

THE MICROELECTRONICS DATA BOOK



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MOTOROLA *Semiconductor Products Inc.*

SECOND EDITION



THE MICROELECTRONICS DATA BOOK

In the entire dynamic history of electronics no facet of the industry has moved as rapidly from concept to implementation as has the field of microelectronics. Already integrated circuits are replacing discrete-component circuits in all major computer applications and extensive military applications. With the economies made possible by integrated circuits, they are also finding their way into other fields such as industrial, consumer, and automotive electronics. The linear area of applications, though somewhat lagging the digital field, is now expanding at a rate reminiscent of earlier days when new designs were emerging from the laboratories faster than they could be effectively introduced to the market place.

Since an integrated circuit represents a significantly larger portion of each equipment design than any single discrete component, the design engineers' cognizance of new products and their capabilities becomes increasingly vital. To the dissemination of this information, in the most useful form, the Microelectronics Data Book is dedicated. This Second Edition supersedes the First Edition Integrated Circuit Data Book.

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MDTL, MRTL, mW MRTL and Unibloc are trademarks of Motorola Inc.

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MC718P	Plastic mW MRTL	
MC719F	Commercial mW MRTL	
MC719P	Plastic mW MRTL	
MC720F	Commercial mW MRTL	
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MC723F	Commercial MRTL	
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MC724F	Commercial MRTL	
MC724P	Plastic MRTL	
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MC725P	Plastic MRTL	
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		MECL II

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MC7493L,P		
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MC9704P		
MC9707P		Plastic mW MRTL Commercial MRTL Plastic MRTL Plastic mW MRTL Commercial mW MRTL Plastic mW MRTL Plastic mW MRTL Plastic MRTL
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INTERCHANGEABILITY GUIDE

The following cross-reference lists integrated circuits from a number of major manufacturers, and indicates the direct replacement type. Due to the variety of packages on the market, there may be slight differences in outline dimensions.

DIGITAL INTEGRATED CIRCUITS

MECL

Part Number	Motorola Direct Replacement
RCA	
CD2150F CD2151F CD2152F	MC1050F MC1051F MC1052F
Stewart-Warner	
SW301F SW301T SW302F SW302T SW303F SW303T SW304F SW304T SW305F SW305T SW306F SW306T SW307F SW307T SW308F SW308T SW309F SW309T SW310F SW310T SW311F SW311T SW351F SW351T SW352AF SW352AT SW353F SW353T SW354F SW354T SW355F SW355T SW356F SW356T SW357F SW357T SW358AF SW358AT SW359F	MC301F MC301G MC302F MC302G MC303F MC303G MC304F MC304G MC305F MC305G MC306F MC306G MC307F MC307G MC308F MC308G MC309F MC309G MC310F MC310G MC311F MC311G MC351F MC351G MC352AF MC352AG MC353F MC353G MC354F MC354G MC355F MC355G MC356F MC356G MC357F MC357G MC358AF MC358AG MC359F

Part Number	Motorola Direct Replacement
Stewart-Warner (cont.)	
SW359T SW360F SW360T SW361F SW361T SW1001M SW1002M SW1003M SW1004M SW1005M SW1006M SW1007M SW1008M SW1009M SW1010M SW1011M SW1012M SW1013M SW1014M SW1015M SW1016M SW1017M SW1018M SW1019M SW1020M SW1021M SW1022M SW1024M SW1025M SW1029M SW1030M SW1031M SW1033M SW1201F SW1202F SW1203F SW1204F SW1205F SW1206F SW1207F SW1208F SW1209F SW1210F SW1211F SW1212F SW1213F	MC359G MC360F MC360G MC361F MC361G MC1001P MC1002P MC1003P MC1004P MC1005P MC1006P MC1007P MC1008P MC1009P MC1010P MC1011P MC1012P MC1013P MC1014P MC1015P MC1016P MC1017P MC1018P MC1019P MC1020P MC1021P MC1022P MC1024P MC1025P MC1029P MC1030P MC1031P MC1033P MC1201F MC1202F MC1203F MC1204F MC1205F MC1206F MC1207F MC1208F MC1209F MC1210F MC1211F MC1212F MC1213F

Part Number	Motorola Direct Replacement
Stewart-Warner (cont.)	
SW1214F SW1215F SW1216F SW1217F SW1218F SW1219F SW1220F SW1221F SW1222F SW1224F SW1225F SW1229F SW1230F SW1231F SW1233F	MC1214F MC1215F MC1216F MC1217F MC1218F MC1219F MC1220F MC1221F MC1222F MC1224F MC1225F MC1229F MC1230F MC1231F MC1233F
Westinghouse	
WC377	MC1023P†

MTTL

Amperex	
FJH 101 FJH 111 FJH 121 FJH 131 FJH 141 FJH 151 FJH 161 FJH 201 FJH 221 FJH 231 FJH 111 FJJ121 FJJ121 FJJ121 FJJ21 FJL 101 FJY 101	MC7430P MC7420P MC7410P MC7400P MC7440P MC7450P MC7451P MC17482P,L MC7402P MC7401P MC7472P MC7473P MC7479P MC7493P,L MC7441AP,L MC7460P

†Not pin-for-pin replacement

MTTL (cont.)

Part Number	Motorola Direct Replacement
Fairchild	
U31900151X	MC3152F
U31900159X	MC3052F
U31900251X	MC3100F
U31900259X	MC3000F
U31900351X	MC3105F
U31900359X	MC3005F
U31900451X	MC3110F
U31900459X	MC3010F
U31900551X	MC3120F
U31900559X	MC3020F
U31900651X	MC3130F
U31900659X	MC3030F
U31900751X	MC3115F
U31900759X	MC3015F
U31900951X	MC3125F#
U31900959X	MC3025F#
U6A900151X	MC3152L
U6A900159X	MC3052L,P
U6A900251X	MC3100L
U6A900259X	MC3000L,P
U6A900351X	MC3105L
U6A900359X	MC3005L,P
U6A900451X	MC3110L
U6A900459X	MC3010L,P
U6A900551X	MC3120L
U6A900559X	MC3020L,P
U6A900651X	MC3130L
U6A900659X	MC3030L,P
U6A900751X	MC3115L
U6A900759X	MC3015L,P
U6A900951X#	MC3125L#
U6A900959X#	MC3025L,P#
U6A901651X	MC5404L
U6A901659X	MC7404L,P
U6B931559X	MC7441AL,P
National	
DM7501D	MC5473L
DM7510D	MC5479L
DM7533D	MC5493L
DM8000N	MC7400P
DM8001N	MC7401P
DM8010N	MC7410P
DM8020N	MC7420P
DM8030N	MC7430P
DM8040N	MC7440P
DM8050N	MC7450P
DM8051N	MC7451P
DM8053N	MC7453P
DM8054N	MC7454P
DM8060N	MC7460P
DM8500N	MC7476P
DM8501N	MC7473P
DM8510N	MC7479P
DM8533N	MC7493P
DM8550N	MC7475P
DM8840N	MC7441AP
SN5400D	MC5400L
SN5400F	MC5400F
SN5410D	MC5410L
SN5410F	MC5410F
SN5420D	MC5420L
SN5420F	MC5420F
SN5440D	MC5440L
SN5440F	MC5440F

Part Number	Motorola Direct Replacement
National (cont.)	
SN5473D	MC5473L
SN5473F	MC5473F
SN5474D	MC5479L
SN5474F	MC5479F
SN5476D	MC5476L
SN7400D	MC7400L
SN7400F	MC7400F
SN7400N	MC7400P
SN7401N	MC7401P
SN7410D	MC7410L
SN7410F	MC7410F
SN7410N	MC7410P
SN7420D	MC7420L
SN7420F	MC7420F
SN7420N	MC7420P
SN7430N	MC7430P
SN7440D	MC7440L
SN7440F	MC7440F
SN7440N	MC7440P
SN7441N	MC7441AP
SN7450N	MC7450P
SN7451N	MC7451P
SN7453N	MC7453P
SN7454N	MC7454P
SN7460N	MC7460P
SN7473D	MC7473L
SN7473F	MC7473F
SN7473N	MC7473P
SN7474D	MC7479L
SN7474F	MC7479F
SN7474N	MC7479P
SN7475N	MC7475P
SN7476D	MC7476L
SN7476N	MC7476P
SN7493N	MC7493P
Philco	
PD9620-61	MC2103L
PD9620-69	MC2003L,P
PD9620-71	MC2153L
PD9620-79	MC2053L,P
PD9621-61	MC2101L
PD9621-69	MC2151L
PD9621-71	MC2001L,P
PD9621-79	MC2051L,P
PD9622-61	MC2107L
PD9622-69	MC2007L,P
PD9622-71	MC2157L
PD9622-79	MC2057L,P
PD9623-61	MC2109L
PD9623-69	MC2009L,P
PD9623-71	MC2159L
PD9623-79	MC2059L,P
PD9624-61	MC2125L
PD9624-69	MC2025L,P
PD9624-71	MC2175L
PD9624-79	MC2075L,P
PD9625-61	MC2105L
PD9625-69	MC2005L,P
PD9625-71	MC2155L
PD9625-79	MC2055L,P
PD9626-61	MC2110L
PD9626-69	MC2010L,P
PD9626-71	MC2160L
PD9626-79	MC2060L,P

