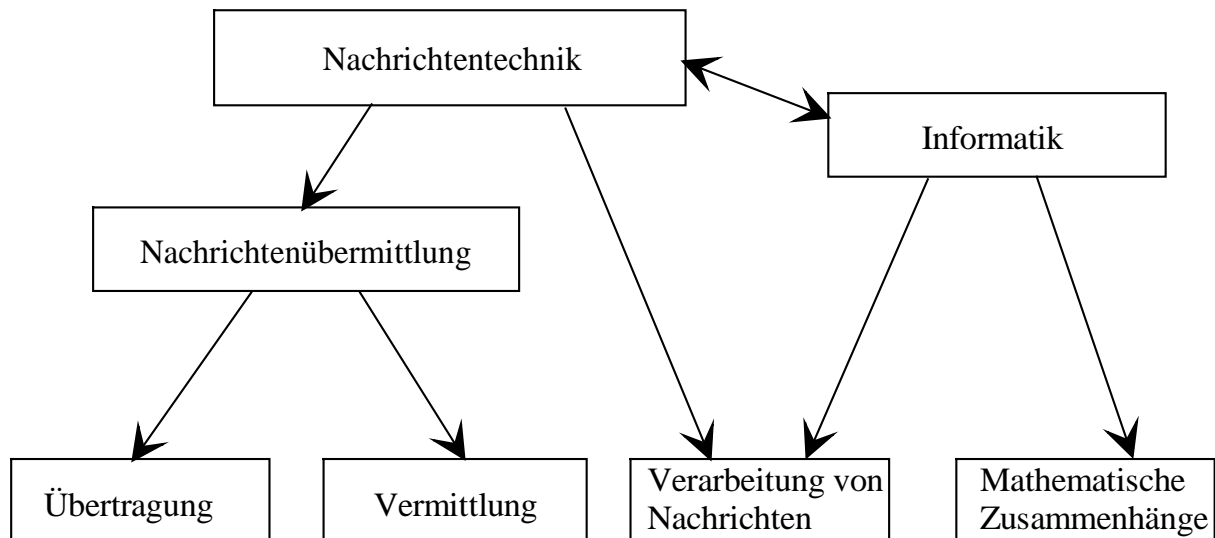
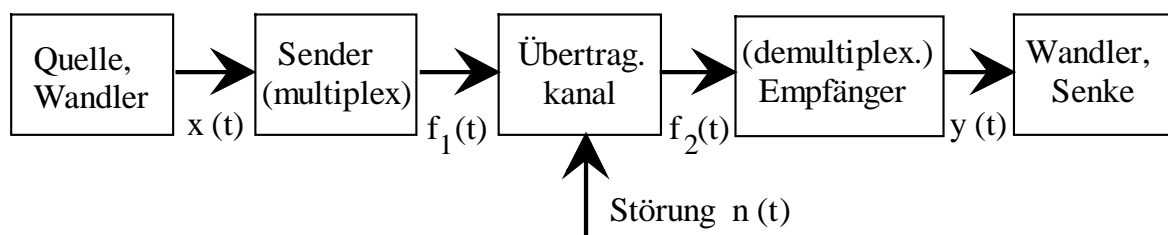


