyo-shi, Kyoto 617-8520 Japan**, desires to acquire all rights to the Patent(s);

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other valuable consideration, the receipt of which ASSIGNOR acknowledges, ASSIGNOR has sold, assigned, transferred, and set over, and does, by this Assignment, sell, assign, transfer, and set over unto ASSIGNEE, all rights to the Patent(s), including reissues and extensions, to be held and enjoyed by ASSIGNEE, its successors, assigns, and legal representatives, for ASSIGNEE's own use and benefit and for the use and benefit of its successors, assigns, and legal representatives, to the end of the term(s) for which the Patent(s) has/have been granted or may be reissued or extended, as fully and entirely as the Patent(s) would have been held and enjoyed by ASSIGNOR had this assignment and sale not been made; together with all claims for profits and damages by reason of past infringement, with the right to sue for and collect the same for the use and benefit of ASSIGNEE, its successors, assigns, and legal representatives.

This Assignment is deemed to have become effective as from: 21 MAY 2020

IN WITNESS WHEREOF, ASSIGNOR and ASSIGNEE have caused this Assignment to be executed by its duly authorized officer or representative on the date(s) indicated below.

By: **Panasonic Corporation**

Name: **Masato Murayama**

Title: **Authorized Signing Officer, Intellectual Property Center**

Date:

By: **Panasonic Semiconductor Solutions Co., Ltd.**



Name: **Kazunari Takahashi**

Title: **Authorized Signing Officer, Manager**

Date:

UNITED STATES OF AMERICA

ASSIGNMENT

WHEREAS, **Panasonic Corporation** ("ASSIGNOR"), a Corporation organized under the laws of **Japan**, with a place of business at **1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501, Japan**, owns the United States Patent(s) (the "Patent(s)") listed on the attached Schedule A; and

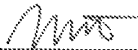
WHEREAS, **Panasonic Semiconductor Solutions Co., Ltd.** ("ASSIGNEE"), a **Limited Company** organized under the laws of **Japan**, with a place of business at **1, Kotari-yakemachi, Nagaokakyo-shi, Kyoto 617-8520 Japan**, desires to acquire all rights to the Patent(s);

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other valuable consideration, the receipt of which ASSIGNOR acknowledges, ASSIGNOR has sold, assigned, transferred, and set over, and does, by this Assignment, sell, assign, transfer, and set over unto ASSIGNEE, all rights to the Patent(s), including reissues and extensions, to be held and enjoyed by ASSIGNEE, its successors, assigns, and legal representatives, for ASSIGNEE's own use and benefit and for the use and benefit of its successors, assigns, and legal representatives, to the end of the term(s) for which the Patent(s) has/have been granted or may be reissued or extended, as fully and entirely as the Patent(s) would have been held and enjoyed by ASSIGNOR had this assignment and sale not been made; together with all claims for profits and damages by reason of past infringement, with the right to sue for and collect the same for the use and benefit of ASSIGNEE, its successors, assigns, and legal representatives.

This Assignment is deemed to have become effective as from: May, 21, 2020.....

IN WITNESS WHEREOF, ASSIGNOR and ASSIGNEE have caused this Assignment to be executed by its duly authorized officer or representative on the date(s) indicated below.

By: **Panasonic Corporation**



Name: **Masato Murayama**

Title: **Authorized Signing Officer, Intellectual Property Center**

Date:

By: **Panasonic Semiconductor Solutions Co., Ltd.**

Name: **Kazunari Takahashi**

Title: **Manager, Management Promotion Section, Planning Department**

Date:

Schedule

Country	Application Number	IP Grant Number
United States of America	9586992	8432721
United States of America	9711884	8437173
United States of America	9819646	8599602
United States of America	9911831	8618526
United States of America	9791729	8787582
United States of America	9983076	8861257
United States of America	9828936	8867259
United States of America	9602180	8927416
United States of America	9981981	8928056
United States of America	9794771	8941238
United States of America	10040788	8942050
United States of America	9774342	8942025
United States of America	9870467	8947166
United States of America	9695773	8953363
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United States of America	10238107	8994125
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United States of America	9721873	9000506
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United States of America	9709929	9006793
United States of America	10173155	9007385
United States of America	9791568	9006701
United States of America	10262003	9012294
United States of America	9984914	9019142
United States of America	10323746	9019747
United States of America	10218307	9024920
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United States of America	10358202	9082974
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United States of America	10253524	9082971

Country	Application Number	IP Grant Number
United States of America	10162211	9082967
United States of America	10377509	9087581
United States of America	10142599	9087582
United States of America	10306588	9106250
United States of America	10245012	9106856
United States of America	10307376	9105332
United States of America	9833061	9111640
United States of America	10354700	9118917
United States of America	10164409	9117961
United States of America	10330160	9129875
United States of America	10430050	9130167
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Country	Application Number	IP Grant Number
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Country	Application Number	IP Grant Number
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United States of America	10619191	9881961
United States of America	10914225	9887138
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United States of America	10849554	9893546
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United States of America	11305074	10068876
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United States of America	10980269	10085268
United States of America	11398771	10090350
United States of America	11124261	10096359

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United States of America	11370038	10116887
United States of America	10550954	10151835
United States of America	10814347	10156536
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United States of America	11375814	10193194
United States of America	10573573	10194105
United States of America	10983661	10210930
United States of America	11242904	10223811
United States of America	11016713	10256300
United States of America	11132272	10284101
United States of America	11705448	10281565
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United States of America	11405060	10281420
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United States of America	11878971	10447005
United States of America	11510638	10491842
United States of America	11000904	10488877
United States of America	11404802	10530252
United States of America	11534288	10534022
United States of America	11706343	10541230

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United States of America	11642965	10546988
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United States of America	10952862	10564710
United States of America	10594398	10573810
United States of America	11258743	10574639
United States of America	11502430	10581124
United States of America	11539251	7459952
United States of America	11727915	7460426
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United States of America	11649206	7492205
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Country	Application Number	IP Grant Number
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United States of America	11958966	7576612
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United States of America	11513023	7782103
United States of America	11525716	7782638
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United States of America	11912173	7869314
United States of America	12442649	7868662
United States of America	12445357	7868803

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United States of America	11676747	7876857
United States of America	11714762	7877667
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United States of America	12120802	7903026
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United States of America	12710762	8232600

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United States of America	13067721	8330188

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United States of America	13001840	8391051
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United States of America	13529707	8399875
United States of America	13226783	8399947
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United States of America	13010355	8445184

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