

(19)  
(12)

(KR)  
(A)

(51) 。 Int. Cl. <sup>7</sup>  
H04B 1/40

(11)  
(43)

2002 - 0092012  
2002 12 11

(21) 10 - 2001 - 0030855  
(22) 2001 06 01

(71) 20 LG

(72) 2 101 2203

(74)  
:

(54)

· (V<sub>rej</sub>) ,  
 ; (V<sub>fb</sub>) 1 ; 2  
 ; K , 가 가 k 가 가 (V<sub>rej</sub>), (V<sub>fb</sub>)  
 3

5

1

2 1

3

4

5 4

6

7 (a)

7 (b)

8 (a) - (c) k 가

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400 : 401 :

402 : D/A 403 :

404 : IQ 405 :

406 : 407 :

408 : 409 : A/D

410 : 410A :

501A,501B : 502A,502B :

503 : 504 :

505 : 506 :

1 , (100)

(I/Q) , (111)

(101) ; (101) D/

A (102) ; D/A (102) (103) ; (107)

(103) ; (Up Converter)(1

04) ; (104) (105) ; (105)  
 , (106) ; (107) (105)  
 onverter)(108) ; (108) (Down C  
 ; A/D (109) (110) (100) A/D (109)  
 (105) (111) ,  
 (100) (I/Q)가 2 (101)  
 , (111) .  
 , (103) (101) D/A (102) .  
 , (104) (105) (106)  
 가 (Output) .  
 , (111) (101) (106)  
 , (108) (107) , (106)  
 (100) , (111) A/D (109) 가 A/D (109) (110)  
 (105) .  
 (111) (11  
 0) (Micros  
 trip Line)  
 , 3 .

$(V_{rej})$ ,  
 $(V_{fb})$  1 ;  
 2 ;  
 $(V_{rej}), (V_{fb})$  K 가 가 k 가 가  
 3  
 4  
 (400) (I/Q) (411)  
 ; (401) ; (401) D  
 /A (402) ; D/A (402) (403) ; (403) ; (407)  
 IQ (404) (404) (405) ; IQ (404) ;  
 (406) ; (407) (405)  
 erter) (408) ; (408) (Down Conv  
 ; (401) ( $V_{rej}$ ) (406) A/D (409)  
 ( $V_{fb}$ ) (410) , 5 k 8  
 .  
 4 3 , (410)  
 .  
 , (400) (I/Q)가 (401) , (4  
 11) D/A (402)  
 , (403) IQ (404)  
 가 가 (405) (406)  
 가 (Output)  
 , (408) (407) , (406)  
 . ( $V_{rej}$ ) (410) A/D (409) 가 A/D (409)  
 ( $V_{fb}$ ) (400)  
 , (410) (410A) ( $V_{rej}$ ), ( $V_{fb}$ )가 , 가  
 가 가 " 0" 가  
 . 6 ( $V_{rej}$ ), ( $V_{fb}$ )가  
 가 가 ( $V_{fb}$ ) 가 ( $V_{rej}$ ), ( $V_{fb}$ )  
 410) (410A) (DSP: Digital Signal Process) (410A) ( $V_{rej}$ ), ( $V_{fb}$ )  
 , (410A) 5

(410A) (gathering) (400) (  $V_{ref}$  ) (  $V_{fb}$  )

$$V_{ref}=[V_{ref}(1),V_{ref}(2),V_{ref}(3),\dots,V_{ref}(m)]$$

$$V_{fb}=[V_{fb}(1),V_{fb}(2),V_{fb}(3),\dots,V_{fb}(m),\dots,V_{fb}(m+k)]$$

(OSR: Over Sampling Rate) (  $V_{ref}$  ) (  $V_{fb}$  ) (501A),(501B) , 7 (a),(b) ,

가 , DSP

가 (503) , (502A),(502B) (  $V_{ref}$  ), (  $V_{fb}$  ) (  $V_{ref}$  ), (  $V_{fb}$  ) (502B) (501B) (502A) (  $V_{ref}$  ), (  $V_{fb}$  ) (503) (504)

(504) 5) (  $V_{ref}$  ), (  $V_{fb}$  ) ( ) (505) (506) (501A) (50)

" 0" (  $V_{ref}$  ), (  $V_{fb}$  ) 가 가 (506)

(506) , k 1 가

$$\sum_{n=1}^m |V_{ref}(n)-V_{fb}(n+1)|, \sum_{n=1}^m |V_{ref}(n)-V_{fb}(n+2)|, \dots, \sum_{n=1}^m |V_{ref}(n)-V_{fb}(n+k)|$$

8 (a),(b),(c) , k 가 (  $V_{ref}$  ), (  $V_{fb}$  ) 가 (  $V_{ref}$  ), (  $V_{fb}$  )

가 , k (506) 가 , ( V<sub>rej</sub>), ( V<sub>fb</sub>)

( V<sub>rej</sub>), ( V<sub>fb</sub>) K ( V<sub>rej</sub>), ( V<sub>fb</sub>) (Time Delay)

$$\frac{1}{Time\ Delay} = \frac{Sampling\ Rate}{Over\ Sampling\ Rate} \times k$$

$$\therefore Time\ Delay = \frac{Over\ Sampling\ Rate}{Sampling\ Rate \times k}$$

가가 가 .