Grundlagen der Nachrichtentechnik

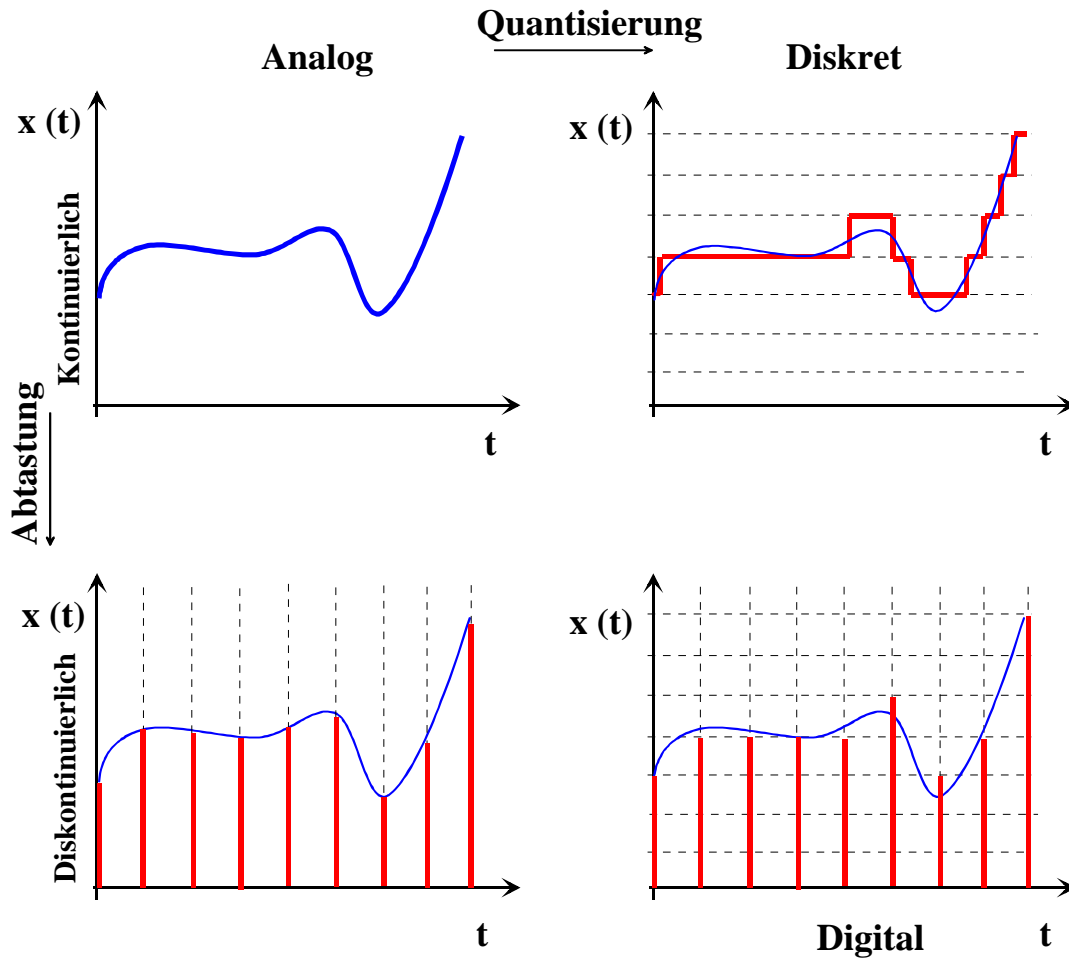
Teil 1 „Grundlagen, A/D-Wandlung, Codierung, analoge Modulation“