Part Number	Motorola Direct Replacement
Philco (cont.)	
PD9627-61	MC2126L
PD9627-69	MC2026L,P
PD9627-71	MC2176L
PD9627-79	MC2076L,P
PD9628-61	MC2100L
PD9628-69	MC2000L,P
PD9628-71	MC2150L
PD9628-79	MC2050L,P
PD9629-61	MC2106L
PD9629-69	MC2006L,P
PD9629-71	MC2156L
PD9629-79	MC2056L,P
PD9630-61	MC2104L
PD9630-69	MC2004L,P
PD9630-71	MC2154L
PD9630-79	MC2054L,P
PD9631-61	MC2102L
PD9631-69	MC2002L,P
PD9631-71	MC2152L
PD9631-79	MC2052L,P
PD9632-61	MC2113L
PD9632-69	MC2013L,P
PD9632-71	MC2163L
PD9632-79	MC2063L,P
PD9634-61	MC2111L
PD9634-69	MC2011L,P
PD9634-71	MC2161L
PD9634-79	MC2061L,P
PD9635-61	MC527L
PD9635-69	MC427L,P
PD9635-71	MC577L
PD9635-79	MC477L,P
PD9637-61	MC2112L
PD9637-69	MC2012L,P
PD9637-71	MC2162L
PD9637-79	MC2062L,P
PL9620-61	MC2103F
PL9620-69	MC2003F
PL9620-71	MC2153F
PL9620-79	MC2053F
PL9621-61	MC2101F
PL9621-69	MC2151F
PL9621-71	MC2001F
PL9621-79	MC2051F
PL9622-61	MC2107F
PL9622-69	MC2007F
PL9622-71	MC2157F
PL9622-79	MC2057F
PL9623-61	MC2109F
PL9623-69	MC2009F
PL9623-71	MC2159F
PL9623-79	MC2059F
PL9624-61	MC2125F
PL9624-69	MC2025F
PL9624-71	MC2175F
PL9624-79	MC2075F
PL9625-61	MC2105F
PL9625-69	MC2005F
PL9625-71	MC2155F
PL9625-79	MC2055F
PL9626-61	MC2110F
PL9626-69	MC2010F
PL9626-71	MC2160F
PL9626-79	MC2060F
PL9627-61	MC2126F
PL9627-69	MC2026F
PL9627-71	MC2176F

#I_{OL} = 46 mAdc for MC3125/3025, 48 mAdc for 9009.

MTTL (cont.)

Part Number	Motorola Direct Replacement
Philco (cont.)	
PL9627-79	MC2076F
PL9628-61	MC2100F
PL9628-69	MC2000F
PL9628-71	MC2150F
PL9628-79	MC2050F
PL9629-61	MC2106F
PL9629-69	MC2006F
PL9629-71	MC2156F
PL9629-79	MC2056F
PL9630-61	MC2104F
PL9630-69	MC2004F
PL9630-71	MC2154F
PL9630-79	MC2054F
PL9631-61	MC2102F
PL9631-69	MC2002F
PL9631-71	MC2152F
PL9631-79	MC2052F
PL9632-61	MC2113F
PL9632-69	MC2013F
PL9632-71	MC2163F
PL9632-79	MC2063F
PL9634-61	MC2111F
PL9634-69	MC2011F
PL9634-71	MC2161F
PL9634-79	MC2061F
PL9635-61	MC527F
PL9635-69	MC427F
PL9635-71	MC577F
PL9635-79	MC477F
PL9637-61	MC2112F
PL9637-69	MC2012F
PL9637-71	MC2162F
PL9637-79	MC2062F
Raytheon	
RF10D	MC513L
RF10K	MC513F
RF11D	MC563L
RF11K	MC563F
RF12D	MC413L,P
RF12K	MC413F
RF13D	MC463L,P
RF13K	MC463F
RF20D	MC514L
RF20K	MC514F
RF21D	MC564L
RF21K	MC564F
RF22D	MC414L,P
RF22K	MC414F
RF23D	MC464L,P
RF23K	MC464F
RF30D	MC521L
RF30K	MC521F
RF31D	MC571L
RF31K	MC571F
RF32D	MC421L,P
RF32K	MC421F
RF33D	MC471L,P
RF33K	MC471F
RF50D	MC515L
RF50K	MC515F
RF51D	MC565L
RF51K	MC565F
RF52D	MC415L,P
RF52K	MC415F

Part Number	Motorola Direct Replacement
Raytheon (cont.)	
RF53D	MC465L,P
RF53K	MC465F
RF60D	MC516L
RF60K	MC516F
RF61D	MC566L
RF61K	MC566F
RF62D	MC416L,P
RF62K	MC416F
RF63D	MC466L,P
RF63K	MC466F
RF100D	MC523L
RF100K	MC523F
RF101D	MC573L
RF100K	MC573F
RF102D	MC423L,P
RF102K	MC423F
RF103D	MC473L,P
RF103K	MC473F
RF110D	MC524L
RF110K	MC524F
RF111D	MC574L
RF111K	MC574F
RF112D	MC424L,P
RF112K	MC424F
RF113D	MC474L,P
RF113K	MC474F
RF120D	MC2123L
RF120K	MC2123F
RF121D	MC2173L
RF121K	MC2173F
RF122D	MC2023L,P
RF122K	MC2023F
RF123D	MC2073L,P
RF123K	MC2073F
RF130D	MC2124L
RF130K	MC2124F
RF131D	MC2174L
RF131K	MC2174F
RF132D	MC2024L,P
RF132K	MC2024F
RF133D	MC2074L,P
RF133K	MC2074F
RF200D	MC2125L
RF200K	MC2125F
RF201D	MC2175L
RF201K	MC2175F
RF202D	MC2025L,P
RF202K	MC2025F
RF203D	MC2075L,P
RF203K	MC2075F
RF210D	MC2126L
RF210K	MC2126F
RF211D	MC2176L
RF211K	MC2176F
RF212D	MC2026L,P
RF212K	MC2026F
RF213D	MC2076L,P
RF213K	MC2076F
RF250D	MC2109L
RF250K	MC2109F
RF251D	MC2159L
RF251K	MC2159F
RF252D	MC2009L,P
RF252K	MC2009F
RF253D	MC2059L,P
RF253K	MC2059F
RF260D	MC2110L

Part Number	Motorola Direct Replacement
Raytheon (cont.)	
RF260K	MC2110F
RF261D	MC2160L
RF261K	MC2160F
RF262D	MC2010L,P
RF262K	MC2010F
RF263D	MC2060L,P
RF263K	MC2060F
RG40D	MC500L
RG40K	MC500F
RG41D	MC550L
RG41K	MC550F
RG42D	MC400L,P
RG42K	MC400F
RG43D	MC450L,P
RG43K	MC450F
RG50D	MC501L
RG50K	MC501F
RG51D	MC551L
RG51K	MC551F
RG52D	MC401L,P
RG52K	MC401F
RG53D	MC451L,P
RG53K	MC451F
RG60D	MC502L
RG60K	MC502F
RG61D	MC552L
RG61K	MC552F
RG62D	MC402L,P
RG62K	MC402F
RG63D	MC452L,P
RG63K	MC452F
RG70D	MC520L
RG70K	MC520F
RG71D	MC570L
RG71K	MC570F
RG72D	MC420L,P
RG72K	MC420F
RG73D	MC470L,P
RG73K	MC470F
RG80D	MC526L
RG80K	MC526F
RG81D	MC576L
RG81K	MC576F
RG82D	MC426L,P
RG82K	MC426F
RG83D	MC476L,P
RG83K	MC476F
RG90D	MC503L
RG90K	MC503F
RG91D	MC553L
RG91K	MC553F
RG92D	MC403L,P
RG92K	MC403F
RG93D	MC453L,P
RG93K	MC453F
RG100D	MC504L
RG100K	MC504F
RG101D	MC554L
RG101K	MC554F
RG102D	MC404L,P
RG102K	MC404F
RG103D	MC454L,P
RG103K	MC454F
RG110D	MC505L
RG110K	MC505F
RG111D	MC555L
RG111K	MC555F

MTTL (cont.)

