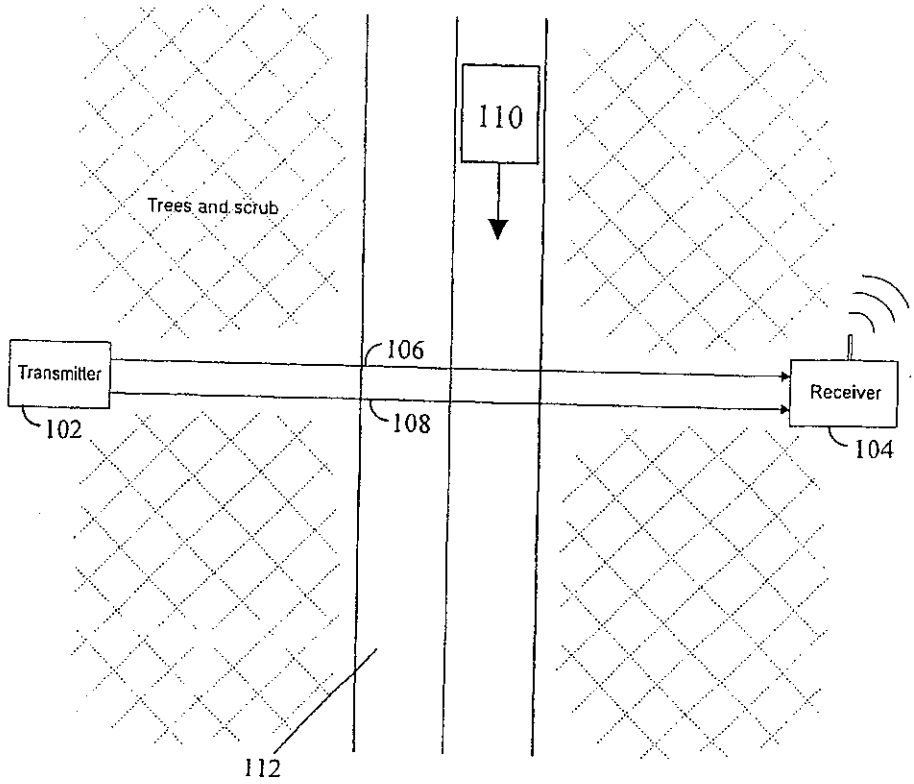


Figure 1

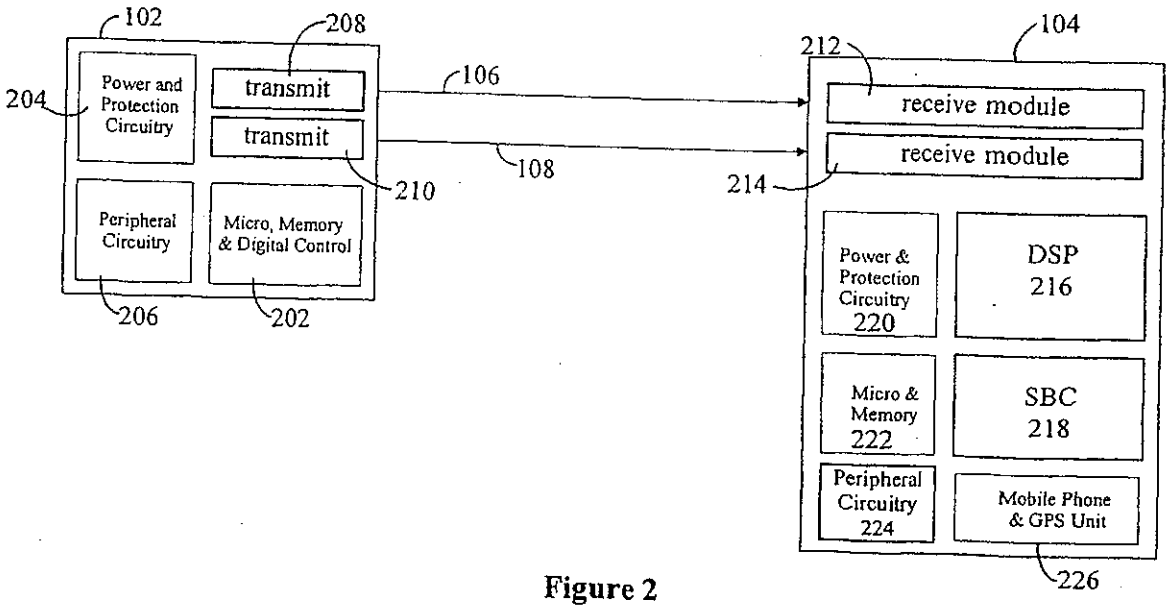


Figure 2

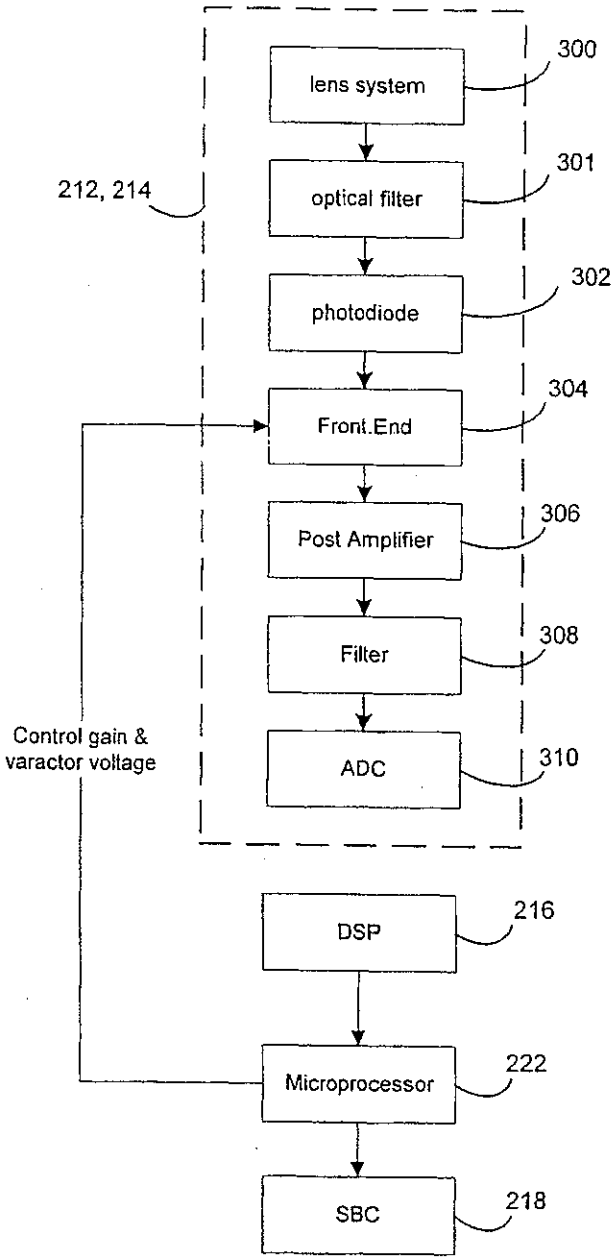

lens system
300
optical filter
301
212, 214
photodiode
302
Front.End
304
Post Amplifier
306
Filter
308
Control gain &
varactor voltage
ADC
310
DSP
216
Microprocessor
222
SBC
218