Folie 1 Verknüpfung Nachrichtentechnik - Informatik

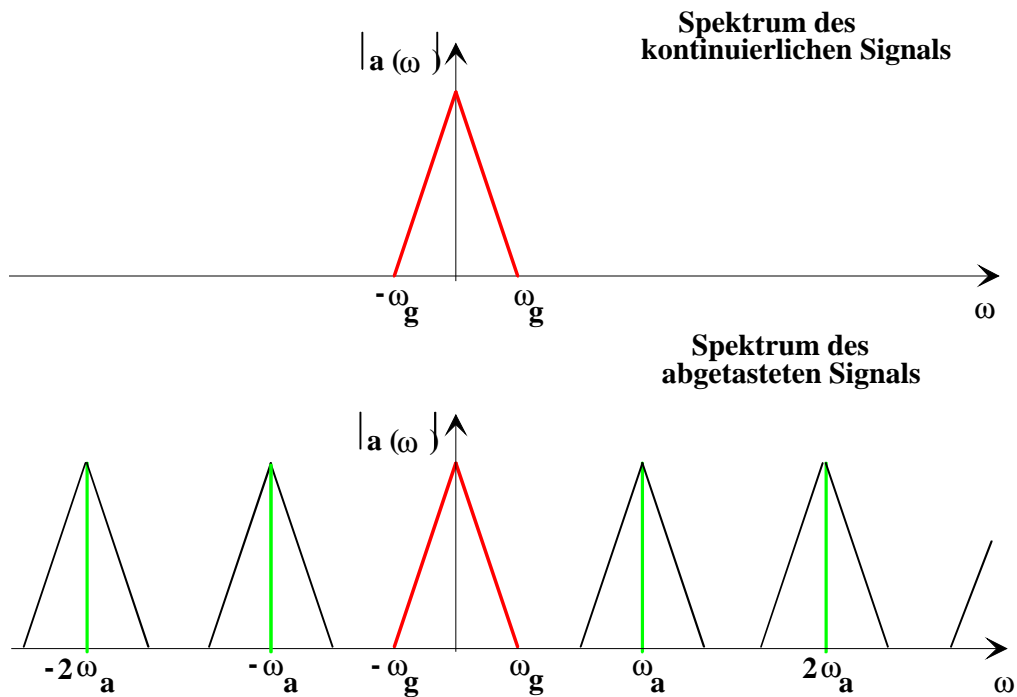


Folie 2 Grundschemata einer Übertragungsstrecke



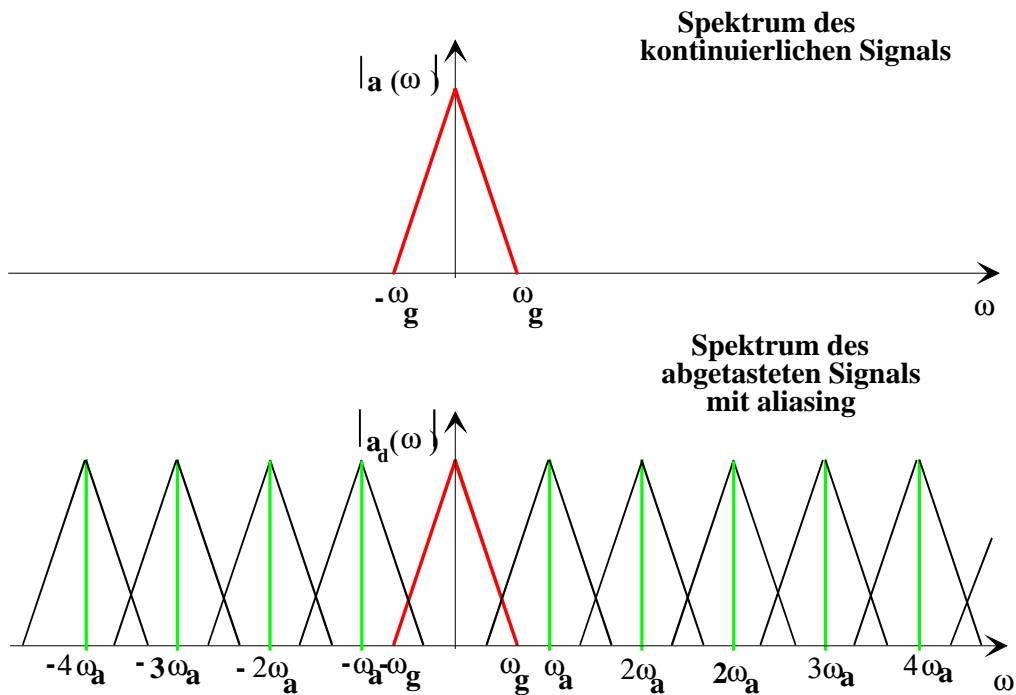
Folie 3 Signalklassifikation nach Wertevorart und zeitlicher Existenz