Part Number	Motorola Direct Replacement
Raytheon (cont.)	
RG112D	MC405L,P
RG112K	MC405F
RG113D	MC455L,P
RG113K	MC455F
RG120D	MC506L
RG120K	MC506F
RG121D	MC556L
RG121K	MC556F
RG122D	MC406L,P
RG122K	MC406F
RG123D	MC456L,P
RG123K	MC456F
RG130D	MC507L
RG130K	MC507F
RG131D	MC557L
RG131K	MC557F
RG132D	MC407L,P
RG132K	MC407F
RG133D	MC457L,P
RG133K	MC457F
RG140D	MC508L
RG140K	MC508F
RG141D	MC558L
RG141K	MC558F
RG142D	MC408L,P
RG142K	MC408F
RG143D	MC458L,P
RG143K	MC458F
RG150D	MC509L
RG150K	MC509F
RG151D	MC559L
RG151K	MC559F
RG152D	MC409L,P
RG152K	MC409F
RG153D	MC459L,P
RG153K	MC459F
RG160D	MC519L
RG160K	MC519F
RG161D	MC569L
RG161K	MC569F
RG162D	MC419L,P
RG162K	MC419F
RG163D	MC469L,P
RG163K	MC469F
RG170D	MC510L
RG170K	MC510F
RG171D	MC560L
RG171K	MC560F
RG172D	MC410L,P
RG172K	MC410F
RG173D	MC460L,P
RG173K	MC460F
RG180D	MC511L
RG180K	MC511F
RG181D	MC561L
RG181K	MC561F
RG182D	MC411L,P
RG182K	MC411F
RG183D	MC461L,P
RG183K	MC461F
RG190D	MC512L
RG190K	MC512F
RG191D	MC562L
RG191K	MC562F
RG192D	MC412L,P
RG192K	MC412F
RG193D	MC462L,P

Part Number	Motorola Direct Replacement
Raytheon (cont.)	
RG193K	MC462F
RG200D	MC2111L
RG200K	MC2111F
RG201D	MC2161L
RG201K	MC2161F
RG202D	MC2011L,P
RG202K	MC2011F
RG203D	MC2061L,P
RG203K	MC2061F
RG210D	MC2100L
RG210K	MC2100F
RG211D	MC2150L
RG211K	MC2150F
RG212D	MC2000L,P
RG212K	MC2000F
RG213D	MC2050L,P
RG213K	MC2050F
RG220D	MC2101L
RG220K	MC2101F
RG221D	MC2151L
RG221K	MC2151F
RG222D	MC2001L,P
RG222K	MC2001F
RG223D	MC2051L,P
RG223K	MC2051F
RG230D	MC2102L
RG230K	MC2102F
RG231D	MC2152L
RG231K	MC2152F
RG232D	MC2002L,P
RG232K	MC2002F
RG233D	MC2052L,P
RG233K	MC2052F
RG240D	MC2103L
RG240K	MC2103F
RG241D	MC2153L
RG241K	MC2153F
RG242D	MC2003L,P
RG242K	MC2003F
RG243D	MC2053L,P
RG243K	MC2053F
RG250D	MC2104L
RG250K	MC2104F
RG251D	MC2154L
RG251K	MC2154F
RG252D	MC2004L,P
RG252K	MC2004F
RG253D	MC2054L,P
RG253K	MC2054F
RG260D	MC2105L
RG260K	MC2105F
RG261D	MC2155L
RG261K	MC2155F
RG262D	MC2005L,P
RG262K	MC2005F
RG263D	MC2055L,P
RG263K	MC2055F
RG270D	MC2106L
RG270K	MC2106F
RG271D	MC2156L
RG271K	MC2156F
RG272D	MC2006L,P
RG272K	MC2006F
RG273D	MC2056L,P
RG273K	MC2056F
RG280D	MC527L
RG280K	MC527F

Part Number	Motorola Direct Replacement
Raytheon (cont.)	
RG281D	MC577L
RG281K	MC577F
RG282D	MC427L,P
RG282K	MC427F
RG283D	MC477L,P
RG283K	MC477F
RG300D	MC2112L
RG300K	MC2112F
RG301D	MC2162L
RG301K	MC2162F
RG302D	MC2012L,P
RG302K	MC2012F
RG303D	MC2062L,P
RG303K	MC2062F
RG310D	MC2113L
RG310K	MC2113F
RG311D	MC2163L
RG311K	MC2163F
RG312D	MC2013L,P
RG312K	MC2013F
RG313D	MC2063L,P
RG313K	MC2063F
RG320D	MC2107L
RG320K	MC2107F
RG321D	MC2157L
RG321K	MC2157F
RG322D	MC2007L,P
RG322K	MC2007F
RG323D	MC2057L,P
RG323K	MC2057F
Signetics	
N8H16A	MC3010L,P
N8H70A	MC3005L,P
N8H80A	MC3000L,P
N7400A	MC7400P
N7401A	MC7401P
N7402A	MC7402P
N7410A	MC7410P
N7420A	MC7420P
N7430A	MC7430P
N7440A	MC7440P
N7441A	MC7441AP
N7450A	MC7450P
N7451A	MC7451P
N7453A	MC7453P
N7454A	MC7454P
N7460A	MC7460P
N7472A	MC7472P
N7473A	MC7473P
N7474A	MC7479P
N7475B	MC7475P
N7476B	MC7476P
N8806A	MC7460P
N8806J	MC7460F
N8808A	MC7430P
N8808J	MC7430F
N8816J	MC7420F
N8822J	MC7473F
N8828A	MC7479P
N8828J	MC7479F
N8829A	MC7472P
N8829J	MC7472F
N8840A	MC7450P
N8840J	MC7450F

MTTL (cont.)

Part Number	Motorola Direct Replacement
Signetics	
N8848A‡	MC7453P
N8848J‡	MC7453F
N8855J	MC7440F
N8870J	MC7410F
N8880J	MC7400F
N8881A	MC7401P
N8881J	MC7401F
S8H16A	MC3110L
S8H70A	MC3105L
S8H80A	MC3100L
S8806A	MC5460L
S8806J	MC5460F
S8808A	MC5430L
S8808J	MC5430F
S8816J	MC5420F
S8822J	MC5473F
S8828A	MC5479L
S8828J	MC5479F
S8829A	MC5472L
S8829J	MC5472F
S8840A	MC5450L
S8840J	MC5450F
S8848A‡	MC5453L
S8848J‡	MC5453F
S8855J	MC5440F
S8870J	MC5410F
S8880J	MC5400F
S8881A	MC5401L
S8881J	MC5401F
Sprague	
USN5400J	MC5400F
USN5401J	MC5401F
USN5402J	MC5402F
USN5410J	MC5410F
USN5420J	MC5420F
USN5430J	MC5430F
USN5440J	MC5440F
USN5450J	MC5450F
USN5451J	MC5451F
USN5453J	MC5453F
USN5454J	MC5454F
USN5460J	MC5460F
USN5472J	MC5472F
USN5473J	MC5473F
USN5474J	MC5479F
USN5493A	MC5493L
USN7400A	MC7400P
USN7400J	MC7400F
USN7401A	MC7401P
USN7401J	MC7401F
USN7402A	MC7402P
USN7402J	MC7402F
USN7410A	MC7410P
USN7410J	MC7410F
USN7420A	MC7420P
USN7420J	MC7420F
USN7430A	MC7430P
USN7430J	MC7430F
USN7440A	MC7440P
USN7440J	MC7440F
USN7441A	MC7441AP
USN7450A	MC7450P
USN7450J	MC7450F
USN7451A	MC7451P

Part Number	Motorola Direct Replacement
Sprague (cont.)	
USN7451J	MC7451F
USN7453A	MC7453P
USN7453J	MC7453F
USN7454A	MC7454P
USN7454J	MC7454F
USN7460A	MC7460P
USN7460J	MC7460F
USN7472A	MC7472P
USN7472J	MC7472F
USN7473A	MC7473P
USN7473J	MC7473F
USN7474A	MC7479P
USN7474J	MC7479F
USN7482A	MC17482P
USN7493A	MC7493L
Sylvania	
SF10-02	MC513F
SF10-03	MC513L
SF11-02	MC563F
SF11-03	MC563L
SF12-02	MC413F
SF12-03	MC413L,P
SF13-02	MC463F
SF13-03	MC463L,P
SF20-02	MC514F
SF20-03	MC514L
SF21-02	MC564F
SF21-03	MC564L
SF22-02	MC414F
SF22-03	MC414L,P
SF23-02	MC464F
SF23-03	MC464L,P
SF30-02	MC521F
SF30-03	MC521L
SF31-02	MC571F
SF31-03	MC571L
SF32-02	MC421F
SF32-03	MC421L,P
SF33-02	MC471F
SF33-03	MC471L,P
SF50-02	MC515F
SF50-03	MC515L
SF51-02	MC565F
SF51-03	MC565L
SF52-02	MC415F
SF52-03	MC415L,P
SF53-02	MC465F
SF53-03	MC465L,P
SF60-02	MC516F
SF60-03	MC516L
SF61-02	MC566F
SF61-03	MC566L
SF62-02	MC416F
SF62-03	MC416L,P
SF63-02	MC466F
SF63-03	MC466L,P
SF100-02	MC523F
SF100-03	MC523L
SF101-02	MC573F
SF101-03	MC573L
SF102-02	MC423F
SF102-03	MC423L,P
SF103-02	MC473F
SF103-03	MC473L,P

