

Component-Level Information Packet
for 08590-60192, 08590-60193, & 08593-60021
Third Converter for HP 8590B, HP 8591A, HP 8592B,
HP 8594A, and HP 8595A

Copyright © 1991 Hewlett-Packard Company

All Rights Reserved.
Reproduction, adaptation, or translation
without prior written permission
is prohibited, except as allowed
under the copyright laws.

HP Document Part Number 08590-90146

Printed September 1990

Printed in USA



**HEWLETT
PACKARD**

HP Part Number 08590-60192
Third Converter

| Reference Designation | HP Part Number | C D | Qty | Description | Mfr Code | Mfr Part Number |
|-----------------------|----------------|-----|-----|-----------------------|----------|-----------------|
| C1 | 0160-4799 | 2 | 1 | CAP-FXD 2.2pF 100 V | 02010 | MA101A2R2CAAH |
| C2 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C3 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C4 | 0160-4382 | 9 | 1 | CAP-FXD 3.3pF 200 V | 06352 | FD12C0G2D3R3C |
| C5 | 0160-4790 | 3 | 1 | CAP-FXD 12pF 100 V | 02010 | SA102A120JAAH |
| C6 | 0160-4790 | 3 | 1 | CAP-FXD 12pF 100 V | 02010 | SA102A120JAAH |
| C7 | 0160-4790 | 3 | 1 | CAP-FXD 12pF 100 V | 02010 | SA102A120JAAH |
| C8 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C9 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C10 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C11 | 0160-4795 | 8 | 1 | CAP-FXD 4.7pF 100 V | 02010 | SA102A4R7DAAH |
| C12 | 0160-4790 | 3 | 1 | CAP-FXD 12pF 100 V | 02010 | SA102A120JAAH |
| C13 | 0160-4793 | 6 | 1 | CAP-FXD 6.8pF 100 V | 02010 | SA102A6R8DAAH |
| C14 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C15 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C16 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C17 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C18 | 0160-4801 | 7 | 1 | CAP-FXD 100pF 100 V | 02010 | SA102A101JAAH |
| C19 | 0180-4130 | 7 | 1 | CAP-FXD 2.2uF 20 V TA | 04200 | 173D225X9020V |
| C20 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C21 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C22 | 0160-4805 | 1 | 1 | CAP-FXD 47pF 100 V | 02010 | SA102A470JAAH |
| C23 | 0160-4805 | 1 | 1 | CAP-FXD 47pF 100 V | 02010 | SA102A470JAAH |
| C24 | 0160-4805 | 1 | 1 | CAP-FXD 47pF 100 V | 02010 | SA102A470JAAH |
| C25 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C26 | 0160-4799 | 2 | 1 | CAP-FXD 2.2pF 100 V | 02010 | MA101A2R2CAAH |
| C27 | 0180-4132 | 9 | 1 | CAP-FXD 6.8uF 35 V TA | 04200 | 173D685X9035X |
| C28 | 0160-4822 | 2 | 1 | CAP-FXD 1000pF 100 V | 02010 | SA201A102JAAH |
| C29 | 0180-4130 | 7 | 1 | CAP-FXD 2.2uF 20 V TA | 04200 | 173D225X9020V |
| C30 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C31 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C32 | 0160-4389 | 6 | 1 | CAP-FXD 100pF 200 V | 02010 | SR202A101JAAH |
| C34 | 0180-4134 | 1 | 1 | CAP-FXD 22uF 15 V TA | 04200 | 173D226X9015X |
| C36 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C37 | 0160-4554 | 7 | 1 | CAP-FXD 0.01uF 50 V | 02010 | SA105C103MAAH |
| C38 | 0160-4523 | 0 | 1 | CAP-FXD 16pF 200 V | 06352 | FD12C0G2D160J |
| C39 | 0160-4574 | 1 | 1 | CAP-FXD 1000pF 100 V | 02010 | SA101C102KAAH |
| C41 | 0160-4798 | 1 | 1 | CAP-FXD 2.7pF 100 V | 02010 | MA101A2R7CAA |
| C43 | 0160-4795 | 8 | 1 | CAP-FXD 4.7pF 100 V | 02010 | SA102A4R7DAAH |
| C44 | 0121-0444 | 4 | 1 | CAP-VAR 9pF 3pF 160 V | 01468 | 302-450-204 |
| C45 | 0160-4795 | 8 | 1 | CAP-FXD 4.7pF 100 V | 02010 | SA102A4R7DAAH |
| C46 | 0121-0444 | 4 | 1 | CAP-VAR 9pF 3pF 160 V | 01468 | 302-450-204 |
| C47 | 0121-0444 | 4 | 1 | CAP-VAR 9pF 3pF 160 V | 01468 | 302-450-204 |
| C48 | 0160-4796 | 9 | 1 | CAP-FXD 3.9pF 100 V | 02010 | SA101A3R9CAAH |
| C49 | 0160-3872 | 0 | 1 | CAP-FXD 2.2pF 200 V | 06352 | FD12C0G2D2R2C |
| C50 | 0160-4809 | 5 | 1 | CAP-FXD 390pF 100 V | 02010 | SA101A391JAAH |
| C51 | 0160-5348 | 9 | 1 | CAP-FXD 51pF 100 V | 02010 | SA102A510JAAH |
| C52 | 0160-3873 | 1 | 1 | CAP-FXD 4.7pF 200 V | 06352 | FD12C0G2D4R7D |

**Indicates factory-selected value*

HP Part Number 08590-60192
Third Converter

| Reference Designation | HP Part Number | C D | Qty | Description | Mfr Code | Mfr Part Number |
|-----------------------|----------------|-----|-----|--|----------|-----------------|
| C53 | 0160-5413 | 9 | 1 | CAP-FXD 160pF 100 V | 02010 | SA101A161JAAH |
| C54 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C55 | 0160-5422 | 0 | 1 | CAP-FXD 0.047uF 50 V | 02010 | SA205C473MAAH |
| C56 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C57 | 0160-4831 | 3 | 1 | CAP-FXD 4700pF 100 V | 02010 | SA101C472KAAH |
| C58 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C59 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C61 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C62 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C63 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C64 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C65 | 0160-4535 | 4 | 1 | CAP-FXD 1uF 50 V | 02010 | SR305C105KAAH |
| C66 | 0160-3873 | 1 | 1 | CAP-FXD 4.7pF 200 V | 06352 | FD12C0G2D4R7D |
| C67 | 0160-3873 | 1 | 1 | CAP-FXD 4.7pF 200 V | 06352 | FD12C0G2D4R7D |
| C68 | 0160-4383 | 0 | 1 | CAP-FXD 6.8pF 200 V | 06352 | FD12C0G2D6R8D |
| C69 | 0160-4490 | 0 | 1 | CAP-FXD 1.8pF 200 V | 06352 | FD12C0G2D1R8C |
| C70 | 0160-4801 | 7 | 1 | CAP-FXD 100pF 100 V | 02010 | SA102A101JAAH |
| C71 | 0160-5422 | 0 | 1 | CAP-FXD 0.047uF 50 V | 02010 | SA205C473MAAH |
| C72 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C73 | 0160-4380 | 7 | 1 | CAP-FXD 1pF 200 V | 06352 | FD11C0K2D1R0C |
| C74 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C75 | 0160-4382 | 9 | 1 | CAP-FXD 3.3pF 200 V | 06352 | FD12C0G2D3R3C |
| C76 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C77 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C78 | 0160-4790 | 3 | 1 | CAP-FXD 12pF 100 V | 02010 | SA102A120JAAH |
| C79 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C80 | 0160-4383 | 0 | 1 | CAP-FXD 6.8pF 200 V | 06352 | FD12C0G2D6R8D |
| CR1 | 0122-0161 | 4 | 1 | DIODE-VVC 2.15PF 7% BVR=30V | 03334 | BB405B |
| CR2 | 1901-1070 | 9 | 1 | DIODE-PIN 110V | 02062 | |
| J1 | 1252-2816 | 6 | 1 | | 01380 | 5-87729-6 |
| J2 | 1250-1955 | 8 | 1 | CONNECTOR-RF SMB M PC 50-OHM | 02788 | 5164-5008-09 |
| J3 | 1250-1955 | 8 | 1 | CONNECTOR-RF SMB M PC 50-OHM | 02788 | 5164-5008-09 |
| J4 | 1250-1955 | 8 | 1 | CONNECTOR-RF SMB M PC 50-OHM | 02788 | 5164-5008-09 |
| J5 | 1250-1955 | 8 | 1 | CONNECTOR-RF SMB M PC 50-OHM | 02788 | 5164-5008-09 |
| J6 | 1252-2816 | 6 | 1 | | 01380 | 5-87729-6 |
| L1 | 9100-2251 | 0 | 1 | INDUCTOR RF-CH-MLD 220NH +-10% .105D-INX | 03273 | 10M220K |
| L2 | 9135-0070 | 0 | 1 | INDUCTOR 24NH +-6.25% 2.6D-MMX6.6LG-MM | 03273 | 10M024X-1 |
| L3 | 9135-0075 | 5 | 1 | INDUCTOR RF-CH-MLD 43NH +-6.047% | 02172 | |
| L4 | 9100-2256 | 5 | 1 | INDUCTOR RF-CH-MLD 560NH +-10% .105D-INX | 03273 | 10M560K |
| L5 | 9100-2247 | 4 | 1 | INDUCTOR RF-CH-MLD 100NH +-10% .105D-INX | 03273 | 10M100K |
| L6 | 9100-2255 | 4 | 1 | INDUCTOR RF-CH-MLD 470NH +-10% .105D-INX | 03273 | 10M470K |
| L7 | 9100-2255 | 4 | 1 | INDUCTOR RF-CH-MLD 470NH +-10% .105D-INX | 03273 | 10M470K |
| L9 | 9100-2891 | 4 | 1 | INDUCTOR RF-CH-MLD 50NH +-10% .105D-INX. | 03273 | 10M050K-1 |
| L10 | 9140-0736 | 6 | 1 | INDUCTOR-FIXED L:200 UH MIN @ 0.35 ADC,1 | 04200 | |
| L11 | 9100-2256 | 5 | 1 | INDUCTOR RF-CH-MLD 560NH +-10% .105D-INX | 03273 | 10M560K |
| L12 | 9100-2250 | 9 | 1 | INDUCTOR RF-CH-MLD 180NH +-10% .105D-INX | 03273 | 10M180K |
| L13 | 9100-3552 | 6 | 1 | INDUCTOR RF-CH-MLD 1.5UH +-5% .166D-INX. | 03273 | 15M151J |