(57)

1.

( V<sub>fb</sub>) 1 ; ( V<sub>fb</sub>) , 2 ; k k  
3 가 , k

2.

1 , 2 ( V<sub>rej</sub>), ( V<sub>fb</sub>) 1 ;  
( V<sub>rej</sub>) ( V<sub>fb</sub>) 3 2 ;

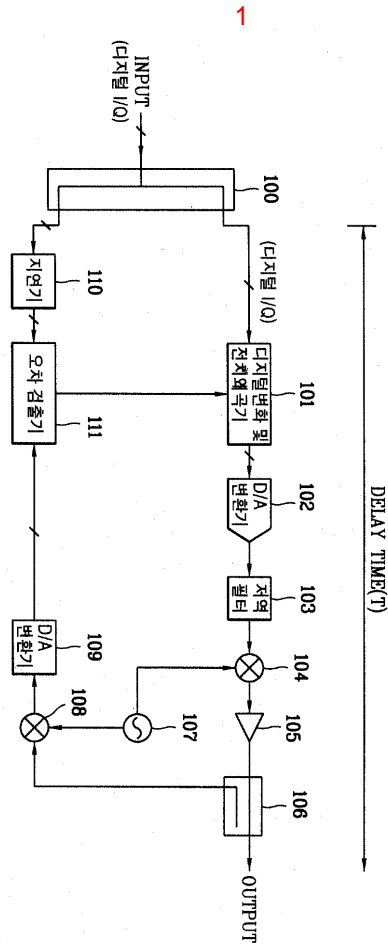
3.

1 , 3 K ( V<sub>rej</sub>), ( V<sub>fb</sub>)

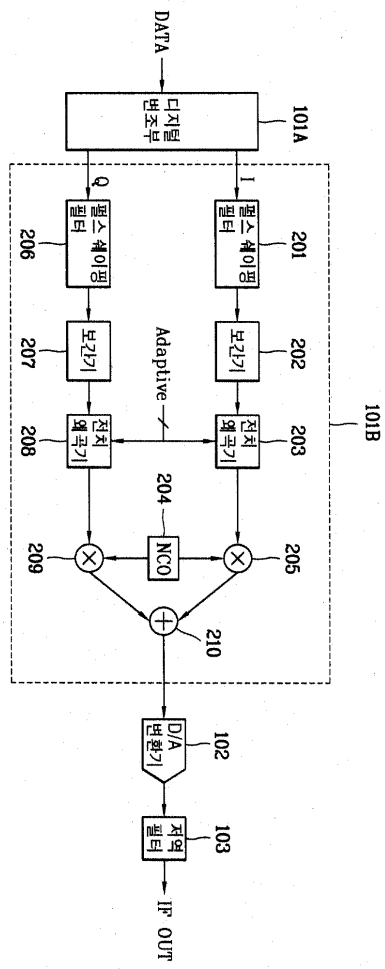
4.

1 , k

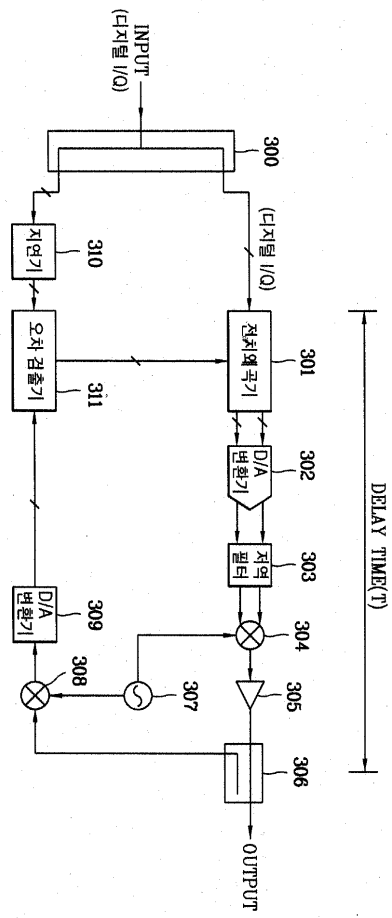
$$\text{시간 지연값} = \frac{\text{오버샘플링레이트}}{\text{샘플링레이트} \times k}$$