Part Number	Motorola Direct Replacement
Sylvania (cont.)	
SF110-02	MC524F
SF110-03	MC524L
SF111-02	MC574F
SF111-03	MC574L
SF112-02	MC424F
SF112-03	MC424L,P
SF113-02	MC474F
SF113-03	MC474L,P
SF120-02	MC2123F
SF120-03	MC2123L
SF121-02	MC2173F
SF121-03	MC2173L
SF122-02	MC2023F
SF122-03	MC2023L,P
SF123-02	MC2073F
SF123-03	MC2073L,P
SF130-02	MC2124F
SF130-03	MC2124L
SF131-02	MC2174F
SF131-03	MC2174L
SF132-02	MC2024F
SF132-03	MC2024L,P
SF133-02	MC2074F
SF133-03	MC2074L,P
SF200-02	MC2125F
SF200-03	MC2125L
SF201-02	MC2175F
SF201-03	MC2175L
SF202-02	MC2025F
SF202-03	MC2025L,P
SF203-02	MC2075F
SF203-03	MC2075L,P
SF210-02	MC2126F
SF210-03	MC2126L
SF211-02	MC2176F
SF211-03	MC2176L
SF212-02	MC2026F
SF212-03	MC2026L,P
SF213-02	MC2076F
SF213-03	MC2076L,P
SF250-02	MC2109F
SF250-03	MC2109L
SF251-02	MC2159F
SF251-03	MC2159L
SF252-02	MC2009F
SF252-03	MC2009L,P
SF253-02	MC2059F
SF253-03	MC2059L,P
SF260-02	MC2110F
SF260-03	MC2110L
SF261-02	MC2160F
SF261-03	MC2160L
SF262-02	MC2010F
SF262-03	MC2010L,P
SF263-02	MC2060F
SF263-03	MC2060L,P
SG40-02	MC500F
SG40-03	MC500L
SG41-02	MC550F
SG41-03	MC550L
SG42-02	MC400F
SG42-03	MC400L,P
SG43-02	MC450F
SG43-03	MC450L,P
SG50-02	MC501F
SG50-03	MC501L
SG51-02	MC551F

‡ 4-Wide 2-2-2-3 Input Gate; MC7453/5453 has open pins where N8448/S8448 has third input of 3-input gate; all other pins the same.

MTTL (cont.)

Part Number	Motorola Direct Replacement
Sylvania (cont.)	
SG51-03	MC551L
SG52-02	MC401F
SG52-03	MC401L,P
SG53-02	MC451F
SG53-03	MC451L,P
SG60-02	MC502F
SG60-03	MC502L
SG61-02	MC552F
SG61-03	MC552L
SG62-02	MC402F
SG62-03	MC402L,P
SG63-02	MC452F
SG63-03	MC452L,P
SG70-02	MC520F
SG70-03	MC520L
SG71-02	MC570F
SG71-03	MC570L
SG72-02	MC420F
SG72-03	MC420L,P
SG73-02	MC470F
SG73-03	MC470L,P
SG80-02	MC526F
SG80-03	MC526L
SG81-02	MC576F
SG81-03	MC576L
SG82-02	MC426F
SG82-03	MC426L,P
SG83-02	MC476F
SG83-03	MC476L,P
SG90-02	MC503F
SG90-03	MC503L
SG91-02	MC553F
SG91-03	MC553L
SG92-02	MC403F
SG92-03	MC403L,P
SG93-02	MC453F
SG93-03	MC453L,P
SG100-02	MC504F
SG100-03	MC504L
SG101-02	MC554F
SG101-03	MC554L
SG102-02	MC404F
SG102-03	MC404L,P
SG103-02	MC454F
SG103-03	MC454L,P
SG110-02	MC505F
SG110-03	MC505L
SG111-02	MC555F
SG111-03	MC555L
SG112-02	MC405F
SG112-03	MC405L,P
SG113-02	MC455F
SG113-03	MC455L,P
SG120-02	MC506F
SG120-03	MC506L
SG121-02	MC556F
SG121-03	MC556L
SG122-02	MC406F
SG122-03	MC406L,P
SG123-02	MC456F
SG123-03	MC456L,P
SG130-02	MC507F
SG130-03	MC507L
SG131-02	MC557F
SG131-03	MC557L
SG132-02	MC407F
SG132-03	MC407L,P

Part Number	Motorola Direct Replacement
Sylvania (cont.)	
SG133-02	MC457F
SG133-03	MC457L,P
SG140-02	MC508F
SG140-03	MC508L
SG141-02	MC558F
SG141-03	MC558L
SG142-02	MC408F
SG142-03	MC408L,P
SG143-02	MC458F
SG143-03	MC458L,P
SG150-02	MC509F
SG150-03	MC509L
SG151-02	MC559F
SG151-03	MC559L
SG152-02	MC409F
SG152-03	MC409L,P
SG153-02	MC459F
SG153-03	MC459L,P
SG160-02	MC519F
SG160-03	MC519L
SG161-02	MC569F
SG161-03	MC569L
SG162-02	MC419F
SG162-03	MC419L,P
SG163-02	MC469F
SG163-03	MC469L,P
SG170-02	MC510F
SG170-03	MC510L
SG171-02	MC560F
SG171-03	MC560L
SG172-02	MC410F
SG172-03	MC410L,P
SG173-02	MC460F
SG173-03	MC460L,P
SG180-02	MC511F
SG180-03	MC511L
SG181-02	MC561F
SG181-03	MC561L
SG182-02	MC411F
SG182-03	MC411L,P
SG183-02	MC461F
SG183-03	MC461L,P
SG190-02	MC512F
SG190-03	MC512L
SG191-02	MC562F
SG191-03	MC562L
SG192-02	MC412F
SG192-03	MC412L,P
SG193-02	MC462F
SG193-03	MC462L,P
SG200-02	MC2111F
SG200-03	MC2111L
SG201-02	MC2161F
SG201-03	MC2161L
SG202-02	MC2011F
SG202-03	MC2011L,P
SG203-02	MC2061F
SG203-03	MC2061L,P
SG210-02	MC2100F
SG210-03	MC2100L
SG211-02	MC2150F
SG211-03	MC2150L
SG212-02	MC2000F
SG212-03	MC2000L,P
SG213-02	MC2050F
SG213-03	MC2050L,P
SG220-02	MC2101F

Part Number	Motorola Direct Replacement
Sylvania (cont.)	
SG220-03	MC2101L
SG221-02	MC2151F
SG221-03	MC2151L
SG222-02	MC2001F
SG222-03	MC2001L,P
SG223-02	MC2051F
SG223-03	MC2051L,P
SG230-02	MC2102F
SG230-03	MC2102L
SG231-02	MC2152F
SG231-03	MC2152L
SG232-02	MC2002F
SG232-03	MC2002L,P
SG233-02	MC2052F
SG233-03	MC2052L,P
SG240-02	MC2103F
SG240-03	MC2103L
SG241-02	MC2153F
SG241-03	MC2153L
SG242-02	MC2003F
SG242-03	MC2003L,P
SG243-02	MC2053F
SG243-03	MC2053L,P
SG250-02	MC2104F
SG250-03	MC2104L
SG251-02	MC2154F
SG251-03	MC2154L
SG252-02	MC2004F
SG252-03	MC2004L,P
SG253-02	MC2054F
SG253-03	MC2054L,P
SG260-02	MC2105F
SG260-03	MC2105L
SG261-02	MC2155F
SG261-03	MC2155L
SG262-02	MC2005F
SG262-03	MC2005L,P
SG263-02	MC2055F
SG263-03	MC2055L,P
SG270-02	MC2106F
SG270-03	MC2106L
SG271-02	MC2156F
SG271-03	MC2156L
SG272-02	MC2006F
SG272-03	MC2006L,P
SG273-02	MC2056F
SG273-03	MC2056L,P
SG280-02	MC527F
SG280-03	MC527L
SG281-02	MC577F
SG281-03	MC577L
SG282-02	MC427F
SG282-03	MC427L,P
SG283-02	MC477F
SG283-03	MC477L,P
SG300-02	MC2112F
SG300-03	MC2112L
SG301-02	MC2162F
SG301-03	MC2162L
SG302-02	MC2012F
SG302-03	MC2012L,P
SG303-02	MC2062F
SG303-03	MC2062L,P
SG310-02	MC2113F
SG310-03	MC2113L
SG311-02	MC2163F
SG311-03	MC2163L

MTTL (cont.)