HP Part Number 08590-60192
Third Converter

| Reference Designation | HP Part Number | C D | Qty | Description | Mfr Code | Mfr Part Number |
|-----------------------|----------------|-----|-----|--|----------|-----------------|
| L14 | 9100-3560 | 6 | 1 | INDUCTOR RF-CH-MLD 5.6UH +-5% .166D-INX. | 03273 | 15M561J |
| L16 | 9100-3562 | 8 | 1 | INDUCTOR RF-CH-MLD 4.7UH +-5% .166D-INX. | 03273 | 15M471J |
| L18 | 9135-0068 | 6 | 1 | INDUCTOR RF-CH-MLD 33NH +-6.36% | 02172 | |
| L20 | 9100-2250 | 9 | 1 | INDUCTOR RF-CH-MLD 180NH +-10% .105D-INX | 03273 | 10M180K |
| L22 | 9100-2251 | 0 | 1 | INDUCTOR RF-CH-MLD 220NH +-10% .105D-INX | 03273 | 10M220K |
| L24 | 9100-2255 | 4 | 1 | INDUCTOR RF-CH-MLD 470NH +-10% .105D-INX | 03273 | 10M470K |
| L25 | 9100-2247 | 4 | 1 | INDUCTOR RF-CH-MLD 100NH +-10% .105D-INX | 03273 | 10M100K |
| L26 | 9135-0077 | 7 | 1 | INDUCTOR 36NH +-6.389% 2.6D-MMX6.6LG-MM | 03273 | 10M036X-1 |
| MP2 | 2190-0124 | 4 | 4 | WASHER-LK INTL T NO. 10 .195-IN-ID | 02788 | 500222 |
| MP3 | 2950-0078 | 9 | 4 | NUT-HEX-DBL-CHAM 10-32-THD .067-IN-THK | 03316 | HN100-11 |
| MP4 | 2200-0101 | 0 | 2 | SCREW-MACH 4-40 .188-IN-LG PAN-HD-POZI | 01125 | |
| MP5 | 5002-0667 | 6 | 1 | COVER-THIRD CONVERTER | 28480 | 5002-0667 |
| MP6 | 86701-40001 | 9 | 1 | EXTRACTOR PC | 28480 | 86701-40001 |
| MP7 | 1200-0173 | 5 | 1 | INSULATOR-XSTR DAP-GL | 02210 | A-10001 DAP |
| MP8 | 3050-0945 | 2 | 4 | WASHER-FL MTLC NO. 10 .2-IN-ID .33-IN-OD | 05313 | 5714-165-063 |
| MP9 | 5001-5539 | 9 | 1 | GROUND STRAP | 28480 | 5001-5539 |
| MP10 | 5001-5539 | 9 | 1 | GROUND STRAP | 28480 | 5001-5539 |
| Q1 | 1853-0451 | 5 | 1 | TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW | 02037 | |
| Q2 | 1854-0720 | 3 | 1 | TRANSISTOR NPN SI PD=500MW FT=4GHZ | 03334 | |
| Q4 | 1854-0632 | 6 | 1 | TRANSISTOR NPN SI PD=180MW FT=4GHZ | 02037 | |
| Q5 | 1853-0451 | 5 | 1 | TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW | 02037 | |
| Q6 | 1854-0720 | 3 | 1 | TRANSISTOR NPN SI PD=500MW FT=4GHZ | 03334 | |
| Q7 | 1853-0007 | 7 | 1 | TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW | 02037 | 2N3251 |
| Q8 | 1854-1142 | 5 | 1 | TRANSISTOR NPN SI TO-92 PD=625MW FT=6GHZ | 02037 | MPS571 |
| Q9 | 1853-0451 | 5 | 1 | TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW | 02037 | |
| Q10 | 1854-0720 | 3 | 1 | TRANSISTOR NPN SI PD=500MW FT=4GHZ | 03334 | |
| Q11 | 1854-0215 | 1 | 1 | TRANSISTOR NPN SI TO-92 PD=625MW FT=300M | 00746 | 2N3904 |
| Q12 | 1853-0451 | 5 | 1 | TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW | 02037 | |
| Q13 | 1854-0946 | 5 | 1 | TRANSISTOR NPN SI PD=290MW | 00039 | NE02135 |
| R1 | 0698-7257 | 2 | 1 | RESISTOR 7.5K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R2 | 0698-7253 | 8 | 1 | RESISTOR 5.11K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R3 | 0698-7247 | 0 | 1 | RESISTOR 2.87K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R4 | 0699-2069 | 6 | 1 | RESISTOR 13.3 +-1% .05W TF TC=0+-100 | 05524 | CMF-50-21 |
| R5 | 0698-3445 | 2 | 1 | RESISTOR 348 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R6 | 0698-3445 | 2 | 1 | RESISTOR 348 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R7 | 0698-7219 | 6 | 1 | RESISTOR 196 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R8 | 0698-7221 | 0 | 1 | RESISTOR 237 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R9 | 0699-1903 | 5 | 1 | RESISTOR 51.1 +-1% .05W TF TC=0+-100 | 05524 | CMF-50-21 |
| R10 | 0699-1948 | 8 | 1 | RESISTOR 46.4 +-1% .05W TF TC=0+-100 | 05524 | CMF-50-21 |
| R11 | 0698-7219 | 6 | 1 | RESISTOR 196 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R12 | 0698-7237 | 8 | 1 | RESISTOR 1.1K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R13 | 0698-7188 | 8 | 1 | RESISTOR 10 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R14 | 0698-7188 | 8 | 1 | RESISTOR 10 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R15 | 0698-7209 | 4 | 1 | RESISTOR 75 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R16 | 0698-7251 | 6 | 1 | RESISTOR 4.22K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R17 | 0698-7239 | 0 | 1 | RESISTOR 1.33K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R18 | 0698-7224 | 3 | 1 | RESISTOR 316 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R19 | 2100-3351 | 6 | 1 | RESISTOR-TRMR 500 10% TKF SIDE-ADJ 1-TRN | 03744 | 3386X-Y46-501 |

