

Fraunhofer-Gesellschaft zur Foerderung der angewandten Forschung e.V.

AR 063394  
AR 063400 B1  
AR 078573 B1  
AR 085362  
AT 1,994,530  
AU 2007308415  
AU 2007308416  
AU 2007312696  
AU 2010305383  
AU 2012217269  
BE 1,994,530  
BE 2,076,901  
BE 2,311,035  
BE 2,378,516  
BE 2,471,061  
BE 2,676,268  
BE 2,884,490  
CA 2,645,618  
CA 2,667,059  
CA 2,777,073  
CA 2,827,249  
CH 1,994,530  
CN 101405791  
CN 101606194  
CN 102243873  
CN 102648494  
CN 103503061  
DE 60 2007 001 460.3  
DE 60 2007 040 029.5  
DE 60 2007 046 861.2  
DE 60 2007 050 964.5  
DE 60 2009 004 623.3  
DE 60 2010 010 725.6  
DE 60 2012 004 121.8  
DK 1,994,530  
ES 1,994,530  
ES 2,076,901  
ES 2,311,035  
ES 2,378,516  
ES 2,471,061  
ES 2,676,268  
ES 2,884,490  
FI 1,994,530  
FI 2,076,901  
FI 2,884,490  
FR 1,994,530  
FR 2,076,901  
FR 2,311,035

FR 2,378,516  
FR 2,471,061  
FR 2,676,268  
FR 2,884,490  
GB 1,994,530  
GB 2,076,901  
GB 2,311,035  
GB 2,378,516  
GB 2,471,061  
GB 2,676,268  
GB 2,884,490  
GR 1,994,530  
HK 1119824  
HK 1128547  
HK 1163332  
HK 1172727  
HK 1192048  
IE 1,994,530  
IL 193786  
IL 197976  
IL 226224  
IN 259275  
IN 268919  
IR 74396  
IT 1,994,530  
IT 2,076,901  
IT 2,311,035  
IT 2,378,516  
IT 2,471,061  
IT 2,676,268  
IT 2,884,490  
JP 4,936,569  
JP 5,083,779  
JP 5,666,021  
JP 5,678,071  
JP 5,700,714  
KR 957,711  
KR 1,056,253  
KR 1,209,410  
KR 1,425,290  
KR 1,699,898  
LI 1,994,530  
LU 1,994,530  
MC 1,994,530  
MX 278,269  
MX 283408  
MX 304,790  
MX 311707  
MX 325,154  
MY-142520-A  
MY-148715-A

NL 1,994,530  
NL 2,076,901  
NL 2,311,035  
NL 2,378,516  
NL 2,471,061  
NL 2,676,268  
NL 2,884,490  
PL 1,994,530  
PL 2,076,901  
PL 2,311,035  
PL 2,378,516  
PL 2,471,061  
PL 2,676,268  
PL 2,884,490  
PT 1,994,530  
PT 2,076,901  
PT 2,884,490  
RU 2411645  
RU 2420815  
RU 2,426,178  
RU 2,560,788  
RU 2591661  
SE 1,994,530  
SE 2,076,901  
SE 2,884,490  
SG 148222  
SG 151603  
SG 151624  
SG 179856  
SG 192746  
TR 1,994,530  
TR 2,076,901  
TR 2,311,035  
TR 2,378,516  
TR 2,471,061  
TR 2,676,268  
TR 2,884,490  
TW I355647  
TW I355649  
TW I357065  
TW I423252  
TW I469136  
US Re. 45,339  
US Re. 45,526  
US 8,438,015  
US 8,744,863  
US 8,775,193  
US 9,583,110  
US 9,595,265  
ZA 2008/10308  
ZA 2009/01650