Part Number	Motorola Direct Replacement
Sylvania (cont.)	
SG312-02	MC2013F
SG312-03	MC2013L,P
SG313-02	MC2063F
SG313-03	MC2063L,P
SG320-02	MC2107F
SG320-03	MC2107L
SG321-02	MC2157F
SG321-03	MC2157L
SG322-02	MC2007F
SG322-03	MC2007L,P
SG323-02	MC2057F
SG323-03	MC2057L,P
Texas Instruments	
SN54H00J	MC3100L
SN54H01J	MC3104L
SN54H10J	MC3105L
SN54H11J	MC3106L
SN54H20J	MC3110L
SN54H21J	MC3111L
SN54H22J	MC3112L
SN54H40J	MC3125L#
SN54H50J	MC3120L
SN54H60J	MC3130L
SN5400	MC5400F
SN5400J	MC5400L
SN5401	MC5401F
SN5401J	MC5401L
SN5402	MC5402F
SN5402J	MC5402L
SN5404	MC5404F
SN5404J	MC5404L
SN5405	MC5405F
SN5405J	MC5405L
SN5410	MC5410F
SN5410J	MC5410L
SN5420	MC5420F
SN5420J	MC5420L
SN5430	MC5430F
SN5430J	MC5430L
SN5440	MC5440F
SN5440J	MC5440L
SN5441AJ	MC5441AL
SN5450	MC5450F
SN5450J	MC5450L
SN5451	MC5451F
SN5451J	MC5451L
SN5453	MC5453F
SN5453J	MC5453L
SN5454	MC5454F
SN5454J	MC5454L
SN5460	MC5460F
SN5460J	MC5460L
SN5472	MC5472F
SN5472J	MC5472L
SN5473	MC5473F
SN5473J	MC5473L
SN5474	MC5474F
SN5474J	MC5474L
SN5475	MC5475F
SN5475J	MC5475L
SN5476	MC5476F
SN5476J	MC5476L
SN5482J	MC15482L
SN5493J	MC5493L
SN74H00J	MC3000L
SN74H00N	MC3000P

Part Number	Motorola Direct Replacement
Texas Instruments (cont.)	
SN74H01J	MC3004L
SN74H01N	MC3004P
SN74H10J	MC3005L
SN74H10N	MC3005P
SN74H11J	MC3006L
SN74H11N	MC3006P
SN74H20J	MC3010L
SN74H20N	MC3010P
SN74H21J	MC3011L
SN74H21N	MC3011P
SN74H22J	MC3012L
SN74H22N	MC3012P
SN74H40J	MC3025L#
SN74H40N	MC3025P#
SN74H50J	MC3020L
SN74H50N	MC3020P
SN74H60J	MC3030L
SN74H60N	MC3030P
SN7400	MC7400F
SN7400J	MC7400L
SN7400N	MC7400P
SN7401	MC7401F
SN7401J	MC7401L
SN7401N	MC7401P
SN7402	MC7402F
SN7402J	MC7402L
SN7402N	MC7402P
SN7404	MC7404F
SN7404J	MC7404L
SN7404N	MC7404P
SN7405	MC7405F
SN7405J	MC7405L
SN7405N	MC7405P
SN7410	MC7410F
SN7410J	MC7410L
SN7410N	MC7410P
SN7420	MC7420F
SN7420J	MC7420L
SN7420N	MC7420P
SN7430	MC7430F
SN7430J	MC7430L
SN7430N	MC7430P
SN7440	MC7440F
SN7440J	MC7440L
SN7440N	MC7440P
SN7441AJ	MC7441AL
SN7450	MC7450F
SN7450J	MC7450L
SN7450N	MC7450P
SN7451	MC7451F
SN7451J	MC7451L
SN7451N	MC7451P
SN7453	MC7453F
SN7453J	MC7453L
SN7453N	MC7453P
SN7454	MC7454F
SN7454J	MC7454L
SN7454N	MC7454P
SN7460	MC7460F
SN7460J	MC7460L
SN7460N	MC7460P
SN7472	MC7472F
SN7472J	MC7472L
SN7472N	MC7472P
SN7473	MC7473F
SN7473J	MC7473L
SN7473N	MC7473P
SN7474	MC7474F

Part Number	Motorola Direct Replacement
Texas Instruments (cont.)	
SN7474J	MC7479L
SN7474N	MC7479P
SN7475J	MC7475L
SN7475N	MC7475P
SN7476J	MC7476L
SN7476N	MC7476P
SN7481	MC4004
SN7482J	MC17482L
SN7493J	MC7493L
Transitron	
TF20F	MC514F
TF20P	MC514L
TF21F	MC564F
TF21P	MC564L
TF22F	MC414F
TF22P	MC414L,P
TF23F	MC464F
TF23P	MC464L,P
TF50F	MC515F
TF50P	MC515L
TF51F	MC565F
TF51P	MC565L
TF52F	MC415F
TF52P	MC415L,P
TF53F	MC465F
TF53P	MC465L,P
TF60F	MC516F
TF60P	MC516L
TF61F	MC566F
TF61P	MC566L
TF62F	MC416F
TF62P	MC416L,P
TF63F	MC466F
TF63P	MC416L,P
TF100F	MC523F
TF100P	MC523L
TF101F	MC573F
TF101P	MC573L
TF102F	MC423F
TF102P	MC423L,P
TF103F	MC473F
TF103P	MC473L,P
TF110F	MC524F
TF110P	MC524L
TF111F	MC574F
TF111P	MC574L
TF112F	MC424F
TF112P	MC424L,P
TF113F	MC474F
TF113P	MC474L,P
TF120F	MC2123F
TF120P	MC2123L
TF121F	MC2173F
TF121P	MC2173L
TF122F	MC2023F
TF122P	MC2023L,P
TF123F	MC2073F
TF123P	MC2073L,P
TF130F	MC2124F
TF130P	MC2124L
TF131F	MC2174F
TF131P	MC2174L
TF132F	MC2024F
TF132P	MC2024L,P

I_{OL} = 38 mAdc for MC3125/MC3025, 48 mAdc for SN54H40/SN74H40.

MTTL (cont.)

Part Number	Motorola Direct Replacement
Transitron (cont.)	
TF133F	MC2074F
TF133P	MC2074L,P
TF250F	MC2109F
TF250P	MC2109L
TF251F	MC2159F
TF251P	MC2159L
TF252F	MC2009F
TF252P	MC2009L,P
TF253F	MC2059F
TF253P	MC2059L,P
TF260F	MC2110F
TF260P	MC2110L
TF261F	MC2160F
TF261P	MC2160L
TF262F	MC2010F
TF262P	MC2010L,P
TF263F	MC2060F
TF263P	MC2060L,P
TF7472E	MC7472P
TF7473E	MC7473P
TF7474E	MC7479P
TG40F	MC500F
TG40P	MC500L
TG41F	MC550F
TG41P	MC550L
TG42F	MC400F
TG42P	MC400L,P
TG43F	MC450F
TG43P	MC450L,P
TG50F	MC501F
TG50P	MC501L
TG51F	MC551F
TG51P	MC551L
TG52F	MC401F
TG52P	MC401L,P
TG53F	MC451F
TG53P	MC451L,P
TG60F	MC502F
TG60P	MC502L
TG61F	MC552F
TG61P	MC552L
TG62F	MC402F
TG62P	MC402L,P
TG63F	MC452F
TG63P	MC452L,P
TG70F	MC520F
TG70P	MC520L
TG71F	MC470F
TG71P	MC570L
TG72F	MC420F
TG72P	MC420L,P
TG73F	MC470F
TG73P	MC470L,P
TG80F	MC526F
TG80P	MC526L
TG81F	MC576F
TG81P	MC576L
TG82F	MC426F
TG82P	MC426L,P
TG83F	MC476F
TG83P	MC476L,P
TG90F	MC503F
TG90P	MC503L
TG91F	MC553F
TG91P	MC553L
TG92F	MC403F
TG92P	MC403L,P

Part Number	Motorola Direct Replacement
Transitron (cont.)	
TG93F	MC453F
TG93P	MC453L,P
TG100F	MC504F
TG100P	MC504L
TG101F	MC554F
TG101P	MC554L
TG102F	MC404F
TG102P	MC404L,P
TG103F	MC454F
TG103P	MC454L,P
TG110F	MC505F
TG110P	MC505L
TG111F	MC555F
TG111P	MC555L
TG112F	MC405F
TG112P	MC405L,P
TG113F	MC455F
TG113P	MC455L,P
TG120F	MC506F
TG120P	MC506L
TG121F	MC556F
TG121P	MC556L
TG122F	MC406F
TG122P	MC406L,P
TG123F	MC456F
TG123P	MC456L,P
TG130F	MC507F
TG130P	MC507L
TG131F	MC557F
TG131P	MC557L
TG132F	MC407F
TG132P	MC407L,P
TG133F	MC457F
TG133P	MC457L,P
TG140F	MC508F
TG140P	MC508L
TG141F	MC558F
TG141P	MC558L
TG142F	MC408F
TG142P	MC408L,P
TG143F	MC458F
TG143P	MC458L,P
TG151F	MC509F
TG151P	MC509L
TG153F	MC409F
TG153P	MC409L,P
TG17/F	MC510F
TG17/P	MC510L
TG173F	MC410F
TG173P	MC410L,P
TG18/F	MC511F
TG18/P	MC511L
TG183F	MC411F
TG183P	MC411L,P
TG190F	MC512F
TG190P	MC512L
TG191F	MC562F
TG191P	MC562L
TG192F	MC412F
TG192P	MC412L,P
TG193F	MC462F
TG193P	MC462L,P
TG210F	MC2100F
TG210P	MC2100L
TG211F	MC2150F
TG211P	MC2150L
TG212F	MC2000F