Figure 3

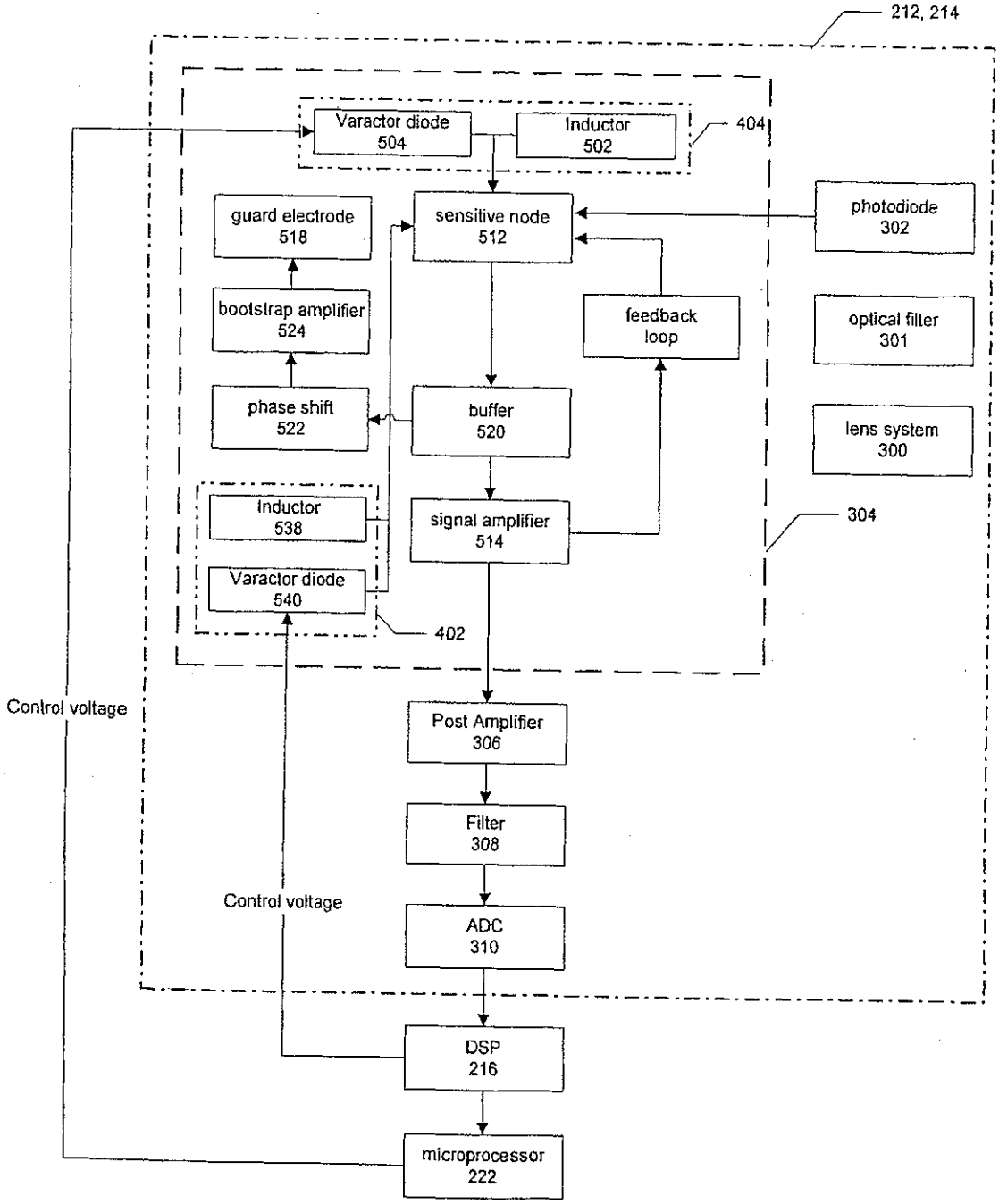

212, 214
Varactor diode 504
Inductor 502
404
guard electrode 518
sensitive node 512
photodiode 302
bootstrap amplifier 524
feedback loop
optical filter 301
phase shift 522
buffer 520
lens system 300
Inductor 538
signal amplifier 514
304
Varactor diode 540
402
Control voltage
Post Amplifier 306
Filter 308
Control voltage
ADC 310
DSP 216
microprocessor 222