**Indicates factory-selected value*

HP Part Number 08590-60192
Third Converter

| Reference Designation | HP Part Number | C D | Qty | Description | Mfr Code | Mfr Part Number |
|-----------------------|----------------|-----|-----|--|----------|-----------------|
| R20 | 0698-7237 | 8 | 1 | RESISTOR 1.1K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R21 | 0698-7212 | 9 | 1 | RESISTOR 100 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R22 | 0757-0416 | 7 | 1 | RESISTOR 511 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R23 | 0698-7212 | 9 | 1 | RESISTOR 100 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R24 | 0698-7224 | 3 | 1 | RESISTOR 316 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R25 | 0698-7197 | 9 | 1 | RESISTOR 23.7 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R26 | 0698-7255 | 0 | 1 | RESISTOR 6.19K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R27 | 0698-7254 | 9 | 1 | RESISTOR 5.62K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R28 | 0698-7212 | 9 | 1 | RESISTOR 100 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R29 | 0698-7247 | 0 | 1 | RESISTOR 2.87K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R30 | 0698-7192 | 4 | 1 | RESISTOR 14.7 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R32 | 0698-7217 | 4 | 1 | RESISTOR 162 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R33 | 0757-0402 | 1 | 1 | RESISTOR 110 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R34 | 0757-0400 | 9 | 1 | RESISTOR 90.9 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R35 | 0698-7210 | 7 | 1 | RESISTOR 82.5 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R36 | 0698-3430 | 5 | 1 | RESISTOR 21.5 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R37 | 0698-3430 | 5 | 1 | RESISTOR 21.5 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R38 | 0698-0082 | 7 | 1 | RESISTOR 464 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R39 | 0757-0442 | 9 | 1 | RESISTOR 10K +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R40 | 0698-3136 | 8 | 1 | RESISTOR 17.8K 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R41 | 0698-7253 | 8 | 1 | RESISTOR 5.11K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R42 | 0698-3442 | 9 | 1 | RESISTOR 237 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R43 | 0757-0280 | 3 | 1 | RESISTOR 1K +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R44 | 0698-7205 | 0 | 1 | RESISTOR 51.1 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R45 | 0698-7205 | 0 | 1 | RESISTOR 51.1 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R46 | 0698-8822 | 9 | 1 | RESISTOR 6.81 +-1% .125W TF TC=0+-100 | 01074 | H8 |
| R47 | 0698-8822 | 9 | 1 | RESISTOR 6.81 +-1% .125W TF TC=0+-100 | 01074 | H8 |
| R48 | 0698-7261 | 8 | 1 | RESISTOR 11K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R49 | 0698-7251 | 6 | 1 | RESISTOR 4.22K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R50 | 0698-7243 | 6 | 1 | RESISTOR 1.96K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R51 | 0698-7224 | 3 | 1 | RESISTOR 316 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R52 | 0757-0405 | 4 | 1 | RESISTOR 162 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R53 | 0757-0405 | 4 | 1 | RESISTOR 162 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R54 | 0698-7205 | 0 | 1 | RESISTOR 51.1 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R55 | 0757-0419 | 0 | 1 | RESISTOR 681 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R56 | 0698-0082 | 7 | 1 | RESISTOR 464 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R57 | 0757-0416 | 7 | 1 | RESISTOR 511 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R58 | 0698-7217 | 4 | 1 | RESISTOR 162 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R59 | 0698-0084 | 9 | 1 | RESISTOR 2.15K 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R60 | 0698-7236 | 7 | 1 | RESISTOR 1K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R62 | 0698-0084 | 9 | 1 | RESISTOR 2.15K 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R63 | 0698-7260 | 7 | 1 | RESISTOR 10K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R64 | 0698-7253 | 8 | 1 | RESISTOR 5.11K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R65 | 0698-7253 | 8 | 1 | RESISTOR 5.11K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R66 | 0757-0280 | 3 | 1 | RESISTOR 1K +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R67 | 0698-7284 | 5 | 1 | RESISTOR 100K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R68 | 2100-3355 | 0 | 1 | RESISTOR-TRMR 100K 10% TKF SIDE-ADJ 1-TR | 03744 | 3386X-Y46-104 |

HP Part Number 08590-60192
Third Converter

| Reference Designation | HP Part Number | C D | Qty | Description | Mfr Code | Mfr Part Number |
|-----------------------|----------------|--------|-----|--|----------|-----------------|
| R69 | 0698-7260 | 7 | 1 | RESISTOR 10K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R70 | 0698-7215 | 2 | 1 | RESISTOR 133 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| T1 | 08558-80003 | 6 | 1 | COIL BP FILTER | 28480 | 08558-80003 |
| U1 | 1820-3485 | 2 | 1 | IC PRESCR ECL | 02037 | MC12090L |
| U2 | 1826-0372 | 2 | 1 | IC MISC 8-DIP-P PKG | 01876 | A251-0100 |
| U3 | 1813-0211 | 1 | 1 | IC WIDEBAND AMPL TO-39 PKG | 02037 | MWA110 |
| U4 | 0955-0113 | 1 | 1 | U-WAVE MIXER 1 GHZ MAX | 02739 | TFM-2-38 |
| U5 | 0410-2119 | 7 | 1 | RESONATOR-SURF ACST W FREQUENCY:600 MHZ | 12127 | RP-1192-2 |
| VR1 | 1902-0025 | 4 | 1 | DIODE-ZNR 10V 5% DO-35 PD=.4W TC=+.06% | 02037 | |
| VR2 | 1902-0949 | 1 | 1 | DIODE-ZNR 4.3V 5% DO-35 PD=.4W TC=+.017% | 02037 | |
| W1 | 8159-0005 | 0 | 1 | RESISTOR-ZERO OHMS 22 AWG LEAD DIA | 01339 | L-2007-1 |

**Indicates factory-selected value*

HP Part Number 08590-60193
Third Converter Option 001

| Reference Designation | HP Part Number | C D | Qty | Description | Mfr Code | Mfr Part Number |
|-----------------------|----------------|-----|-----|-----------------------|----------|-----------------|
| C1 | 0160-4799 | 2 | 1 | CAP-FXD 2.2pF 100 V | 02010 | MA101A2R2CAAH |
| C2 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C3 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C4 | 0160-4382 | 9 | 1 | CAP-FXD 3.3pF 200 V | 06352 | FD12C0G2D3R3C |
| C5 | 0160-4790 | 3 | 1 | CAP-FXD 12pF 100 V | 02010 | SA102A120JAAH |
| C6 | 0160-4790 | 3 | 1 | CAP-FXD 12pF 100 V | 02010 | SA102A120JAAH |
| C7 | 0160-4790 | 3 | 1 | CAP-FXD 12pF 100 V | 02010 | SA102A120JAAH |
| C8 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C9 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C10 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C11 | 0160-4795 | 8 | 1 | CAP-FXD 4.7pF 100 V | 02010 | SA102A4R7DAAH |
| C12 | 0160-4790 | 3 | 1 | CAP-FXD 12pF 100 V | 02010 | SA102A120JAAH |
| C13 | 0160-4793 | 6 | 1 | CAP-FXD 6.8pF 100 V | 02010 | SA102A6R8DAAH |
| C14 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C15 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C16 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C17 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C18 | 0160-4801 | 7 | 1 | CAP-FXD 100pF 100 V | 02010 | SA102A101JAAH |
| C19 | 0180-4130 | 7 | 1 | CAP-FXD 2.2uF 20 V TA | 04200 | 173D225X9020V |
| C20 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C21 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C22 | 0160-4805 | 1 | 1 | CAP-FXD 47pF 100 V | 02010 | SA102A470JAAH |
| C23 | 0160-4805 | 1 | 1 | CAP-FXD 47pF 100 V | 02010 | SA102A470JAAH |
| C24 | 0160-4805 | 1 | 1 | CAP-FXD 47pF 100 V | 02010 | SA102A470JAAH |
| C25 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C26 | 0160-4799 | 2 | 1 | CAP-FXD 2.2pF 100 V | 02010 | MA101A2R2CAAH |
| C27 | 0180-4132 | 9 | 1 | CAP-FXD 6.8uF 35 V TA | 04200 | 173D685X9035X |
| C28 | 0160-4822 | 2 | 1 | CAP-FXD 1000pF 100 V | 02010 | SA201A102JAAH |
| C29 | 0180-4130 | 7 | 1 | CAP-FXD 2.2uF 20 V TA | 04200 | 173D225X9020V |
| C30 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C31 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C32 | 0160-4389 | 6 | 1 | CAP-FXD 100pF 200 V | 02010 | SR202A101JAAH |
| C34 | 0180-4134 | 1 | 1 | CAP-FXD 22uF 15 V TA | 04200 | 173D226X9015X |
| C36 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C37 | 0160-4554 | 7 | 1 | CAP-FXD 0.01uF 50 V | 02010 | SA105C103MAAH |
| C38 | 0160-4523 | 0 | 1 | CAP-FXD 16pF 200 V | 06352 | FD12C0G2D160J |
| C39 | 0160-4574 | 1 | 1 | CAP-FXD 1000pF 100 V | 02010 | SA101C102KAAH |
| C41 | 0160-4798 | 1 | 1 | CAP-FXD 2.7pF 100 V | 02010 | MA101A2R7CAA |
| C43 | 0160-4795 | 8 | 1 | CAP-FXD 4.7pF 100 V | 02010 | SA102A4R7DAAH |
| C44 | 0121-0444 | 4 | 1 | CAP-VAR 9pF 3pF 160 V | 01468 | 302-450-204 |
| C45 | 0160-4795 | 8 | 1 | CAP-FXD 4.7pF 100 V | 02010 | SA102A4R7DAAH |
| C46 | 0121-0444 | 4 | 1 | CAP-VAR 9pF 3pF 160 V | 01468 | 302-450-204 |
| C47 | 0121-0444 | 4 | 1 | CAP-VAR 9pF 3pF 160 V | 01468 | 302-450-204 |
| C48 | 0160-4796 | 9 | 1 | CAP-FXD 3.9pF 100 V | 02010 | SA101A3R9CAAH |
| C49 | 0160-3872 | 0 | 1 | CAP-FXD 2.2pF 200 V | 06352 | FD12C0G2D2R2C |
| C50 | 0160-4809 | 5 | 1 | CAP-FXD 390pF 100 V | 02010 | SA101A391JAAH |
| C51 | 0160-5348 | 9 | 1 | CAP-FXD 51pF 100 V | 02010 | SA102A510JAAH |
| C52 | 0160-3873 | 1 | 1 | CAP-FXD 4.7pF 200 V | 06352 | FD12C0G2D4R7D |