ZA 2009/2199  
ZA 2012/3231  
ZA 2013/06838

**JVC KENWOOD Corporation**

JP 5,668,657

**Nippon Telegraph and Telephone Corporation**

CN 102687199  
CN 103460287  
CN 104321813  
DE 60 2011 009 641.0  
DE 60 2013 029 617.0  
ES 2,523,189  
ES 2,887,349  
FI 2,887,349  
FR 2,523,189  
FR 2,887,349  
GB 2,523,189  
GB 2,887,349  
IT 2,523,189  
IT 2,887,349  
JP 5,603,484  
JP 5,872,034  
JP 5,893,153  
JP 6,053,196  
JP 6,117,359  
JP 6,250,072  
JP 6,250,073  
KR 1,381,272  
KR 1,569,060  
KR 1,661,917  
KR 1,700,855  
KR 1,750,071  
KR 1,797,679  
KR 1,826,219  
KR 1,832,368  
NL 2,887,349  
RU 2510974  
RU 2571561  
SE 2,887,349  
US 9,524,725  
US 9,552,821  
US 9,812,141  
US 9,928,850  
US 9,966,083

**NTT DOCOMO, INC.**

AU 2015235133  
AU 2015251609  
AU 2017204606  
BE 3,136,384  
CA 2,918,715  
CA 2,942,885  
CH 3,136,384  
CN 104246876  
CN 104781876  
CN 106133829  
CN 106233381  
DE 60 2015 022 877.4  
DK 3,136,384  
EE 3,136,384  
ES 3,136,384  
FI 3,136,384  
FR 3,136,384  
GB 3,136,384  
GR 3,136,384  
IE 3,136,384  
IT 3,136,384  
JP 5,981,408  
JP 5,997,592  
JP 6,018,724  
JP 6,035,270  
JP 6,133,454  
JP 6,200,034  
JP 6,277,245  
KR 1,764,234  
KR 1,772,501  
KR 1,780,667  
KR 1,782,935  
KR 1,798,635  
KR 1,878,292  
KR 1,906,524  
KR 1,920,297  
LI 3,136,384  
MX 345,692  
MX 352,479  
MX 354,434  
NO 3,136,384  
PH 12016501844  
PL 3,136,384  
PT 3,136,384  
RU 2612581  
RU 2631155  
RU 2639656  
RU 2,640,743  
SE 3,136,384  
TR 3,136,384  
TW I547940

TW I576831  
TW I587284  
TW I608474  
US 9,508,350  
US 9,761,240  
US 9,799,344  
US 9,881,627  
US 10,068,584  
US 10,115,402  
US 10,152,982  
US 10,163,448

**Panasonic Corporation**

CN 103548369  
CN 104485111  
CN 104737227  
DE 60 2004 032 587.2  
DE 60 2004 038 569.7  
DE 60 2004 041 454.9  
FR 2,071,565  
FR 2,221,807  
FR 2,221,808  
GB 2,071,565  
GB 2,221,807  
GB 2,221,808  
JP 5,937,064  
JP 5,947,294  
JP 6,061,679  
JP 6,246,293  
KR 1,859,246  
MX 355,630  
MY 164987-A  
RU 2,585,990  
RU 2,648,629  
TW I573132  
US 8,208,570  
US 8,738,372  
US 9,288,792  
US 9,401,975  
US 9,456,388  
US 9,679,576  
US 9,741,356  
US 9,881,625  
US 9,892,740  
US 9,906,990  
VN 10019049

**Telefonaktiebolaget LM Ericsson**

AR 099351B1

AT 2,186,086  
AT 2,684,190  
AT 2,992,529  
AT 3,096,314  
AT 3,111,624  
AT 3,258,674  
AU 2008221657  
AU 2012331680  
AU 2014215734  
AU 2016225836  
BD 1005779  
BE 2,535,894  
BE 2,571,024  
BE 2,684,190  
BE 2,697,795  
BE 3,040,988  
BE 3,058,567  
BE 3,113,184  
BE 3,140,831  
BE 3,258,674  
BF 17529  
BJ 17529  
CA 2,697,920  
CA 2,698,031  
CA 2,698,039  
CA 2,900,354  
CF 17529  
CG 17529  
CH 2,186,086  
CH 2,186,089  
CH 2,681,734  
CH 2,684,190  
CH 2,697,796  
CH 2,816,556  
CH 2,831,874  
CH 2,954,518  
CH 2,956,932  
CH 2,975,611  
CH 2,992,529  
CH 3,040,988  
CH 3,058,567  
CH 3,067,888  
CH 3,096,314  
CH 3,111,624  
CH 3,113,184  
CH 3,140,831  
CH 3,258,674  
CI 17529  
CM 17529  
CN 200880007234.1  
CN 201080057995.5