Figure 4

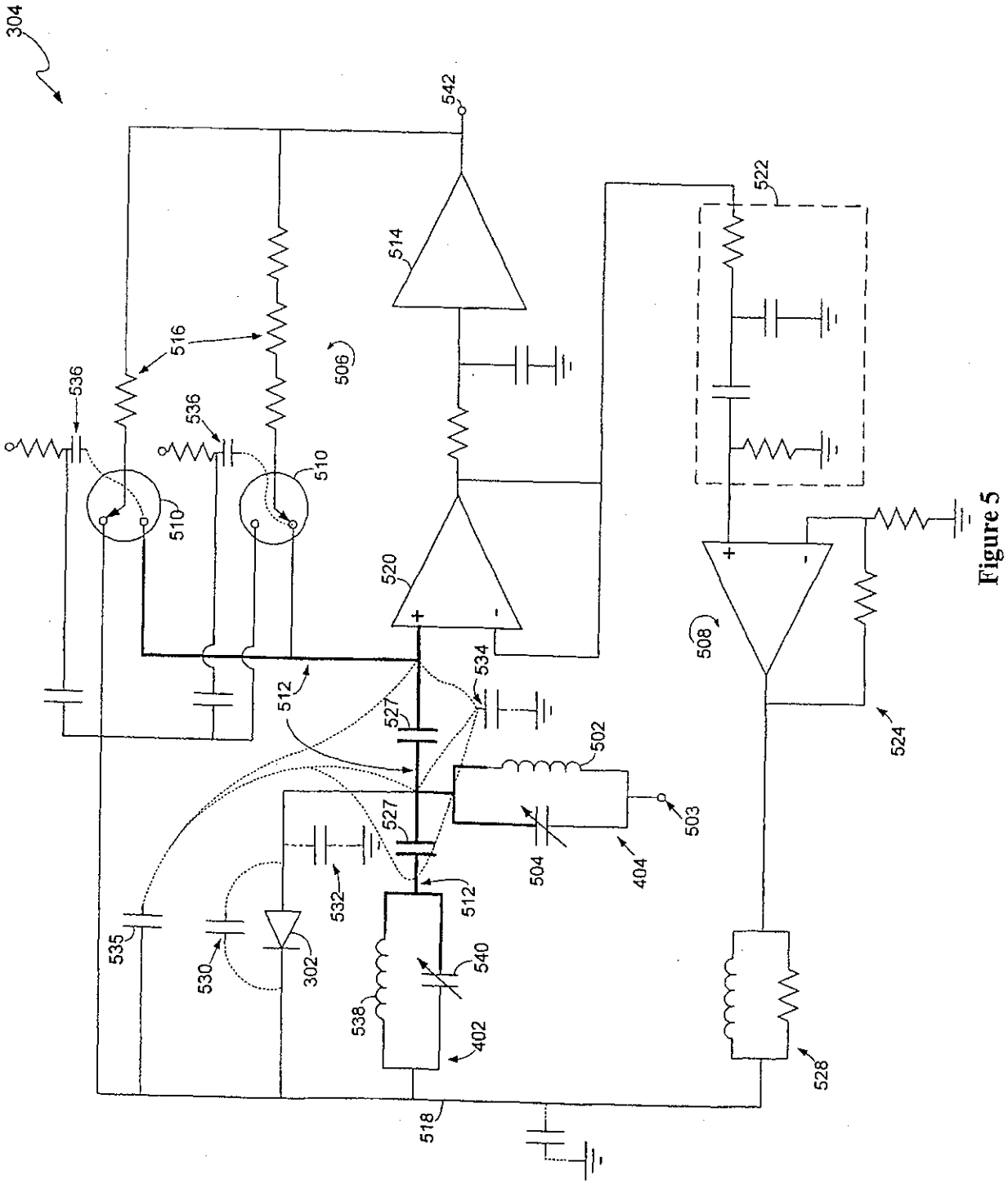

304
542
514
516
506
536
536
510
510
520
512
534
527
502
527
503
504
404
532
512
535
530
302
540
538
402
518
522
508
524
528