**Indicates factory-selected value*

HP Part Number 08590-60193
Third Converter Option 001

| Reference Designation | HP Part Number | C D | Qty | Description | Mfr Code | Mfr Part Number |
|-----------------------|----------------|-----|-----|--|----------|-----------------|
| C53 | 0160-5413 | 9 | 1 | CAP-FXD 160pF 100 V | 02010 | SA101A161JAAH |
| C54 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C55 | 0160-5422 | 0 | 1 | CAP-FXD 0.047uF 50 V | 02010 | SA205C473MAAH |
| C56 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C57 | 0160-4831 | 3 | 1 | CAP-FXD 4700pF 100 V | 02010 | SA101C472KAAH |
| C58 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C59 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C61 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C62 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C63 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C64 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C65 | 0160-4535 | 4 | 1 | CAP-FXD 1uF 50 V | 02010 | SR305C105KAAH |
| C66 | 0160-3873 | 1 | 1 | CAP-FXD 4.7pF 200 V | 06352 | FD12C0G2D4R7D |
| C67 | 0160-3873 | 1 | 1 | CAP-FXD 4.7pF 200 V | 06352 | FD12C0G2D4R7D |
| C68 | 0160-4383 | 0 | 1 | CAP-FXD 6.8pF 200 V | 06352 | FD12C0G2D6R8D |
| C69 | 0160-4490 | 0 | 1 | CAP-FXD 1.8pF 200 V | 06352 | FD12C0G2D1R8C |
| C70 | 0160-4801 | 7 | 1 | CAP-FXD 100pF 100 V | 02010 | SA102A101JAAH |
| C71 | 0160-5422 | 0 | 1 | CAP-FXD 0.047uF 50 V | 02010 | SA205C473MAAH |
| C72 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C73 | 0160-4380 | 7 | 1 | CAP-FXD 1pF 200 V | 06352 | FD11C0K2D1R0C |
| C74 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C75 | 0160-4382 | 9 | 1 | CAP-FXD 3.3pF 200 V | 06352 | FD12C0G2D3R3C |
| C76 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C77 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C78 | 0160-4790 | 3 | 1 | CAP-FXD 12pF 100 V | 02010 | SA102A120JAAH |
| C79 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C80 | 0160-4383 | 0 | 1 | CAP-FXD 6.8pF 200 V | 06352 | FD12C0G2D6R8D |
| CR1 | 0122-0161 | 4 | 1 | DIODE-VVC 2.15PF 7% BVR=30V | 03334 | BB405B |
| CR2 | 1901-1070 | 9 | 1 | DIODE-PIN 110V | 02062 | |
| J1 | 1252-2816 | 6 | 1 | | 01380 | 5-87729-6 |
| J2 | 1250-1955 | 8 | 1 | CONNECTOR-RF SMB M PC 50-OHM | 02788 | 5164-5008-09 |
| J3 | 1250-1955 | 8 | 1 | CONNECTOR-RF SMB M PC 50-OHM | 02788 | 5164-5008-09 |
| J4 | 1250-1955 | 8 | 1 | CONNECTOR-RF SMB M PC 50-OHM | 02788 | 5164-5008-09 |
| J5 | 1250-1955 | 8 | 1 | CONNECTOR-RF SMB M PC 50-OHM | 02788 | 5164-5008-09 |
| J6 | 1252-2816 | 6 | 1 | | 01380 | 5-87729-6 |
| L1 | 9100-2251 | 0 | 1 | INDUCTOR RF-CH-MLD 220NH +-10% .105D-INX | 03273 | 10M220K |
| L2 | 9135-0076 | 6 | 1 | INDUCTOR RF-CH-MLD 39NH +-6% | 02172 | 010150-054J |
| L3 | 9135-0075 | 5 | 1 | INDUCTOR RF-CH-MLD 43NH +-6.047% | 02172 | |
| L4 | 9100-2256 | 5 | 1 | INDUCTOR RF-CH-MLD 560NH +-10% .105D-INX | 03273 | 10M560K |
| L5 | 9100-2247 | 4 | 1 | INDUCTOR RF-CH-MLD 100NH +-10% .105D-INX | 03273 | 10M100K |
| L6 | 9100-2255 | 4 | 1 | INDUCTOR RF-CH-MLD 470NH +-10% .105D-INX | 03273 | 10M470K |
| L7 | 9100-2255 | 4 | 1 | INDUCTOR RF-CH-MLD 470NH +-10% .105D-INX | 03273 | 10M470K |
| L9 | 9100-2891 | 4 | 1 | INDUCTOR RF-CH-MLD 50NH +-10% .105D-INX. | 03273 | 10M050K-1 |
| L10 | 9140-0736 | 6 | 1 | INDUCTOR-FIXED L:200 UH MIN @ 0.35 ADC,1 | 04200 | |
| L11 | 9100-2256 | 5 | 1 | INDUCTOR RF-CH-MLD 560NH +-10% .105D-INX | 03273 | 10M560K |
| L12 | 9100-2250 | 9 | 1 | INDUCTOR RF-CH-MLD 180NH +-10% .105D-INX | 03273 | 10M180K |
| L13 | 9100-3552 | 6 | 1 | INDUCTOR RF-CH-MLD 1.5UH +-5% .166D-INX. | 03273 | 15M151J |