CN 201180068987.5  
CN 201180070142.X  
CN 201280053667.7  
CN 201280072072.6  
CN 201310553487.1  
CN 201380044957.X  
CN 201380072906.8  
CN 201480007552.3  
CZ 2,186,089  
CZ 2,571,024  
CZ 2,684,190  
CZ 2,697,796  
CZ 2,831,874  
CZ 2,831,875  
CZ 2,891,151  
CZ 2,975,611  
CZ 3,040,988  
CZ 3,058,567  
CZ 3,067,888  
CZ 3,111,624  
CZ 3,113,184  
CZ 3,220,390  
DE 60 2007 040 031.7  
DE 60 2008 019 137.0  
DE 60 2008 021 910.0  
DE 60 2008 035 061.4  
DE 60 2008 039 120.5  
DE 60 2008 057 268.4  
DE 60 2010 020 957.1  
DE 60 2011 016 374.4  
DE 60 2011 017 249.2  
DE 60 2011 021 533.7  
DE 60 2011 026 297.1  
DE 60 2011 038 467.8  
DE 60 2011 039 027.9  
DE 60 2011 045 047.6  
DE 60 2012 013 256.6  
DE 60 2012 020 311.0  
DE 60 2012 032 027.3  
DE 60 2012 039 099.9  
DE 60 2012 051 659.3  
DE 60 2013 008 665.6  
DE 60 2013 010 717.3  
DE 60 2013 010 987.7  
DE 60 2013 030 655.9  
DE 60 2014 003 403.9  
DE 60 2014 010 613.7  
DE 60 2014 019 582.2  
DE 60 2015 000 050.1  
DE 60 2015 004 915.2  
DE 60 2015 013 419.2