Spektrumerweiterung durch Abtastung

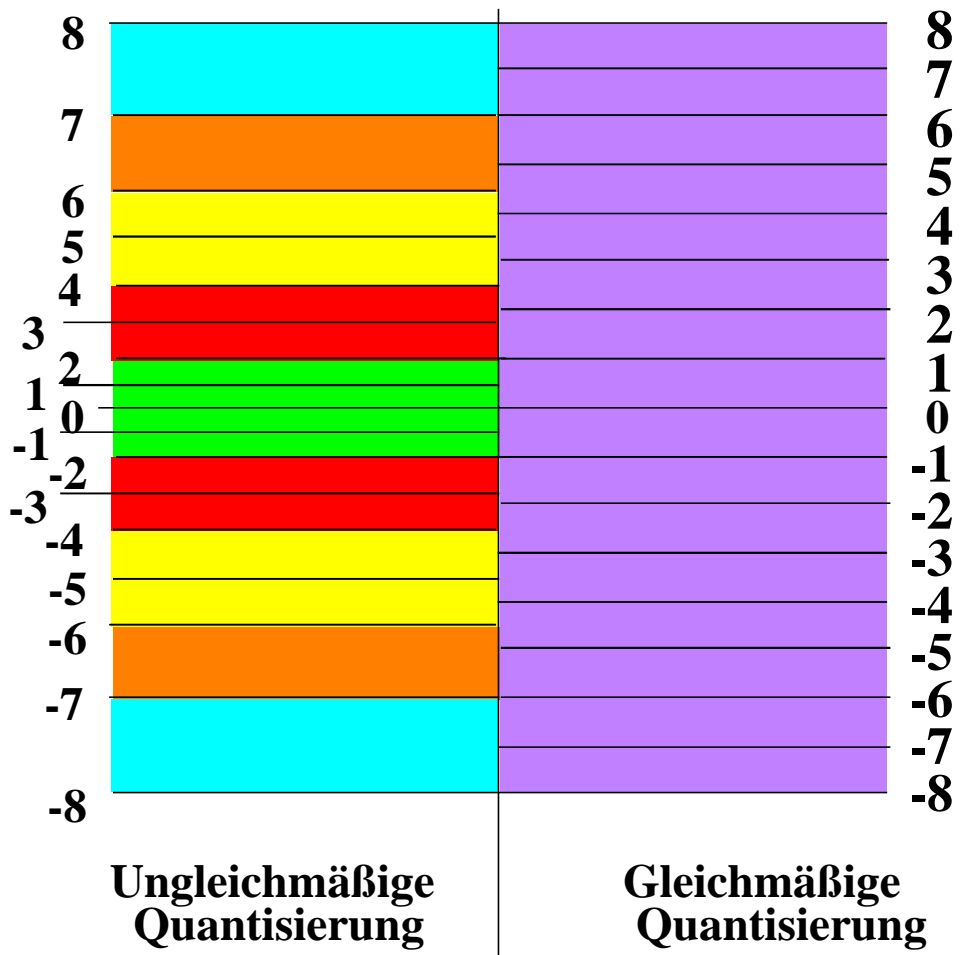


Folie 4 Spektrum eines abgetasteten Signals

Aliasing bei zu geringer Abtastfrequenz