HP Part Number 08590-60193
Third Converter Option 001

| Reference Designation | HP Part Number | C D | Qty | Description | Mfr Code | Mfr Part Number |
|-----------------------|----------------|-----|-----|--|----------|-----------------|
| L14 | 9100-3560 | 6 | 1 | INDUCTOR RF-CH-MLD 5.6UH +-5% .166D-INX. | 03273 | 15M561J |
| L16 | 9100-3562 | 8 | 1 | INDUCTOR RF-CH-MLD 4.7UH +-5% .166D-INX. | 03273 | 15M471J |
| L18 | 9135-0068 | 6 | 1 | INDUCTOR RF-CH-MLD 33NH +-6.36% | 02172 | |
| L20 | 9100-2250 | 9 | 1 | INDUCTOR RF-CH-MLD 180NH +-10% .105D-INX | 03273 | 10M180K |
| L22 | 9100-2251 | 0 | 1 | INDUCTOR RF-CH-MLD 220NH +-10% .105D-INX | 03273 | 10M220K |
| L24 | 9100-2255 | 4 | 1 | INDUCTOR RF-CH-MLD 470NH +-10% .105D-INX | 03273 | 10M470K |
| L25 | 9100-2247 | 4 | 1 | INDUCTOR RF-CH-MLD 100NH +-10% .105D-INX | 03273 | 10M100K |
| L26 | 9135-0077 | 7 | 1 | INDUCTOR 36NH +-6.389% 2.6D-MMX6.6LG-MM | 03273 | 10M036X-1 |
| MP2 | 2190-0124 | 4 | 4 | WASHER-LK INTL T NO. 10 .195-IN-ID | 02788 | 500222 |
| MP3 | 2950-0078 | 9 | 4 | NUT-HEX-DBL-CHAM 10-32-THD .067-IN-THK | 03316 | HN100-11 |
| MP4 | 2200-0101 | 0 | 2 | SCREW-MACH 4-40 .188-IN-LG PAN-HD-POZI | 01125 | |
| MP5 | 5002-0668 | 7 | 1 | COVER-THIRD CONVERTER-001 | 28480 | 5002-0668 |
| MP6 | 86701-40001 | 9 | 1 | EXTRACTOR PC | 28480 | 86701-40001 |
| MP7 | 1200-0173 | 5 | 1 | INSULATOR-XSTR DAP-GL | 02210 | A-10001 DAP |
| MP8 | 3050-0945 | 2 | 4 | WASHER-FL MTLT NO. 10 .2-IN-ID .33-IN-OD | 05313 | 5714-165-063 |
| MP9 | 5001-5539 | 9 | 1 | GROUND STRAP | 28480 | 5001-5539 |
| MP10 | 5001-5539 | 9 | 1 | GROUND STRAP | 28480 | 5001-5539 |
| Q1 | 1853-0451 | 5 | 1 | TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW | 02037 | |
| Q2 | 1854-0720 | 3 | 1 | TRANSISTOR NPN SI PD=500MW FT=4GHZ | 03334 | |
| Q4 | 1854-0632 | 6 | 1 | TRANSISTOR NPN SI PD=180MW FT=4GHZ | 02037 | |
| Q5 | 1853-0451 | 5 | 1 | TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW | 02037 | |
| Q6 | 1854-0720 | 3 | 1 | TRANSISTOR NPN SI PD=500MW FT=4GHZ | 03334 | |
| Q7 | 1853-0007 | 7 | 1 | TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW | 02037 | 2N3251 |
| Q8 | 1854-1142 | 5 | 1 | TRANSISTOR NPN SI TO-92 PD=625MW FT=6GHZ | 02037 | MPS571 |
| Q9 | 1853-0451 | 5 | 1 | TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW | 02037 | |
| Q10 | 1854-0720 | 3 | 1 | TRANSISTOR NPN SI PD=500MW FT=4GHZ | 03334 | |
| Q11 | 1854-0215 | 1 | 1 | TRANSISTOR NPN SI TO-92 PD=625MW FT=300M | 00746 | 2N3904 |
| Q12 | 1853-0451 | 5 | 1 | TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW | 02037 | |
| Q13 | 1854-0946 | 5 | 1 | TRANSISTOR NPN SI PD=290MW | 00039 | NE02135 |
| R1 | 0698-7257 | 2 | 1 | RESISTOR 7.5K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R2 | 0698-7253 | 8 | 1 | RESISTOR 5.11K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R3 | 0698-7247 | 0 | 1 | RESISTOR 2.87K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R4 | 0699-2069 | 6 | 1 | RESISTOR 13.3 +-1% .05W TF TC=0+-100 | 05524 | CMF-50-21 |
| R5 | 0698-3445 | 2 | 1 | RESISTOR 348 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R6 | 0698-3445 | 2 | 1 | RESISTOR 348 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R7 | 0698-7219 | 6 | 1 | RESISTOR 196 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R8 | 0698-7221 | 0 | 1 | RESISTOR 237 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R9 | 0699-1903 | 5 | 1 | RESISTOR 51.1 +-1% .05W TF TC=0+-100 | 05524 | CMF-50-21 |
| R10 | 0699-1948 | 8 | 1 | RESISTOR 46.4 +-1% .05W TF TC=0+-100 | 05524 | CMF-50-21 |
| R11 | 0698-7219 | 6 | 1 | RESISTOR 196 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R12 | 0698-7237 | 8 | 1 | RESISTOR 1.1K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R13 | 0698-7188 | 8 | 1 | RESISTOR 10 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R14 | 0698-7188 | 8 | 1 | RESISTOR 10 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R15 | 0698-7209 | 4 | 1 | RESISTOR 75 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R16 | 0698-7251 | 6 | 1 | RESISTOR 4.22K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R17 | 0698-7239 | 0 | 1 | RESISTOR 1.33K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R18 | 0698-7224 | 3 | 1 | RESISTOR 316 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |

**Indicates factory-selected value*

HP Part Number 08590-60193
Third Converter Option 001

| Reference Designation | HP Part Number | C D | Qty | Description | Mfr Code | Mfr Part Number |
|-----------------------|----------------|-----|-----|--|----------|-----------------|
| R19 | 2100-3351 | 6 | 1 | RESISTOR-TRMR 500 10% TKF SIDE-ADJ 1-TRN | 03744 | 3386X-Y46-501 |
| R20 | 0698-7239 | 0 | 1 | RESISTOR 1.33K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R21 | 0698-7216 | 3 | 1 | RESISTOR 147 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R22 | 0757-0416 | 7 | 1 | RESISTOR 511 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R23 | 0698-7216 | 3 | 1 | RESISTOR 147 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R24 | 0698-7224 | 3 | 1 | RESISTOR 316 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R25 | 0698-7197 | 9 | 1 | RESISTOR 23.7 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R26 | 0698-7255 | 0 | 1 | RESISTOR 6.19K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R27 | 0698-7254 | 9 | 1 | RESISTOR 5.62K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R28 | 0698-7212 | 9 | 1 | RESISTOR 100 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R29 | 0698-7247 | 0 | 1 | RESISTOR 2.87K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R30 | 0698-7192 | 4 | 1 | RESISTOR 14.7 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R32 | 0698-7217 | 4 | 1 | RESISTOR 162 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R33 | 0757-0402 | 1 | 1 | RESISTOR 110 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R34 | 0757-0400 | 9 | 1 | RESISTOR 90.9 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R35 | 0698-7210 | 7 | 1 | RESISTOR 82.5 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R36 | 0698-3430 | 5 | 1 | RESISTOR 21.5 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R37 | 0698-3430 | 5 | 1 | RESISTOR 21.5 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R38 | 0698-0082 | 7 | 1 | RESISTOR 464 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R39 | 0757-0442 | 9 | 1 | RESISTOR 10K +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R40 | 0698-3136 | 8 | 1 | RESISTOR 17.8K 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R41 | 0698-7253 | 8 | 1 | RESISTOR 5.11K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R42 | 0698-3442 | 9 | 1 | RESISTOR 237 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R43 | 0757-0280 | 3 | 1 | RESISTOR 1K +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R44 | 0698-7205 | 0 | 1 | RESISTOR 51.1 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R45 | 0698-7205 | 0 | 1 | RESISTOR 51.1 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R46 | 0698-8822 | 9 | 1 | RESISTOR 6.81 +-1% .125W TF TC=0+-100 | 01074 | H8 |
| R47 | 0698-8822 | 9 | 1 | RESISTOR 6.81 +-1% .125W TF TC=0+-100 | 01074 | H8 |
| R48 | 0698-7261 | 8 | 1 | RESISTOR 11K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R49 | 0698-7251 | 6 | 1 | RESISTOR 4.22K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R50 | 0698-7243 | 6 | 1 | RESISTOR 1.96K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R51 | 0698-7224 | 3 | 1 | RESISTOR 316 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R52 | 0757-0405 | 4 | 1 | RESISTOR 162 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R53 | 0757-0405 | 4 | 1 | RESISTOR 162 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R54 | 0698-7205 | 0 | 1 | RESISTOR 51.1 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R55 | 0757-0419 | 0 | 1 | RESISTOR 681 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R56 | 0698-0082 | 7 | 1 | RESISTOR 464 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R57 | 0757-0416 | 7 | 1 | RESISTOR 511 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R58 | 0698-7217 | 4 | 1 | RESISTOR 162 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R59 | 0698-0084 | 9 | 1 | RESISTOR 2.15K 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R60 | 0698-7236 | 7 | 1 | RESISTOR 1K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R62 | 0698-0084 | 9 | 1 | RESISTOR 2.15K 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R63 | 0698-7260 | 7 | 1 | RESISTOR 10K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R64 | 0698-7253 | 8 | 1 | RESISTOR 5.11K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R65 | 0698-7253 | 8 | 1 | RESISTOR 5.11K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R66 | 0757-0280 | 3 | 1 | RESISTOR 1K +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R67 | 0698-7284 | 5 | 1 | RESISTOR 100K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R68 | 2100-3355 | 0 | 1 | RESISTOR-TRMR 100K 10% TKF SIDE-ADJ 1-TR | 03744 | 3386X-Y46-104 |