Figure 5

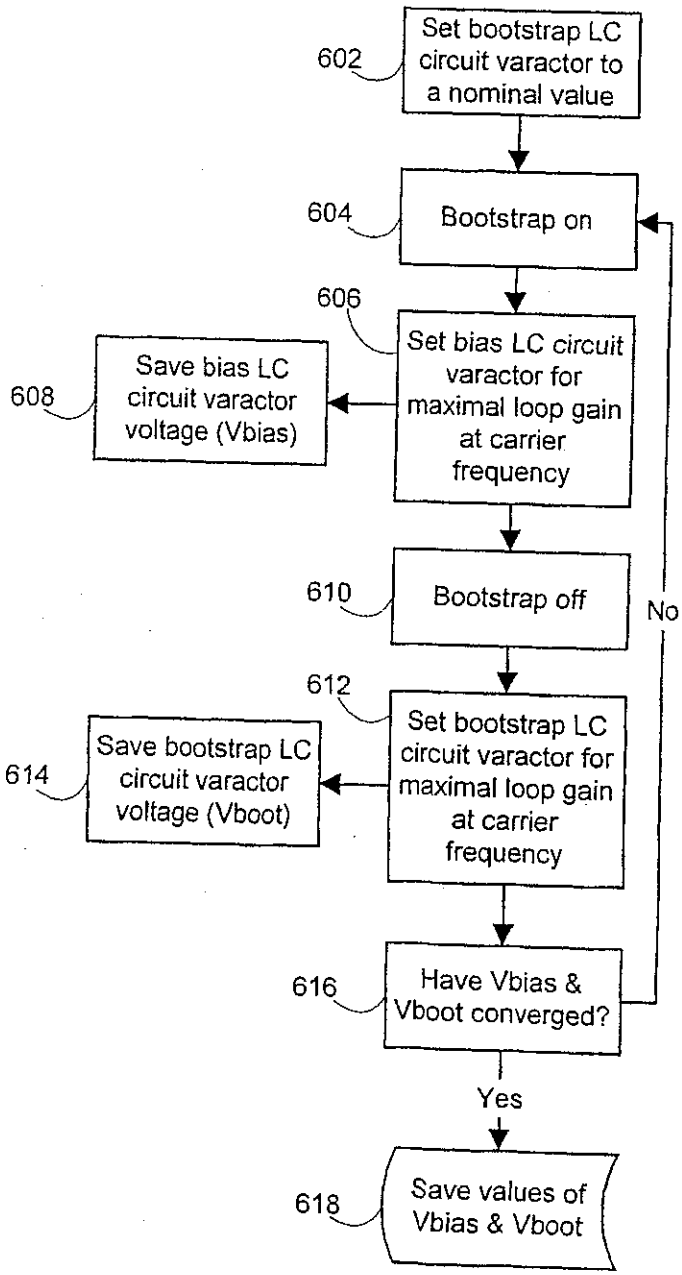

602
Set bootstrap LC circuit varactor to a nominal value
604
Bootstrap on
606
Set bias LC circuit varactor for maximal loop gain at carrier frequency
608
Save bias LC circuit varactor voltage (Vbias)
610
Bootstrap off
612
Set bootstrap LC circuit varactor for maximal loop gain at carrier frequency
614
Save bootstrap LC circuit varactor voltage (Vboot)
616
Have Vbias & Vboot converged?
No
Yes
618
Save values of Vbias & Vboot

Figure 6

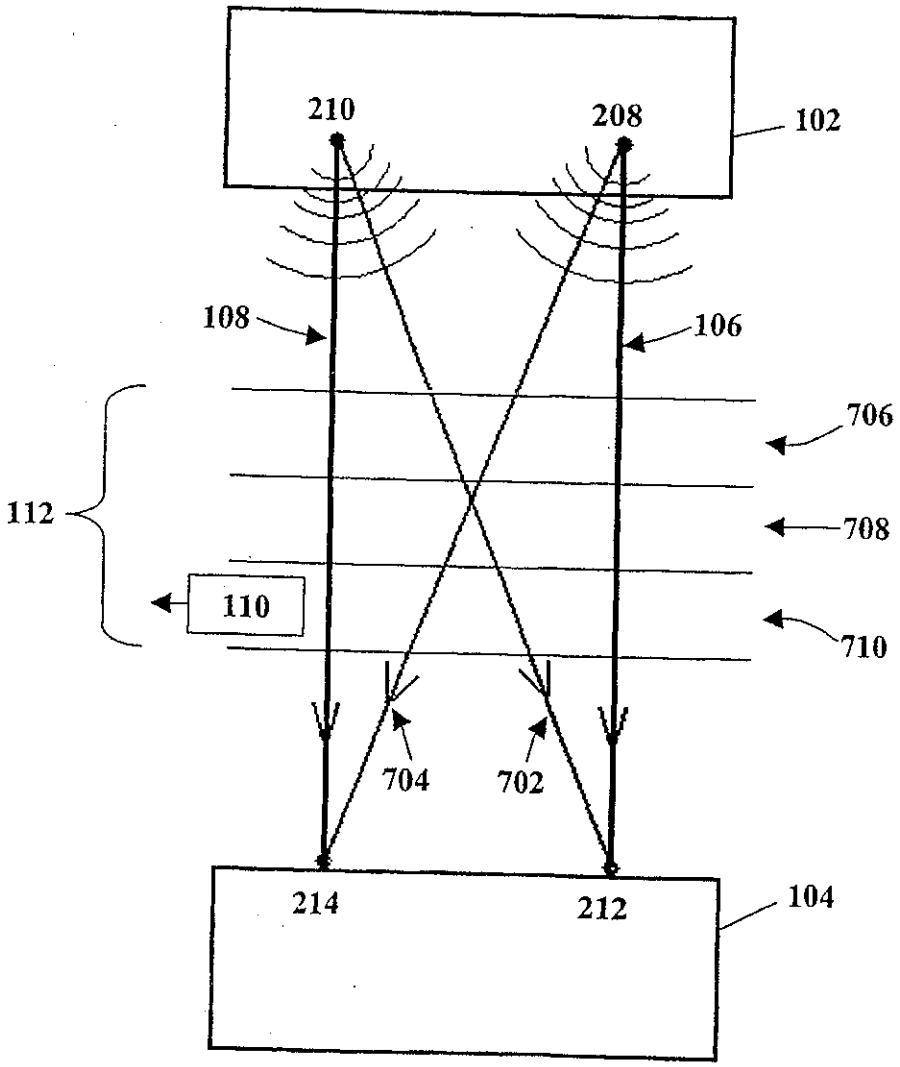


Figure 7