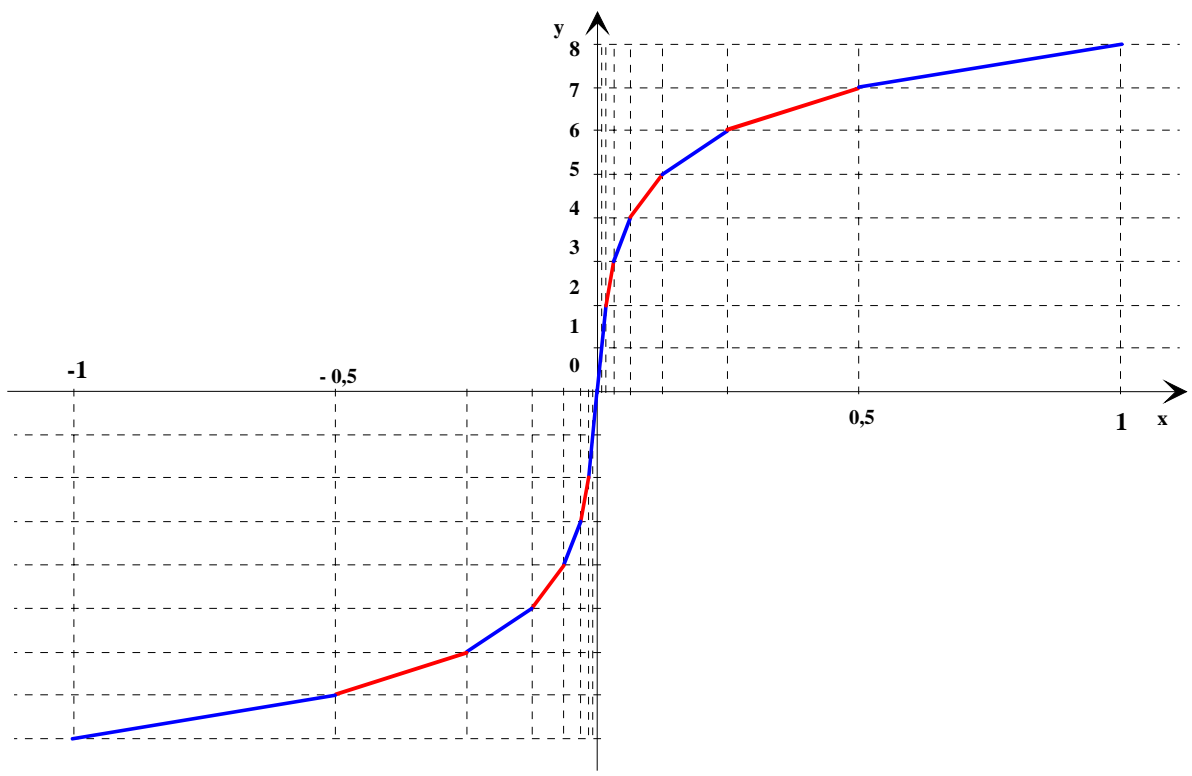


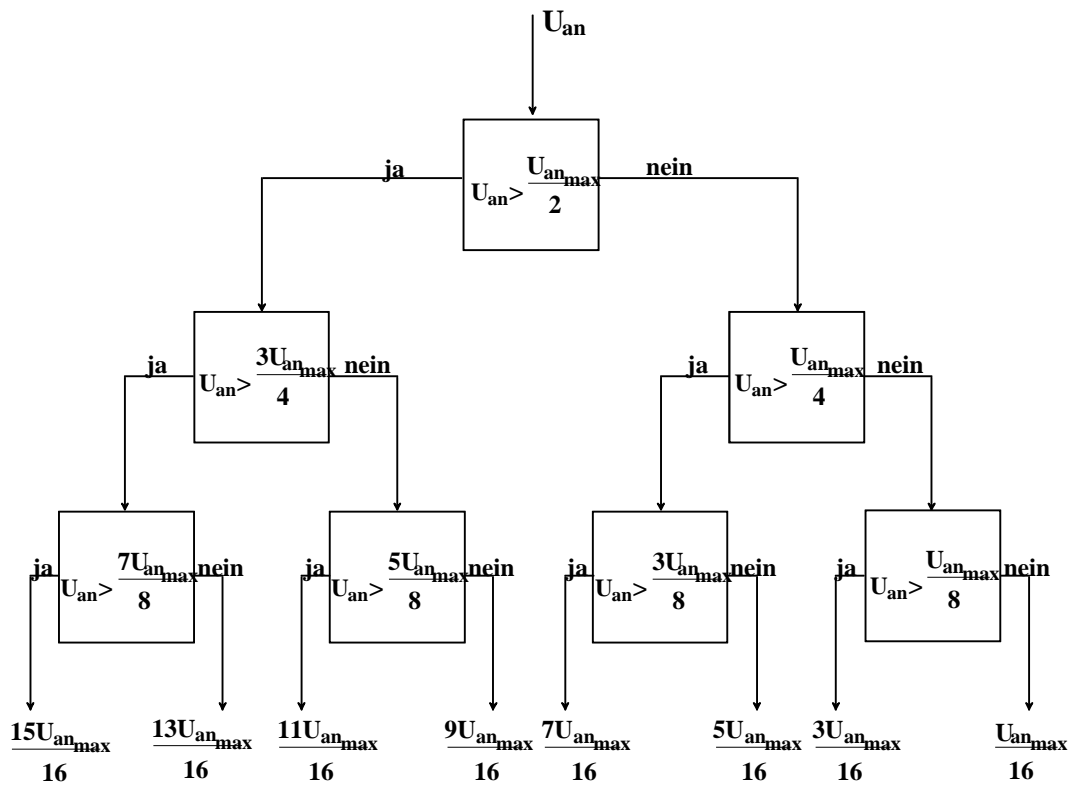
Folie 5 Aliasing bei zu geringer Abtastfrequenz