HP Part Number 08590-60193
Third Converter Option 001

| Reference Designation | HP Part Number | C D | Qty | Description | Mfr Code | Mfr Part Number |
|-----------------------|----------------|-----|-----|--|----------|-----------------|
| R69 | 0698-7260 | 7 | 1 | RESISTOR 10K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R70 | 0698-7215 | 2 | 1 | RESISTOR 133 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| T1 | 08558-80003 | 6 | 1 | COIL BP FILTER | 28480 | 08558-80003 |
| U1 | 1820-3485 | 2 | 1 | IC PRESCR ECL | 02037 | MC12090L |
| U2 | 1826-0372 | 2 | 1 | IC MISC 8-DIP-P PKG | 01876 | A251-0100 |
| U3 | 1813-0211 | 1 | 1 | IC WIDEBAND AMPL TO-39 PKG | 02037 | MWA110 |
| U4 | 0955-0113 | 1 | 1 | U-WAVE MIXER 1 GHZ MAX | 02739 | TFM-2-38 |
| U5 | 0410-2119 | 7 | 1 | RESONATOR-SURF ACST W FREQUENCY:600 MHZ | 12127 | RP-1192-2 |
| VR1 | 1902-0025 | 4 | 1 | DIODE-ZNR 10V 5% DO-35 PD=.4W TC=+.06% | 02037 | |
| VR2 | 1902-0949 | 1 | 1 | DIODE-ZNR 4.3V 5% DO-35 PD=.4W TC=+.017% | 02037 | |
| W1 | 8159-0005 | 0 | 1 | RESISTOR-ZERO OHMS 22 AWG LEAD DIA | 01339 | L-2007-1 |

**Indicates factory-selected value*

HP Part Number 08593-60021
Third Converter Option E02

| Reference Designation | HP Part Number | C D | Qty | Description | Mfr Code | Mfr Part Number |
|-----------------------|----------------|-----|-----|-----------------------|----------|-----------------|
| C1 | 0160-4799 | 2 | 1 | CAP-FXD 2.2pF 100 V | 02010 | MA101A2R2CAAH |
| C2 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C3 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C4 | 0160-4382 | 9 | 1 | CAP-FXD 3.3pF 200 V | 06352 | FD12C0G2D3R3C |
| C5 | 0160-4790 | 3 | 1 | CAP-FXD 12pF 100 V | 02010 | SA102A120JAAH |
| C6 | 0160-4790 | 3 | 1 | CAP-FXD 12pF 100 V | 02010 | SA102A120JAAH |
| C7 | 0160-4790 | 3 | 1 | CAP-FXD 12pF 100 V | 02010 | SA102A120JAAH |
| C8 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C9 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C10 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C11 | 0160-4795 | 8 | 1 | CAP-FXD 4.7pF 100 V | 02010 | SA102A4R7DAAH |
| C12 | 0160-4790 | 3 | 1 | CAP-FXD 12pF 100 V | 02010 | SA102A120JAAH |
| C13 | 0160-4793 | 6 | 1 | CAP-FXD 6.8pF 100 V | 02010 | SA102A6R8DAAH |
| C14 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C15 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C16 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C17 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C18 | 0160-4801 | 7 | 1 | CAP-FXD 100pF 100 V | 02010 | SA102A101JAAH |
| C19 | 0180-4130 | 7 | 1 | CAP-FXD 2.2uF 20 V TA | 04200 | 173D225X9020V |
| C20 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C21 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C22 | 0160-4805 | 1 | 1 | CAP-FXD 47pF 100 V | 02010 | SA102A470JAAH |
| C23 | 0160-4805 | 1 | 1 | CAP-FXD 47pF 100 V | 02010 | SA102A470JAAH |
| C24 | 0160-4805 | 1 | 1 | CAP-FXD 47pF 100 V | 02010 | SA102A470JAAH |
| C25 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C26 | 0160-4799 | 2 | 1 | CAP-FXD 2.2pF 100 V | 02010 | MA101A2R2CAAH |
| C27 | 0180-4132 | 9 | 1 | CAP-FXD 6.8uF 35 V TA | 04200 | 173D685X9035X |
| C28 | 0160-4822 | 2 | 1 | CAP-FXD 1000pF 100 V | 02010 | SA201A102JAAH |
| C29 | 0180-4130 | 7 | 1 | CAP-FXD 2.2uF 20 V TA | 04200 | 173D225X9020V |
| C30 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C31 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C32 | 0160-4389 | 6 | 1 | CAP-FXD 100pF 200 V | 02010 | SR202A101JAAH |
| C34 | 0180-4134 | 1 | 1 | CAP-FXD 22uF 15 V TA | 04200 | 173D226X9015X |
| C36 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C37 | 0160-4554 | 7 | 1 | CAP-FXD 0.01uF 50 V | 02010 | SA105C103MAAH |
| C38 | 0160-4523 | 0 | 1 | CAP-FXD 16pF 200 V | 06352 | FD12C0G2D160J |
| C39 | 0160-4574 | 1 | 1 | CAP-FXD 1000pF 100 V | 02010 | SA101C102KAAH |
| C41 | 0160-4798 | 1 | 1 | CAP-FXD 2.7pF 100 V | 02010 | MA101A2R7CAA |
| C43 | 0160-4795 | 8 | 1 | CAP-FXD 4.7pF 100 V | 02010 | SA102A4R7DAAH |
| C44 | 0121-0444 | 4 | 1 | CAP-VAR 9pF 3pF 160 V | 01468 | 302-450-204 |
| C45 | 0160-4795 | 8 | 1 | CAP-FXD 4.7pF 100 V | 02010 | SA102A4R7DAAH |
| C46 | 0121-0444 | 4 | 1 | CAP-VAR 9pF 3pF 160 V | 01468 | 302-450-204 |
| C47 | 0121-0444 | 4 | 1 | CAP-VAR 9pF 3pF 160 V | 01468 | 302-450-204 |
| C48 | 0160-4796 | 9 | 1 | CAP-FXD 3.9pF 100 V | 02010 | SA101A3R9CAAH |
| C49 | 0160-3872 | 0 | 1 | CAP-FXD 2.2pF 200 V | 06352 | FD12C0G2D2R2C |
| C50 | 0160-4809 | 5 | 1 | CAP-FXD 390pF 100 V | 02010 | SA101A391JAAH |
| C51 | 0160-5348 | 9 | 1 | CAP-FXD 51pF 100 V | 02010 | SA102A510JAAH |
| C52 | 0160-3873 | 1 | 1 | CAP-FXD 4.7pF 200 V | 06352 | FD12C0G2D4R7D |