Part Number	Motorola Direct Replacement
Transitron (cont.)	
TG212P	MC2000L,P
TG213F	MC2050F
TG213P	MC2050L,P
TG220F	MC2101F
TG220P	MC2101L
TG221F	MC2151F
TG221P	MC2151L
TG222F	MC2001F
TG222P	MC2001L,P
TG223F	MC2051F
TG223P	MC2051L,P
TG231F	MC2102F
TG231P	MC2102L
TG233F	MC2002F
TG233P	MC2002L,P
TG240F	MC2103F
TG240P	MC2103L
TG241F	MC2153F
TG241P	MC2153L
TG242F	MC2003F
TG242P	MC2003L,P
TG243F	MC2053F
TG243P	MC2053L,P
TG250F	MC2104F
TG250P	MC2104L
TG251F	MC2154F
TG251P	MC2154L
TG252F	MC2004F
TG252P	MC2004L,P
TG253F	MC2054F
TG253P	MC2054L,P
TG260F	MC2105F
TG260P	MC2105L
TG261F	MC2155F
TG261P	MC2155L
TG262F	MC2005F
TG262P	MC2005L,P
TG263F	MC2055F
TG263P	MC2055L,P
TG271F	MC2106F
TG271P	MC2106L
TG273F	MC2006F
TG273P	MC2006L,P
TG280F	MC527F
TG280P	MC527L
TG281F	MC577F
TG281P	MC577L
TG282F	MC427F
TG282P	MC427L,P
TG283F	MC477F
TG283P	MC477L,P
TG300F	MC2112F
TG300P	MC2112L
TG301F	MC2162F
TG301P	MC2162L
TG302F	MC2012F
TG302P	MC2012L,P
TG303F	MC2062F
TG303P	MC2062L,P
TG310F	MC2113F
TG310P	MC2113L
TG311F	MC2163F
TG311P	MC2163L
TG312F	MC2013F
TG312P	MC2013L,P
TG313F	MC2063F
TG313P	MC2063L,P

MTTL (cont.)

Part Number	Motorola Direct Replacement
Transitron (cont.)	
TG7400E	MC7400P
TG7401E	MC7401P
TG7402E	MC7402P
TG7410E	MC7410P
TG7420E	MC7420P
TG7430E	MC7430P
TG7440E	MC7440P
TG7450E	MC7450P
TG7451E	MC7451P
TG7453E	MC7453P
TG7454E	MC7454P
TG7460E	MC7460P
Westinghouse	
6F120G	MC2123F
6F120K	MC2123L
6F121G	MC2173F
6F121K	MC2173L
6F122G	MC2023F
6F122K	MC2023L
6F123G	MC2073F
6F123K	MC2073L
6F130G	MC2124F
6F130K	MC2124L
6F131G	MC2174F
6F131K	MC2174L
6F132G	MC2024F
6F132K	MC2024L
6F133G	MC2074F
6F133K	MC2074L
6F200G	MC2125F
6F200K	MC2125L
6F201G	MC2175F
6F201K	MC2175L
6F202G	MC2025F
6F202K	MC2025L
6F203G	MC2075F
6F203K	MC2075L
6F210G	MC2126F
6F210K	MC2126L
6F211G	MC2176F
6F211K	MC2176L
6F212G	MC2026F
6F212K	MC2026L
6F213G	MC2076F
6F213K	MC2076L
6F250G	MC2109F
6F250K	MC2109L
6F251G	MC2159F
6F251K	MC2159L
6F252G	MC2009F
6F252K	MC2009L
6F253G	MC2059F
6F253K	MC2059L
6F260G	MC2110F
6F260K	MC2110L
6F261G	MC2160F
6F261K	MC2160L
6F262G	MC2010F
6F262K	MC2010L
6F263G	MC2060F
6F263K	MC2060L
6G200G	MC2111F
6G200K	MC2111L
6G201G	MC2161F

Part Number	Motorola Direct Replacement
Westinghouse (cont.)	
6G201K	MC2161L
6G202G	MC2011F
6G202K	MC2011L
6G203G	MC2061F
6G203K	MC2061L
6G210G	MC2100F
6G210K	MC2100L
6G211G	MC2150F
6G211K	MC2150L
6G212G	MC2000F
6G212K	MC2000L
6G213G	MC2050F
6G213K	MC2050L
6G220G	MC2101F
6G220K	MC2101L
6G221G	MC2151F
6G221K	MC2151L
6G222G	MC2001F
6G222K	MC2001L
6G223G	MC2051F
6G223K	MC2051L
6G230G	MC2102F
6G230K	MC2102L
6G231G	MC2152F
6G231K	MC2152L
6G232G	MC2002F
6G232K	MC2002L
6G233G	MC2052F
6G233K	MC2052L
6G240G	MC2103F
6G240K	MC2103L
6G241G	MC2153F
6G241K	MC2153L
6G242G	MC2003F
6G242K	MC2003L
6G243G	MC2053F
6G243K	MC2053L
6G250G	MC2104F
6G250K	MC2104L
6G251G	MC2154F
6G251K	MC2154L
6G252G	MC2004F
6G252K	MC2004L
6G253G	MC2054F
6G253K	MC2054L
6G260G	MC2105F
6G260K	MC2105L
6G261G	MC2155F
6G261K	MC2155L
6G262G	MC2005F
6G262K	MC2005L
6G263G	MC2055F
6G263K	MC2055L
6G270G	MC2106F
6G270K	MC2106L
6G271G	MC2156F
6G271K	MC2156L
6G272G	MC2006F
6G272K	MC2006L
6G273G	MC2056F
6G273K	MC2056L
6G280G	MC527F
6G280K	MC527L
6G281G	MC577F
6G281K	MC577L
6G282G	MC427F
6G282K	MC427L

Part Number	Motorola Direct Replacement
Westinghouse (cont.)	
6G283G	MC477F
6G283K	MC477L
6G300G	MC2112F
6G300K	MC2112L
6G301G	MC2162F
6G301K	MC2162L
6G302G	MC2012F
6G302K	MC2012L
6G303G	MC2062F
6G303K	MC2062L
6G310G	MC2113F
6G310K	MC2113L
6G311G	MC2163F
6G311K	MC2163L
6G312G	MC2013F
6G312K	MC2013L
6G313G	MC2063F
6G313K	MC2063F

MDTL

Fairchild	
U31909351X	MC953F
U31909359X	MC853F
U31909451X	MC956F
U31909459X	MC856F
U31909751X	MC955F
U31909759X	MC855F
U31909951X	MC952F
U31909959X	MC852F
U31911151X	MC1916F
U31911159X	MC1816F
U31993051X	MC930F
U31993059X	MC830F
U31993151X	MC931F
U31993159X	MC831F
U31993251X	MC932F
U31993259X	MC832F
U31993351X	MC933F
U31993359X	MC833F
U31993551X	MC935F
U31993559X	MC835F
U31993651X	MC936F
U31993659X	MC836F
U31993751X	MC937F
U31993759X	MC837F
U31994451X	MC944F
U31994459X	MC844F
U31994551X	MC945F
U31994559X	MC845F
U31994651X	MC946F
U31994659X	MC846F
U31994851X	MC948F
U31994859X	MC848F
U31994951X	MC949F
U31994959X	MC849F
U31995051X	MC950F
U31995059X	MC850F
U31995151X	MC951F
U31995159X	MC851F
U31996151X	MC961F
U31996159X	MC861F
U31996251X	MC962F

MDTL (cont.)

Part Number	Motorola Direct Replacement
Fairchild (cont.)	
U31996259X	MC862F
U31996351X	MC963F
U31996359X	MC863F
U5F993051X	MC930G
U5F993059X	MC830G
U5F993151X	MC931G
U5F993159X	MC831G
U5F993259X	MC832G
U5F993351X	MC933G
U5F993359X	MC833G
U5F994451X	MC944G
U5F994459X	MC844G
U5F994551X	MC945G
U5F994559X	MC845G
U5F994651X	MC946G
U5F994659X	MC846G
U5F994851X	MC948G
U5F994859X	MC848G
U5F994951X	MC949G
U5F994959X	MC849G
U5F995051X	MC950G
U5F995059X	MC850G
U5F995151X	MC951G
U5F995159X	MC851G
U5F996151X	MC961G
U5F996159X	MC861G
U5F996251X	MC962G
U5F996259X	MC862G
U5F996351X	MC963G
U5F996359X	MC863G
U6A909359X	MC853P
U6A909459X	MC856P
U6A909759X	MC855P
U6A909959X	MC852P
U6A911159X	MC1816P
U6A993059X	MC830P
U6A993159X	MC831P
U6A993259X	MC832P
U6A993359X	MC833P
U6A993659X	MC836P
U6A993759X	MC837P
U6A994459X	MC844P
U6A994559X	MC845P
U6A994659X	MC846P
U6A994859X	MC848P
U6A994959X	MC849P
U6A995059X	MC850P
U6A995159X	MC851P
U6A996159X	MC861P
U6A996259X	MC862P
U6A996359X	MC863P
ITT	
MIC930-1B	MC930F
MIC930-1C	MC930G
MIC930-5B	MC830F
MIC930-5C	MC830G
MIC932-1B	MC932F
MIC932-1C	MC932G
MIC932-5B	MC832F
MIC932-5C	MC832G
MIC933-1B	MC933F
MIC933-1C	MC933G
MIC933-5B	MC833F
MIC933-5C	MC833G