Folie 6 Quantisierungsprinzipien

Folie 7
 13 - Segment - Kennlinie nach CCITT - Empfehlung G. 711

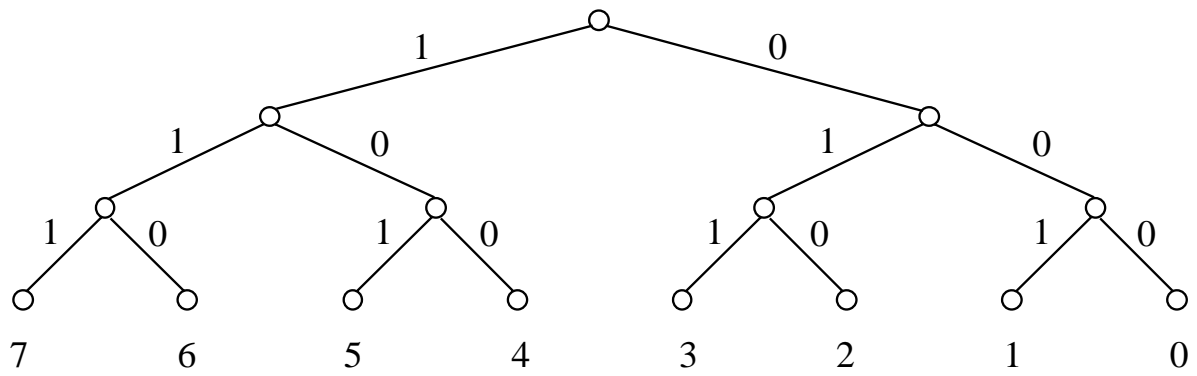




Folie 8 Prinzip der schrittweisen Approximation

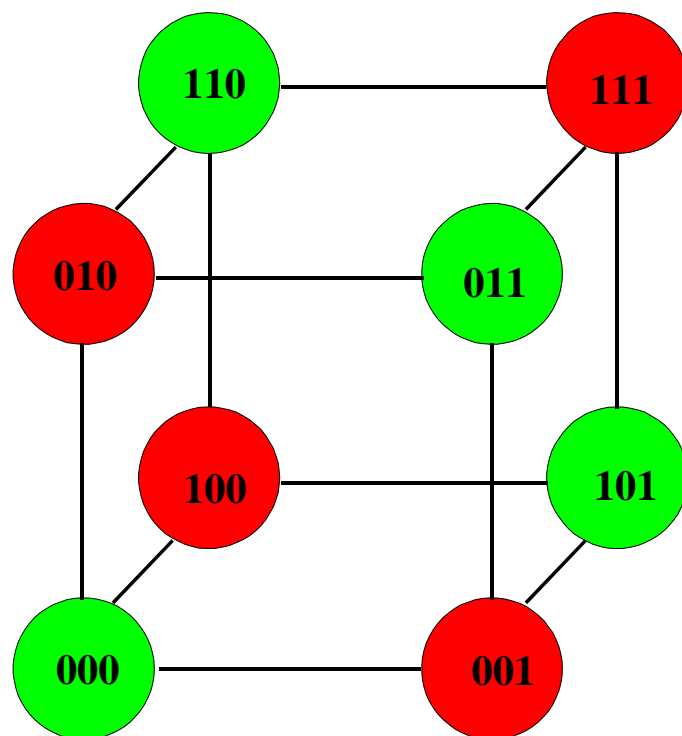
Decimalcode	Binärcode	Graycode	Hexadecimalcode
0	0000	0000	0
1	0001	0001	1
2	0010	0011	2
3	0011	0010	3
4	0100	0110	4
5	0101	0111	5
6	0110	0101	6
7	0111	0100	7
8	1000	1100	8
9	1001	1101	9
10	1010	1111	A
11	1011	1110	B
12	1100	1010	C
13	1101	1011	D
14	1110	1001	E
15	1111	1000	F