DE 60 2015 017 328.7

DK 2,186,089

DK 2,535,894

DK 2,571,024

DK 2,684,190

DK 2,697,795

DK 2,697,796

DK 2,831,874

DK 2,891,151

DK 2,956,932

DK 2,975,611

DK 2,992,529

DK 3,040,988

DK 3,058,567

DK 3,067,888

DK 3,096,314

DK 3,140,831

DK 3,258,674

ES 2,132,731

ES 2,186,086

ES 2,186,089

ES 2,535,894

ES 2,571,024

ES 2,681,734

ES 2,684,190

ES 2,697,795

ES 2,697,796

ES 2,774,146

ES 2,831,874

ES 2,831,875

ES 2,891,151

ES 2,954,518

ES 2,956,932

ES 2,959,480

ES 2,975,611

ES 2,992,529

ES 3,040,988

ES 3,058,567

ES 3,067,888

ES 3,096,314

ES 3,111,624

ES 3,113,184

ES 3,140,831

ES 3,220,390

ES 3,258,674

FI 2,535,894

FI 2,684,190

FI 2,697,795

FI 2,831,874

FI 2,891,151

FI 3,096,314

FI 3,140,831  
FR 2,118,889  
FR 2,132,731  
FR 2,186,086  
FR 2,186,089  
FR 2,491,559  
FR 2,535,894  
FR 2,571,024  
FR 2,681,734  
FR 2,684,190  
FR 2,697,795  
FR 2,697,796  
FR 2,774,146  
FR 2,816,556  
FR 2,831,874  
FR 2,831,875  
FR 2,891,151  
FR 2,954,518  
FR 2,956,932  
FR 2,959,480  
FR 2,975,611  
FR 2,992,529  
FR 3,040,988  
FR 3,058,567  
FR 3,067,888  
FR 3,096,314  
FR 3,111,624  
FR 3,113,184  
FR 3,140,831  
FR 3,220,390  
FR 3,258,674  
GA 17529  
GB 2,118,889  
GB 2,132,731  
GB 2,186,086  
GB 2,186,089  
GB 2,491,559  
GB 2,535,894  
GB 2,571,024  
GB 2,681,734  
GB 2,684,190  
GB 2,697,795  
GB 2,697,796  
GB 2,774,146  
GB 2,816,556  
GB 2,831,874  
GB 2,831,875  
GB 2,891,151  
GB 2,954,518  
GB 2,956,932  
GB 2,959,480

GB 2,975,611  
GB 2,992,529  
GB 3,040,988  
GB 3,058,567  
GB 3,067,888  
GB 3,096,314  
GB 3,111,624  
GB 3,113,184  
GB 3,140,831  
GB 3,220,390  
GB 3,258,674  
GN 17529  
GQ 17529  
GR 2,571,024  
GR 2,681,734  
GR 2,684,190  
GR 2,954,518  
GR 2,992,529  
GR 3,058,567  
GR 3,140,831  
GW 17529  
HU 2,186,086  
HU 2,186,089  
HU 2,684,190  
HU 2,831,874  
HU 2,831,875  
HU 2,956,932  
HU 2,975,611  
HU 2,992,529  
HU 3,096,314  
HU 3,113,184  
IE 2,571,024  
IE 2,681,734  
IE 2,684,190  
IE 2,697,795  
IE 2,697,796  
IE 2,774,146  
IE 2,831,875  
IE 2,891,151  
IE 2,954,518  
IE 2,992,529  
IE 3,058,567  
IE 3,067,888  
IE 3,111,624  
IE 3,113,184  
IE 3,220,390  
IL 248168  
IN 296,999  
IT 2,118,889  
IT 2,132,731  
IT 2,186,086

IT 2,186,089  
IT 2,491,559  
IT 2,535,894  
IT 2,571,024  
IT 2,681,734  
IT 2,684,190  
IT 2,697,795  
IT 2,697,796  
IT 2,774,146  
IT 2,831,874  
IT 2,831,875  
IT 2,891,151  
IT 2,954,518  
IT 2,956,932  
IT 2,975,611  
IT 2,992,529  
IT 3,040,988  
IT 3,058,567  
IT 3,067,888  
IT 3,096,314  
IT 3,111,624  
IT 3,113,184  
IT 3,140,831  
IT 3,220,390  
IT 3,258,674  
JP 5,140,730  
JP 5,183,741  
JP 5,198,477  
JP 5,209,722  
JP 5,255,638  
JP 5,291,004  
JP 5,340,965  
JP 5,458,189  
JP 5,712,220  
JP 5,945,626  
JP 6,069,526  
JP 6,127,143  
JP 6,251,773  
JP 6,404,396  
JP 6,440,674  
KM 17529  
KR 1,462,293  
KR 1,520,212  
KR 1,704,482  
KR 1,740,219  
LI 2,186,086  
LI 2,186,089  
LI 2,681,734  
LI 2,684,190  
LI 2,697,796  
LI 2,816,556

LI 2,831,874  
LI 2,954,518  
LI 2,956,932  
LI 2,975,611  
LI 2,992,529  
LI 3,040,988  
LI 3,058,567  
LI 3,067,888  
LI 3,096,314  
LI 3,111,624  
LI 3,113,184  
LI 3,140,831  
LI 3,258,674  
ML 17529  
MR 17529  
MX 289,021  
MX 290,565  
MX 291,012  
MX 316,736  
MX 344,550  
MX 352,106  
MY 167474-A  
NE 17529  
NG/PT/C/2014/465  
NG/PT/C/2015/1290  
NL 2,118,889  
NL 2,132,731  
NL 2,186,086  
NL 2,186,089  
NL 2,535,894  
NL 2,571,024  
NL 2,681,734  
NL 2,684,190  
NL 2,697,795  
NL 2,697,796  
NL 2,774,146  
NL 2,831,874  
NL 2,831,875  
NL 2,891,151  
NL 2,954,518  
NL 2,956,932  
NL 2,975,611  
NL 2,992,529  
NL 3,040,988  
NL 3,058,567  
NL 3,067,888  
NL 3,096,314  
NL 3,111,624  
NL 3,113,184  
NL 3,140,831  
NL 3,220,390