Part Number	Motorola Direct Replacement
ITT (cont.)	
MIC936-1B	MC936F
MIC936-5B	MC836F
MIC937-1B	MC937F
MIC937-5B	MC837F
MIC944-1C	MC944F
MIC944-1B	MC944G
MIC944-5B	MC844F
MIC944-5C	MC844G
MIC945-1B	MC945F
MIC945-1C	MC945G
MIC945-5B	MC845F
MIC945-5C	MC845G
MIC946-1B	MC946F
MIC946-5B	MC846F
MIC948-1B	MC948F
MIC948-1C	MC948G
MIC948-5B	MC848F
MIC948-5C	MC848G
MIC949-1B	MC949F
MIC949-5B	MC849F
MIC950-1B	MC950F
MIC950-1C	MC950G
MIC950-5B	MC850F
MIC950-5C	MC850G
MIC951-1B	MC951F
MIC951-1C	MC951G
MIC951-5B	MC851F
MIC951-5C	MC851G
MIC961-1B	MC961F
MIC961-1C	MC961G
MIC961-5B	MC861F
MIC961-5C	MC861G
MIC962-1B	MC962F
MIC962-5B	MC862F
MIC963-1B	MC963F
MIC963-5B	MC863F
Philco	
PE9093	MC853P
PE9094	MC856P
PE9097	MC855P
PE9099	MC852P
PE9930	MC830P
PE9931	MC831P
PE9932	MC832P
PE9933	MC833P
PE9937	MC837P
PE9944	MC844P
PE9945	MC845P
PE9946	MC846P
PE9948	MC848P
PE9950	MC850P
PE9961	MC861P
PE9962	MC862P
PE9963	MC863P
PL909531	MC953F
PL909359	MC853F
PL909451	MC956F
PL909459	MC856F
PL909751	MC955F
PL909759	MC855F
PL909951	MC952F
PL909959	MC852F
PL993051	MC930F
PL993059	MC830F

Part Number	Motorola Direct Replacement
Philco (cont.)	
PL993151	MC931F
PL993159	MC831F
PL993251	MC932F
PL993259	MC832F
PL993351	MC933F
PL993359	MC833F
PL993651	MC936F
PL993659	MC836F
PL993751	MC937F
PL993759	MC837F
PL994451	MC944F
PL994459	MC844F
PL994551	MC945F
PL994559	MC845F
PL994651	MC946F
PL994659	MC846F
PL994851	MC948F
PL994859	MC848F
PL995051	MC950F
PL995059	MC850F
PL995151	MC951F
PL995159	MC851F
PL996151	MC961F
PL996159	MC861F
PL996251	MC962F
PL996259	MC862F
PL996351	MC963F
PL996359	MC863F
RCA	
CD2300/930	MC930F
CD2300E/830	MC830P
CD2301/961	MC961F
CD2301E/861	MC861P
CD2302/946	MC946F
CD2302E/846	MC846P
CD2303/949	MC949F
CD2303E/849	MC849P
CD2304/945	MC945F
CD2304E/845	MC845P
CD2305/948	MC948F
CD2305E/848	MC848P
CD2306/932	MC932F
CD2306E/832	MC832P
CD2307/944	MC944F
CD2307E/844	MC844P
CD2308/962	MC962F
CD2308E/862	MC862P
CD2309/963	MC963F
CD2309E/863	MC863P
CD2310/936	MC936F
CD2310E/836	MC836P
CD2311/937	MC937F
CD2311E/837	MC837P
CD2314/933	MC933F
CD2314E/833	MC833P
Raytheon	
RC930J	MC830F
RC930T	MC830G
RC932J	MC832F
RC932T	MC832G
RC933J	MC833F

MDTL (cont.)

Part Number	Motorola Direct Replacement
Raytheon (cont.)	
RC933T	MC833G
RC944J	MC844F
RC944T	MC844G
RC945J	MC845F
RC945T	MC845G
RC946J	MC846F
RC946T	MC846G
RC948J	MC848F
RC948T	MC848G
RC950J	MC850F
RC950T	MC850G
RC951J	MC851F
RC951T	MC851G
RC962J	MC862F
RC962T	MC862G
RC993J	MC853F
RC994J	MC856F
RC997J	MC855F
RC999J	MC852F
RM930J	MC930F
RM930T	MC930G
RM932J	MC932F
RM932T	MC932G
RM933J	MC933F
RM933T	MC933G
RM944J	MC944F
RM944T	MC944G
RM945J	MC945F
RM945T	MC945G
RM946J	MC946F
RM946T	MC946G
RM948J	MC948F
RM948T	MC948G
RM950J	MC950F
RM950T	MC950G
RM951J	MC951F
RM951T	MC951G
RM962J	MC962F
RM962T	MC962G
RM993J	MC953F
RM994J	MC956F
RM997J	MC955F
RM999J	MC952F
Stewart-Warner	
SW705-1F	MC953F
SW705-2F	MC853F
SW706-1F	MC952F
SW706-2F	MC852F
SW708-1F	MC956F
SW708-2F	MC856F
SW709-1F	MC955F
SW709-2F	MC855F
SW727-1F	MC947F
SW727-2F	MC847F
SW930-1F	MC930F
SW930-1T	MC930G
SW930-2F	MC830F
SW930-2T	MC830G
SW932-1F	MC932F
SW932-1T	MC932G
SW932-2F	MC832F
SW932-2T	MC832G
SW933-1F	MC933F
SW933-1T	MC933G

Part Number	Motorola Direct Replacement
Stewart-Warner (cont.)	
SW933-2F	MC833F
SW933-2T	MC833G
SW936-1F	MC936F
SW936-2F	MC836F
SW937-1F	MC937F
SW937-2F	MC837F
SW944-1F	MC944F
SW944-1T	MC944G
SW944-2F	MC844G
SW944-2T	MC844G
SW945-1F	MC945F
SW945-1T	MC945G
SW945-2F	MC845F
SW945-2T	MC845G
SW946-1F	MC946F
SW946-1T	MC946G
SW946-2F	MC846F
SW946-2T	MC846G
SW948-1F	MC948F
SW948-1T	MC948G
SW948-2F	MC848F
SW948-2T	MC848G
SW949-1F	MC949F
SW949-1T	MC949G
SW949-2F	MC849F
SW949-2T	MC849G
SW950-1F	MC950F
SW950-1T	MC950G
SW950-2F	MC850F
SW950-2T	MC850G
SW951-1F	MC951F
SW951-1T	MC951G
SW951-2F	MC851F
SW951-2T	MC851G
SW961-1F	MC961F
SW961-1T	MC961G
SW961-2F	MC861F
SW961-2T	MC861G
SW962-1F	MC962F
SW962-1T	MC962G
SW962-2F	MC862F
SW962-2T	MC862G
SW963-1F	MC963F
SW963-1T	MC963G
SW963-2F	MC863F
SW963-2T	MC863G
Sylvania	
S9301-02	MC930F
S9303-02	MC830F
S9311-02	MC931F
S9313-02	MC831F
S9321-02	MC932F
S9323-02	MC832F
S9331-02	MC933F
S9333-02	MC833F
S9441-02	MC944F
S9443-02	MC844F
S9451-02	MC945F
S9453-02	MC845F
S9461-02	MC946F
S9463-02	MC846F
S9481-02	MC948F
S9483-02	MC848F
S9621-02	MC962F

Part Number	Motorola Direct Replacement
Sylvania (cont.)	
S9623-02	MC862F
Texas Instruments	
SN15830	MC830F
SN15830N	MC830P
SN15831	MC831F
SN15831N	MC831P
SN15832	MC832F
SN15832N	MC832P
SN15833	MC833F
SN15833N	MC833P
SN15836	MC836F
SN15836N	MC836P
SN15837	MC837F
SN15837N	MC837P
SN15844	MC844F
SN15844N	MC844P
SN15845	MC845F
SN15845N	MC845P
SN15846	MC846F
SN15846N	MC846P
SN15848	MC848F
SN15848N	MC848P
SN15849	MC849F
SN15849N	MC849P
SN15850	MC850F
SN15850N	MC850P
SN15851	MC851F
SN15851N	MC851P
SN15861	MC861F
SN15861N	MC861P
SN15862	MC862F
SN15862N	MC862P
SN15863	MC863F
SN15863N	MC863P
SN15930	MC930F
SN15931	MC931F
SN15932	MC932F
SN15933	MC933F
SN15936	MC936F
SN15937	MC937F
SN15944	MC944F
SN15945	MC945F
SN15946	MC946F
SN15948	MC948F
SN15949	MC949F
SN15950	MC950F
SN15951	MC951F
SN15961	MC961F
SN15962	MC962F
SN15963	MC963F
SN158093	MC853F
SN158093N	MC853P
SN158094	MC856F
SN158094N	MC856P
SN158097	MC855F
SN158097N	MC855P
SN158099	MC852F
SN158099N	MC852P
SN159093	MC953F
SN159094	MC956F
SN159097	MC955F
SN159099	MC952F