**Indicates factory-selected value*

HP Part Number 08593-60021
Third Converter Option E02

| Reference Designation | HP Part Number | C D | Qty | Description | Mfr Code | Mfr Part Number |
|-----------------------|----------------|-----|-----|--|----------|-----------------|
| C53 | 0160-5413 | 9 | 1 | CAP-FXD 160pF 100 V | 02010 | SA101A161JAAH |
| C54 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C55 | 0160-5422 | 0 | 1 | CAP-FXD 0.047uF 50 V | 02010 | SA205C473MAAH |
| C56 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C57 | 0160-4831 | 3 | 1 | CAP-FXD 4700pF 100 V | 02010 | SA101C472KAAH |
| C58 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C59 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C61 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C62 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C63 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C64 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C65 | 0160-4535 | 4 | 1 | CAP-FXD 1uF 50 V | 02010 | SR305C105KAAH |
| C66 | 0160-3873 | 1 | 1 | CAP-FXD 4.7pF 200 V | 06352 | FD12C0G2D4R7D |
| C67 | 0160-3873 | 1 | 1 | CAP-FXD 4.7pF 200 V | 06352 | FD12C0G2D4R7D |
| C68 | 0160-4383 | 0 | 1 | CAP-FXD 6.8pF 200 V | 06352 | FD12C0G2D6R8D |
| C69 | 0160-4490 | 0 | 1 | CAP-FXD 1.8pF 200 V | 06352 | FD12C0G2D1R8C |
| C70 | 0160-4801 | 7 | 1 | CAP-FXD 100pF 100 V | 02010 | SA102A101JAAH |
| C71 | 0160-5422 | 0 | 1 | CAP-FXD 0.047uF 50 V | 02010 | SA205C473MAAH |
| C72 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C73 | 0160-4380 | 7 | 1 | CAP-FXD 1pF 200 V | 06352 | FD11C0K2D1ROC |
| C74 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C75 | 0160-4382 | 9 | 1 | CAP-FXD 3.3pF 200 V | 06352 | FD12C0G2D3R3C |
| C76 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C77 | 0160-4832 | 4 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SA101C103KAAH |
| C78 | 0160-4790 | 3 | 1 | CAP-FXD 12pF 100 V | 02010 | SA102A120JAAH |
| C79 | 0160-3879 | 7 | 1 | CAP-FXD 0.01uF 100 V | 02010 | SR201C103MAAH |
| C80 | 0160-4383 | 0 | 1 | CAP-FXD 6.8pF 200 V | 06352 | FD12C0G2D6R8D |
| CR1 | 0122-0161 | 4 | 1 | DIODE-VVC 2.15PF 7% BVR=30V | 03334 | BB405B |
| CR2 | 1901-1070 | 9 | 1 | DIODE-PIN 110V | 02062 | |
| J1 | 1252-2816 | 6 | 1 | | 01380 | 5-87729-6 |
| J2 | 1250-1955 | 8 | 1 | CONNECTOR-RF SMB M PC 50-OHM | 02788 | 5164-5008-09 |
| J3 | 1250-1955 | 8 | 1 | CONNECTOR-RF SMB M PC 50-OHM | 02788 | 5164-5008-09 |
| J4 | 1250-1955 | 8 | 1 | CONNECTOR-RF SMB M PC 50-OHM | 02788 | 5164-5008-09 |
| J5 | 1250-1955 | 8 | 1 | CONNECTOR-RF SMB M PC 50-OHM | 02788 | 5164-5008-09 |
| J6 | 1252-2816 | 6 | 1 | | 01380 | 5-87729-6 |
| J7 | 1250-1955 | 8 | 1 | CONNECTOR-RF SMB M PC 50-OHM | 02788 | 5164-5008-09 |
| L1 | 9100-2251 | 0 | 1 | INDUCTOR RF-CH-MLD 220NH +-10% .105D-INX | 03273 | 10M220K |
| L2 | 9135-0070 | 0 | 1 | INDUCTOR 24NH +-6.25% 2.6D-MMX6.6LG-MM | 03273 | 10M024X-1 |
| L3 | 9135-0075 | 5 | 1 | INDUCTOR RF-CH-MLD 43NH +-6.047% | 02172 | |
| L4 | 9100-2256 | 5 | 1 | INDUCTOR RF-CH-MLD 560NH +-10% .105D-INX | 03273 | 10M560K |
| L5 | 9100-2247 | 4 | 1 | INDUCTOR RF-CH-MLD 100NH +-10% .105D-INX | 03273 | 10M100K |
| L6 | 9100-2255 | 4 | 1 | INDUCTOR RF-CH-MLD 470NH +-10% .105D-INX | 03273 | 10M470K |
| L7 | 9100-2255 | 4 | 1 | INDUCTOR RF-CH-MLD 470NH +-10% .105D-INX | 03273 | 10M470K |
| L9 | 9100-2891 | 4 | 1 | INDUCTOR RF-CH-MLD 50NH +-10% .105D-INX. | 03273 | 10M050K-1 |
| L10 | 9140-0736 | 6 | 1 | INDUCTOR-FIXED L:200 UH MIN @ 0.35 ADC,1 | 04200 | |
| L11 | 9100-2256 | 5 | 1 | INDUCTOR RF-CH-MLD 560NH +-10% .105D-INX | 03273 | 10M560K |
| L12 | 9100-2250 | 9 | 1 | INDUCTOR RF-CH-MLD 180NH +-10% .105D-INX | 03273 | 10M180K |

HP Part Number 08593-60021
Third Converter Option E02

| Reference Designation | HP Part Number | C D | Qty | Description | Mfr Code | Mfr Part Number |
|-----------------------|----------------|-----|-----|--|----------|-----------------|
| L13 | 9100-3552 | 6 | 1 | INDUCTOR RF-CH-MLD 1.5UH +-5% .166D-INX. | 03273 | 15M151J |
| L14 | 9100-3560 | 6 | 1 | INDUCTOR RF-CH-MLD 5.6UH +-5% .166D-INX. | 03273 | 15M561J |
| L16 | 9100-3562 | 8 | 1 | INDUCTOR RF-CH-MLD 4.7UH +-5% .166D-INX. | 03273 | 15M471J |
| L18 | 9135-0068 | 6 | 1 | INDUCTOR RF-CH-MLD 33NH +-6.36% | 02172 | |
| L20 | 9100-2250 | 9 | 1 | INDUCTOR RF-CH-MLD 180NH +-10% .105D-INX | 03273 | 10M180K |
| L22 | 9100-2251 | 0 | 1 | INDUCTOR RF-CH-MLD 220NH +-10% .105D-INX | 03273 | 10M220K |
| L24 | 9100-2255 | 4 | 1 | INDUCTOR RF-CH-MLD 470NH +-10% .105D-INX | 03273 | 10M470K |
| L25 | 9100-2247 | 4 | 1 | INDUCTOR RF-CH-MLD 100NH +-10% .105D-INX | 03273 | 10M100K |
| L26 | 9135-0077 | 7 | 1 | INDUCTOR 36NH +-6.389% 2.6D-MMX6.6LG-MM | 03273 | 10M036X-1 |
| MP2 | 2190-0124 | 4 | 5 | WASHER-LK INTL T NO. 10 .195-IN-ID | 02788 | 500222 |
| MP3 | 2950-0078 | 9 | 5 | NUT-HEX-DBL-CHAM 10-32-THD .067-IN-THK | 03316 | HN100-11 |
| MP4 | 2200-0101 | 0 | 2 | SCREW-MACH 4-40 .188-IN-LG PAN-HD-POZI | 01125 | |
| MP5 | 5002-0667 | 6 | 1 | COVER-THIRD CONVERTER | 28480 | 5002-0667 |
| MP6 | 86701-40001 | 9 | 1 | EXTRACTOR PC | 28480 | 86701-40001 |
| MP7 | 1200-0173 | 5 | 1 | INSULATOR-XSTR DAP-GL | 02210 | A-10001 DAP |
| MP8 | 3050-0945 | 2 | 5 | WASHER-FL MTLT NO. 10 .2-IN-ID .33-IN-OD | 05313 | 5714-165-063 |
| MP9 | 5001-5539 | 9 | 1 | GROUND STRAP | 28480 | 5001-5539 |
| MP10 | 5001-5539 | 9 | 1 | GROUND STRAP | 28480 | 5001-5539 |
| Q1 | 1853-0451 | 5 | 1 | TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW | 02037 | |
| Q2 | 1854-0720 | 3 | 1 | TRANSISTOR NPN SI PD=500MW FT=4GHZ | 03334 | |
| Q4 | 1854-0632 | 6 | 1 | TRANSISTOR NPN SI PD=180MW FT=4GHZ | 02037 | |
| Q5 | 1853-0451 | 5 | 1 | TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW | 02037 | |
| Q6 | 1854-0720 | 3 | 1 | TRANSISTOR NPN SI PD=500MW FT=4GHZ | 03334 | |
| Q7 | 1853-0007 | 7 | 1 | TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW | 02037 | 2N3251 |
| Q8 | 1854-1142 | 5 | 1 | TRANSISTOR NPN SI TO-92 PD=625MW FT=6GHZ | 02037 | MPS571 |
| Q9 | 1853-0451 | 5 | 1 | TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW | 02037 | |
| Q10 | 1854-0720 | 3 | 1 | TRANSISTOR NPN SI PD=500MW FT=4GHZ | 03334 | |
| Q11 | 1854-0215 | 1 | 1 | TRANSISTOR NPN SI TO-92 PD=625MW FT=300M | 00746 | 2N3904 |
| Q12 | 1853-0451 | 5 | 1 | TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW | 02037 | |
| Q13 | 1854-0946 | 5 | 1 | TRANSISTOR NPN SI PD=290MW | 00039 | NE02135 |
| R1 | 0698-7257 | 2 | 1 | RESISTOR 7.5K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R2 | 0698-7253 | 8 | 1 | RESISTOR 5.11K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R3 | 0698-7247 | 0 | 1 | RESISTOR 2.87K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R4 | 0699-2069 | 6 | 1 | RESISTOR 13.3 +-1% .05W TF TC=0+-100 | 05524 | CMF-50-21 |
| R5 | 0698-3445 | 2 | 1 | RESISTOR 348 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R6 | 0698-3445 | 2 | 1 | RESISTOR 348 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R7 | 0698-7219 | 6 | 1 | RESISTOR 196 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R8 | 0698-7221 | 0 | 1 | RESISTOR 237 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R9 | 0699-1903 | 5 | 1 | RESISTOR 51.1 +-1% .05W TF TC=0+-100 | 05524 | CMF-50-21 |
| R10 | 0699-2079 | 8 | 1 | RESISTOR 82.5 +-1% .05W TF TC=0+-100 | 05524 | CMF-50-21 |
| R11 | 0698-7219 | 6 | 1 | RESISTOR 196 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R12 | 0698-7237 | 8 | 1 | RESISTOR 1.1K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R13 | 0698-7188 | 8 | 1 | RESISTOR 10 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R14 | 0698-7188 | 8 | 1 | RESISTOR 10 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R15 | 0698-7209 | 4 | 1 | RESISTOR 75 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R16 | 0698-7251 | 6 | 1 | RESISTOR 4.22K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R17 | 0698-7239 | 0 | 1 | RESISTOR 1.33K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |

**Indicates factory-selected value*

HP Part Number 08593-60021
Third Converter Option E02

| Reference Designation | HP Part Number | C D | Qty | Description | Mfr Code | Mfr Part Number |
|-----------------------|----------------|-----|-----|--|----------|-----------------|
| R18 | 0698-7224 | 3 | 1 | RESISTOR 316 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R19 | 2100-3351 | 6 | 1 | RESISTOR-TRMR 500 10% TKF SIDE-ADJ 1-TRN | 03744 | 3386X-Y46-501 |
| R20 | 0698-7237 | 8 | 1 | RESISTOR 1.1K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R21 | 0698-7212 | 9 | 1 | RESISTOR 100 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R22 | 0757-0416 | 7 | 1 | RESISTOR 511 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R23 | 0698-7212 | 9 | 1 | RESISTOR 100 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R24 | 0698-7224 | 3 | 1 | RESISTOR 316 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R25 | 0698-7197 | 9 | 1 | RESISTOR 23.7 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R26 | 0698-7255 | 0 | 1 | RESISTOR 6.19K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R27 | 0698-7254 | 9 | 1 | RESISTOR 5.62K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R28 | 0698-7212 | 9 | 1 | RESISTOR 100 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R29 | 0698-7247 | 0 | 1 | RESISTOR 2.87K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R30 | 0698-7192 | 4 | 1 | RESISTOR 14.7 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R32 | 0698-7217 | 4 | 1 | RESISTOR 162 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R33 | 0757-0402 | 1 | 1 | RESISTOR 110 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R34 | 0757-0400 | 9 | 1 | RESISTOR 90.9 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R35 | 0698-7210 | 7 | 1 | RESISTOR 82.5 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R36 | 0698-3430 | 5 | 1 | RESISTOR 21.5 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R37 | 0698-3430 | 5 | 1 | RESISTOR 21.5 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R38 | 0698-0082 | 7 | 1 | RESISTOR 464 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R39 | 0757-0442 | 9 | 1 | RESISTOR 10K +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R40 | 0698-3136 | 8 | 1 | RESISTOR 17.8K 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R41 | 0698-7253 | 8 | 1 | RESISTOR 5.11K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R42 | 0698-3442 | 9 | 1 | RESISTOR 237 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R43 | 0757-0280 | 3 | 1 | RESISTOR 1K +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R44 | 0698-7205 | 0 | 1 | RESISTOR 51.1 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R45 | 0698-7205 | 0 | 1 | RESISTOR 51.1 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R46 | 0698-8822 | 9 | 1 | RESISTOR 6.81 +-1% .125W TF TC=0+-100 | 01074 | H8 |
| R47 | 0698-8822 | 9 | 1 | RESISTOR 6.81 +-1% .125W TF TC=0+-100 | 01074 | H8 |
| R48 | 0698-7261 | 8 | 1 | RESISTOR 11K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R49 | 0698-7251 | 6 | 1 | RESISTOR 4.22K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R50 | 0698-7243 | 6 | 1 | RESISTOR 1.96K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R51 | 0698-7224 | 3 | 1 | RESISTOR 316 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R52 | 0757-0405 | 4 | 1 | RESISTOR 162 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R53 | 0757-0405 | 4 | 1 | RESISTOR 162 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R54 | 0698-7205 | 0 | 1 | RESISTOR 51.1 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R55 | 0757-0419 | 0 | 1 | RESISTOR 681 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R56 | 0698-0082 | 7 | 1 | RESISTOR 464 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R57 | 0757-0416 | 7 | 1 | RESISTOR 511 +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R58 | 0698-7217 | 4 | 1 | RESISTOR 162 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R59 | 0698-0084 | 9 | 1 | RESISTOR 2.15K 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R60 | 0698-7236 | 7 | 1 | RESISTOR 1K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R62 | 0698-0084 | 9 | 1 | RESISTOR 2.15K 1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R63 | 0698-7260 | 7 | 1 | RESISTOR 10K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R64 | 0698-7253 | 8 | 1 | RESISTOR 5.11K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R65 | 0698-7253 | 8 | 1 | RESISTOR 5.11K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R66 | 0757-0280 | 3 | 1 | RESISTOR 1K +-1% .125W TF TC=0+-100 | 00746 | CRB14 OR CRB25 |
| R67 | 0698-7284 | 5 | 1 | RESISTOR 100K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |

HP Part Number 08593-60021
Third Converter Option E02

| Reference Designation | HP Part Number | C D | Qty | Description | Mfr Code | Mfr Part Number |
|-----------------------|----------------|-----|-----|--|----------|-----------------|
| R68 | 2100-3355 | 0 | 1 | RESISTOR-TRMR 100K 10% TKF SIDE-ADJ 1-TR | 03744 | 3386X-Y46-104 |
| R69 | 0698-7260 | 7 | 1 | RESISTOR 10K +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R70 | 0698-7215 | 2 | 1 | RESISTOR 133 +-1% .05W TF TC=0+-100 | 00746 | CRB20 |
| R71 | 0699-1948 | 8 | 1 | RESISTOR 46.4 +-1% .05W TF TC=0+-100 | 05524 | CMF-50-21 |
| R72 | 0699-2032 | 3 | 1 | RESISTOR 147 +-1% .05W TF TC=0+-100 | 05524 | CMF-50-21 |
| T1 | 08558-80003 | 6 | 1 | | 28480 | 08558-80003 |
| U1 | 1820-3485 | 2 | 1 | IC PRESCR ECL | 02037 | MC12090L |
| U2 | 1826-0372 | 2 | 1 | IC MISC 8-DIP-P PKG | 01876 | A251-0100 |
| U3 | 1813-0211 | 1 | 1 | IC WIDEBAND AMPL TO-39 PKG | 02037 | MWA110 |
| U4 | 0955-0113 | 1 | 1 | U-WAVE MIXER 1 GHZ MAX | 02739 | TFM-2-38 |
| U5 | 0410-2119 | 7 | 1 | RESONATOR-SURF ACST W FREQUENCY:600 MHZ | 12127 | RP-1192-2 |
| VR1 | 1902-0025 | 4 | 1 | DIODE-ZNR 10V 5% D0-35 PD=.4W TC=+.06% | 02037 | |
| VR2 | 1902-0949 | 1 | 1 | DIODE-ZNR 4.3V 5% D0-35 PD=.4W TC=+.017% | 02037 | |
| W1 | 8159-0005 | 0 | 1 | RESISTOR-ZERO OHMS 22 AWG LEAD DIA | 01339 | L-2007-1 |

**Indicates factory-selected value*