NL 3,258,674  
NO 2,684,190  
NO 2,697,795  
NO 2,697,796  
NO 2,975,611  
NO 2,992,529  
NO 3,040,988  
NO 3,067,888  
NO 3,111,624  
NZ 710308  
PL 2,118,889  
PL 2,132,731  
PL 2,186,086  
PL 2,535,894  
PL 2,681,734  
PL 2,684,190  
PL 2,697,795  
PL 2,831,875  
PL 2,956,932  
PL 2,959,480  
PL 2,992,529  
PL 3,040,988  
PL 3,058,567  
PL 3,111,624  
PL 3,140,831  
PL 3,220,390  
PL 3,258,674  
PT 2,186,089  
PT 2,491,559  
PT 2,571,024  
PT 2,681,734  
PT 2,684,190  
PT 2,697,795  
PT 2,954,518  
PT 2,992,529  
PT 3,058,567  
PT 3,220,390  
RO 2,186,086  
RO 2,684,190  
RO 2,697,796  
RO 2,831,875  
RO 2,954,518  
RO 2,956,932  
RO 2,992,529  
RO 3,058,567  
RO 3,067,888  
RU 2,469,419  
RU 2,575,389  
RU 2609133  
RU 2610293  
RU 2,611,017

RU 2,624,586  
RU 2,665,889  
RU 2,670,785  
SE 2,186,086  
SE 2,186,089  
SE 2,535,894  
SE 2,684,190  
SE 2,697,796  
SE 2,831,874  
SE 2,831,875  
SE 2,891,151  
SE 2,954,518  
SE 2,975,611  
SE 2,992,529  
SE 3,058,567  
SE 3,096,314  
SE 3,113,184  
SE 3,220,390  
SG 11201505231V  
SN 17529  
TD 17529  
TG 17529  
TR 2,186,086  
TR 2,186,089  
TR 2,571,024  
TR 2,681,734  
TR 2,684,190  
TR 2,697,795  
TR 2,697,796  
TR 2,774,146  
TR 2,816,556  
TR 2,831,874  
TR 2,831,875  
TR 2,891,151  
TR 2,954,518  
TR 2,956,932  
TR 2,975,611  
TR 2,992,529  
TR 3,040,988  
TR 3,058,567  
TR 3,067,888  
TR 3,096,314  
TR 3,111,624  
TR 3,113,184  
TR 3,140,831  
TR 3,220,390  
TR 3,258,674  
US 8,457,953  
US 8,706,509  
US 8,706,511  
US 8,731,917

US 9,076,453  
US 9,153,240  
US 9,269,364  
US 9,269,372  
US 9,293,144  
US 9,318,117  
US 9,349,379  
US 9,385,750  
US 9,401,155  
US 9,424,856  
US 9,437,202  
US 9,437,204  
US 9,472,208  
US 9,495,971  
US 9,514,756  
US 9,548,057  
US 9,595,268  
US 9,602,128  
US 9,620,138  
US 9,626,978  
US 9,691,398  
US 9,711,154  
US 9,712,414  
US 9,721,574  
US 9,842,601  
US 9,852,739  
US 9,853,659  
US 9,966,082  
US 9,997,165  
US 9,997,174  
US 10,002,617  
US 10,103,958  
US 10,199,049  
VN 18414  
VN 19208  
ZA 2009/06297  
ZA 2013/06709  
ZA 2014/06340  
ZA 2015/04881  
ZA 2015/0780  
ZA 2017/00682