DTL

Part Number	Motorola Direct Replacement
Signetics	
CS700G	MC207F
CS700K	MC207G
CS701G	MC208F
CS701K	MC208G
CS704G	MC210F
CS704K	MC210G
CS705G	MC215F
CS705K	MC215G
CS709G	MC217F
CS709K	MC217G
NE101G	MC251F
NE101K	MC251G
NE102G	MC252F
NE102K	MC252G
NE105G	MC253F
NE105K	MC253G
NE110G	MC254F
NE110K	MC254G
NE115G	MC256F
NE115K	MC256G
NE124G	MC259F
NE124K	MC259G
NE150G	MC255F
NE150K	MC255G
NE700G	MC257F
NE700K	MC257G
NE701G	MC258F
NE701K	MC258G
SE101G	MC201F
SE101K	MC201G
SE102G	MC202F
SE102K	MC202G
SE105G	MC203F
SE105K	MC203G
SE110G	MC204F
SE110K	MC204G
SE115G	MC206F
SE115K	MC206G
SE124G	MC209F
SE124K	MC209G
SE150G	MC205F
SE150K	MC205G

MRTL

Fairchild	
U3F990021X	MC900F
U3F990022X	MC800F
U3F990321X	MC903F
U3F990322X	MC803F
U3F990421X	MC904F
U3F990422X	MC804F
U3F990521X	MC905F
U3F990522X	MC805F
U3F990621X	MC906F
U3F990622X	MC806F
U3F990721X	MC907F
U3F990722X	MC807F
U3F991421X	MC914F
U3F991422X	MC814F
U3F991521X	MC915F
U3F991522X	MC815F
U3F992621X	MC926F

Part Number	Motorola Direct Replacement
Fairchild (cont.)	
U3F992622X	MC826F
U3F992721X	MC927F
U3F992722X	MC827F
U5B990029X	MC700G
U5B990121X	MC901G
U5B990122X	MC801G
U5B990229X	MC702G
U5B990329X	MC703G
U5B990421X	MC904G
U5B990422X	MC804G
U5B990429X	MC704G
U5B990521X	MC905G
U5B990522X	MC805G
U5B990529X	MC705G
U5B990621X	MC906G
U5B990622X	MC806G
U5B990721X	MC907G
U5B990722X	MC807G
U5B990729X	MC707G
U5B991421X	MC914G
U5B991422X	MC814G
U5B991429X	MC714G
U5B991621X	MC916G
U5B991622X	MC816G
U5B992329X	MC723G
U5B997421X	MC974G
U5B997422X	MC874G
U5B997429X	MC774G
U5C990321X	MC903G
U5C990322X	MC803G
U5D990021X	MC900G
U5D990022X	MC800G
U5D990221X	MC902G
U5D990222X	MC802G
U5F991521X	MC915G
U5F991522X	MC815G
U5F991529X	MC715G
U5F992621X	MC926G
U5F992622X	MC826G
U5F992629X	MC726G
U5F992721X	MC927G
U5F992722X	MC827G
U5F992729X	MC727G
U68996059X	MC9860P

Philco	
PL990021	MC900G,F
PL990121	MC901G,F
PL990221	MC902G,F
PL990321	MC903G,F
PL990421	MC904G,F
PL990429	MC704G,F
PL990521	MC905G,F
PL990621	MC906G,F
PL990721	MC907G,F
PL991421	MC914G,F
PL991521	MC915G,F
PL991621	MC916G,F
PL992321	MC916G,F
PL992621	MC926G,F

Solid State Scientific	
SD3720	MC814G

Part Number	Motorola Direct Replacement
Solid State Scientific (cont.)	
SD3721	MC815G
SD3722	MC826G
SD3723	MC800G

mW MRTL

Fairchild	
U3F990821X	MC908F
U3F990921X	MC909F
U3F991021X	MC910F
U3F991121X	MC911F
U3F991221X	MC912F
U3F991321X	MC913F
U3F992121X	MC921F
U5B990821X	MC908G
U5B990829X	MC808G
U5B990921X	MC909G
U5B990929X	MC809G
U5B991021X	MC910G
U5B991029X	MC710G
U5B991121X	MC911G
U5B991129X	MC811G
U5B991221X	MC912G
U5B991229X	MC812G
U5B991321X	MC913G
U5B991329X	MC813G
U5B992121X	MC921G
U5B992129X	MC721G

Philco	
PL990821	MC908G,F
PL990823	MC808G,F
PL990921	MC909G,F
PL990923	MC809G,F
PL991021	MC910G,F
PL991023	MC810G,F
PL991121	MC911G,F
PL991123	MC811G,F
PL991221	MC912G,F
PL991321	MC913G,F
PL991323	MC813G,F
PL992121	MC921G,F
PL992123	MC821G,F
PL993921	MC918G,F
PL993123	MC818G,F
PL994021	MC920G,F**
PL994029	MC720G,F**

Solid State Scientific	
SD3730	MC810G
SD3732	MC813G
SD3741	MC818P
SD3742	MC822P
SD3744	MC876P
SD3745	MC817P
SD3746	MC898P

**Not pin-for-pin replacement.

mW MRTL

Part Number	Motorola Direct Replacement
Texas Instruments	
SN17808L SN17809L SN17810L SN17811L	MC808G MC809G MC810G MC811G

Part Number	Motorola Direct Replacement
Texas Instruments (cont.)	
SN17812L SN17813L SN17908L SN17909L	MC812G MC813G MC908G MC909G

Part Number	Motorola Direct Replacement
Texas Instruments (cont.)	
SN17910L SN17911L SN17912L SN17913L	MC910G MC911G MC912G MC913G

LINEAR INTEGRATED CIRCUITS

Operational Amplifiers

Part Number	Motorola Direct Replacement
Amelco	
805 BE A13-215 A13-251	MC1533G* MC1531G* MC1530G*
Beckman	
821	MC1438R*
General Electric	
4JPA135	MC1531G*
Fairchild	
U3H771231X U3H771239X U31770929X U31770931X U5B770931X U5B770939X U5B771231X U5B771239X U5B7741312 U5B774131 U5B7741393	MC1712F MC1712CF MC1709CF MC1709F MC1709G MC1709CG MC1712G MC1712CG MCH1539G* MC1741G MC1741CG
National	
LH101 LM101 NH0002C	MCH1539G* MC1539G* MC1438R*
Philco	
PA70931 PA70931 PA70939 PA70939 PA71231 PA71231 PA71239 PA71239	MC1709F MC1709G MC1709CF MC1709CG MC1712F MC1712G MC1712CF MC1712CG

Part Number	Motorola Direct Replacement
RCA	
CA3008 CA3010 CA3015 CA3016 CA3022 CA3031	MC1430F* MC1430G* MC1430G* MC1430F* MC1709CG* MC1709G*
Raytheon	
RM702 RM702 RM702 RM702 RM709 RM709 RM709 RM709 RM709 RM4709	MC1712CF MC1712CG MC1712F MC1712G MC1709CF MC1709CG MC1709F MC1709G MC1437P*
Signetics	
NE505G NE505G NE505K NE505K SE505G SE505G SE505K SE505K	MC1430F* MC1431F* MC1430G* MC1431G* MC1530F* MC1531F* MC1530G* MC1531G*
Texas Instruments	
SN726 SN728 SN52702 SN52702L SN52709 SN52709L SN52709L SN72702 SN72702L SN72709 SN72709L	MC1430F* MC1431F* MC1712F MC1712G MC1709F MC1709G MC1712CF MC1712CG MC1709CF MC1709CG

Part Number	Motorola Direct Replacement
Westinghouse	
WS161Q WS174Q	MC1531F* MC1709F*

High-Frequency Amplifiers

Part Number	Motorola Direct Replacement
Fairchild	
SH9004 U5D770339X	MC1110G MC1550G*
Philco	
PA713 PA7601	MC1550G* MC1550G*
RCA	
CA3002 CA3003 CA3004 CA3014	MC1550G* MC1550G* MC1550G* MC1314G*
Signetics	
SE501K	MC1552G*
Texas Instruments	
SN5510L SN5510 SN5510	MC1510G MC1510F† MC1509F
Westinghouse	
WM1146T	MC1550G*

*Nearest equivalent

†Electrically interchangeable; pin-outs different

Sense Amplifiers

Part Number	Motorola Direct Replacement
Fairchild	
U3H771031X U3H771039X U3I771131X U5B771031X U5B771039X U5F771131X	MC1710F MC1710CF MC1711F MC1710G MC1710CG MC1711G
Philco	
PA71031 PA71031 PA71039 PA71039	MC1710F MC1710G MC1710CF MC1710CG
Raytheon	
RM710 RM710	MC1710CF MC1710CG

Part Number	Motorola Direct Replacement
Raytheon (cont.)	
RM710 RM710	MC1710F MC1710G
Sylvania	
SA-10	MC1540F *
Texas Instruments	
SN5500 SN52710 SN52710L SN72710 SN72710L	MC1540F * MC1710F MC1710G MC1710CF MC1710CG

Consumer Products

Part Number	Motorola Direct Replacement
AmpereX	
TAA450 TAA640	MC1351P* MC1351P*
Fairchild *	
μ A717 μ A718 μ A719	MC1351P* MC1351P* MC1351P*
RCA	
CA3042	MC1351P*
Sprague	
ULN2116 ULN2117	MC1351P* MC1351P*

*Nearest equivalent