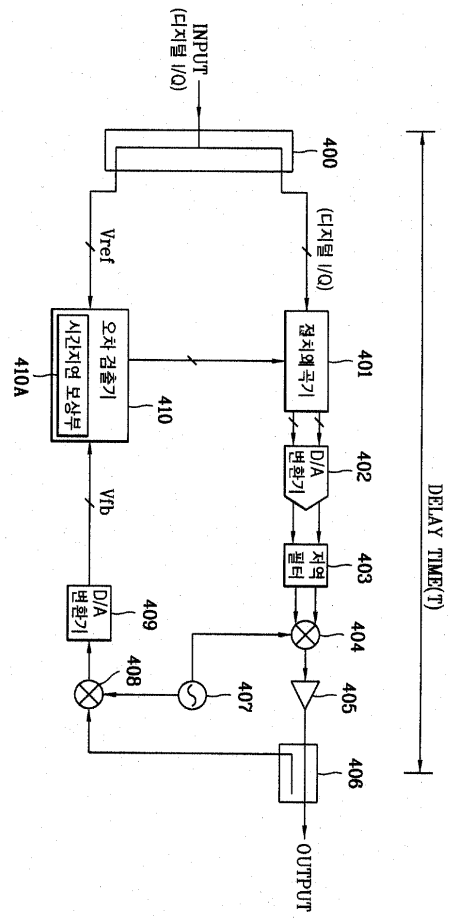
2



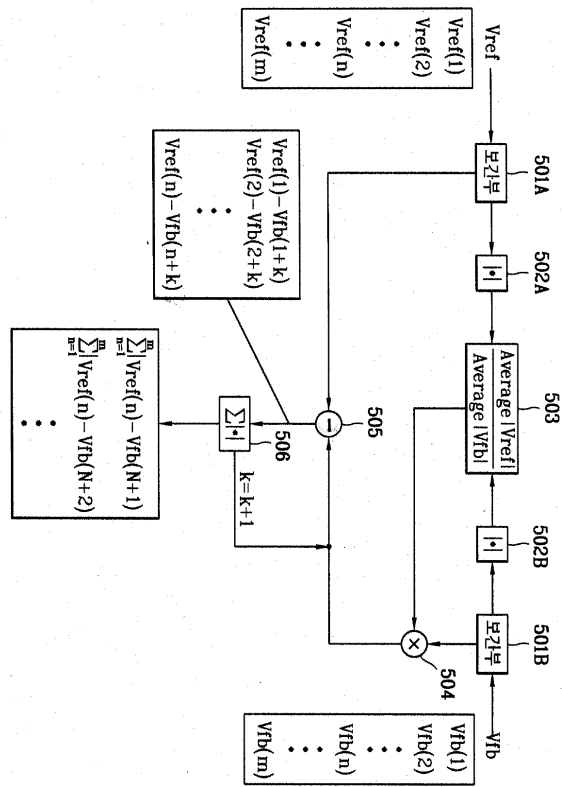
3



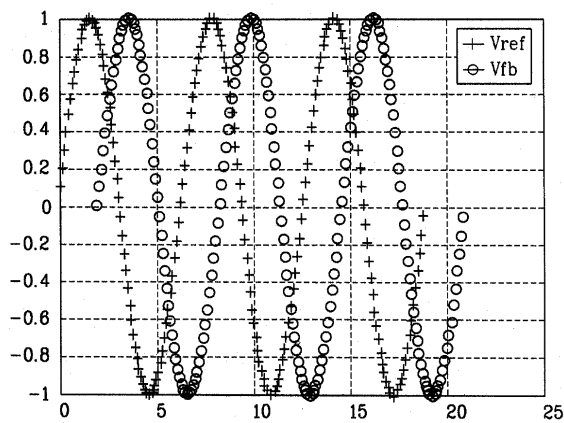
4



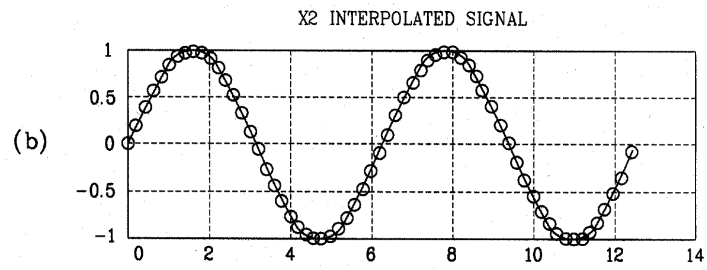
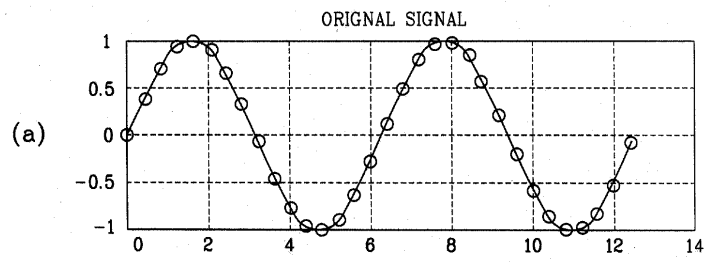
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6



7



8