Folie 9 Codetabelle



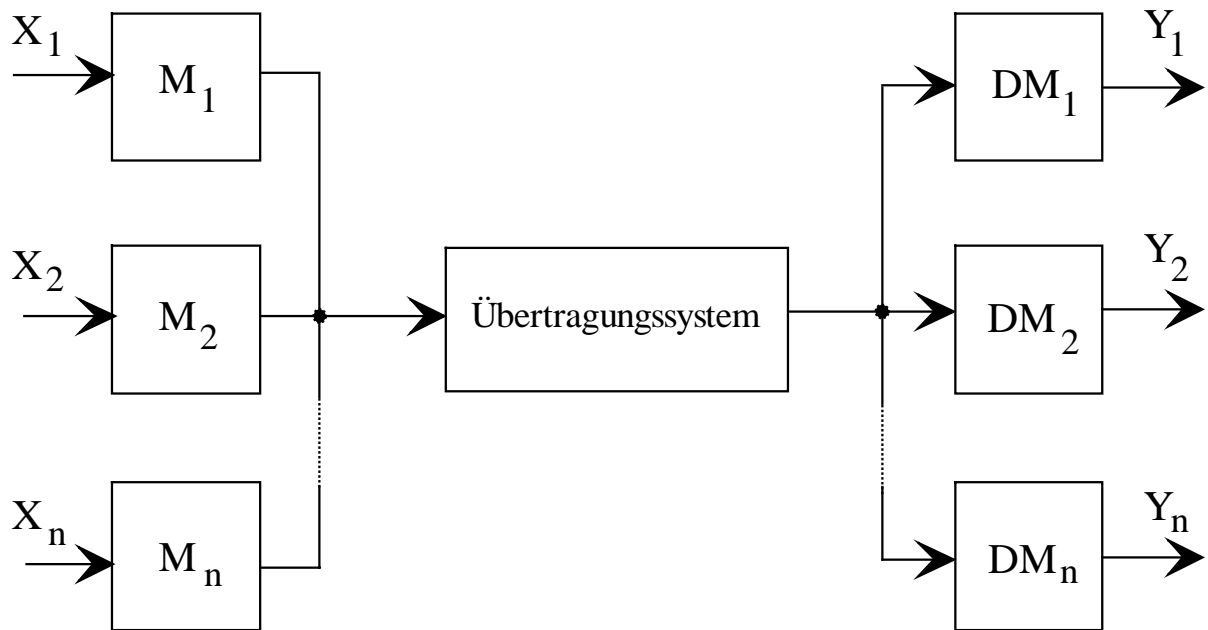
Folie 10

Codebaum

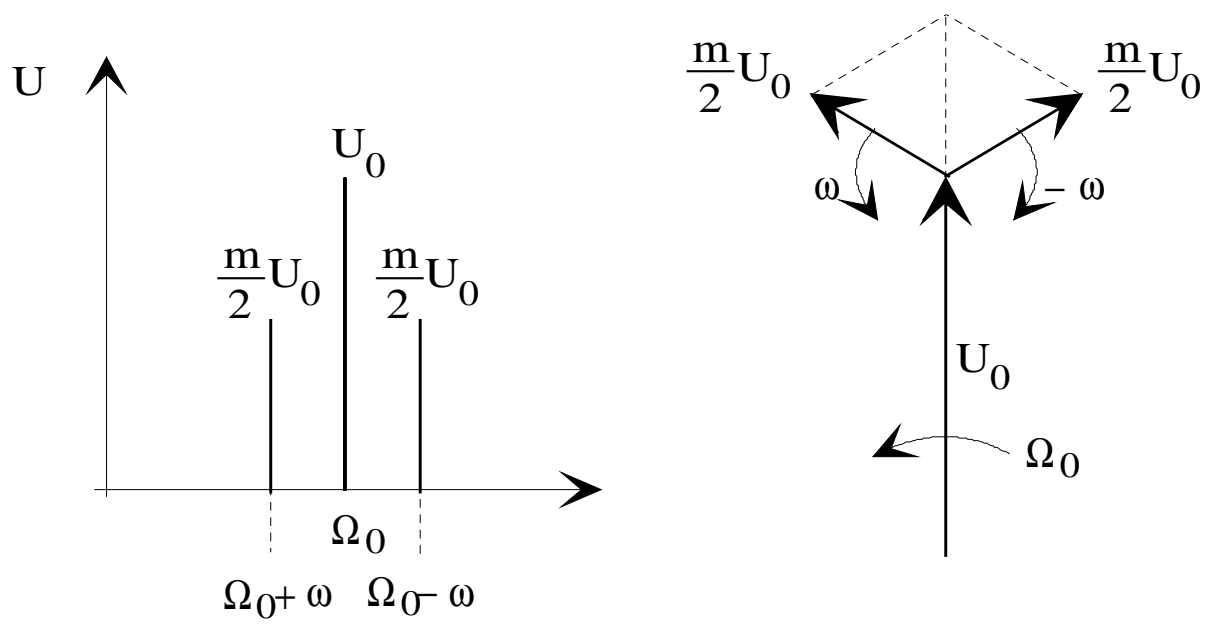


Folie 11

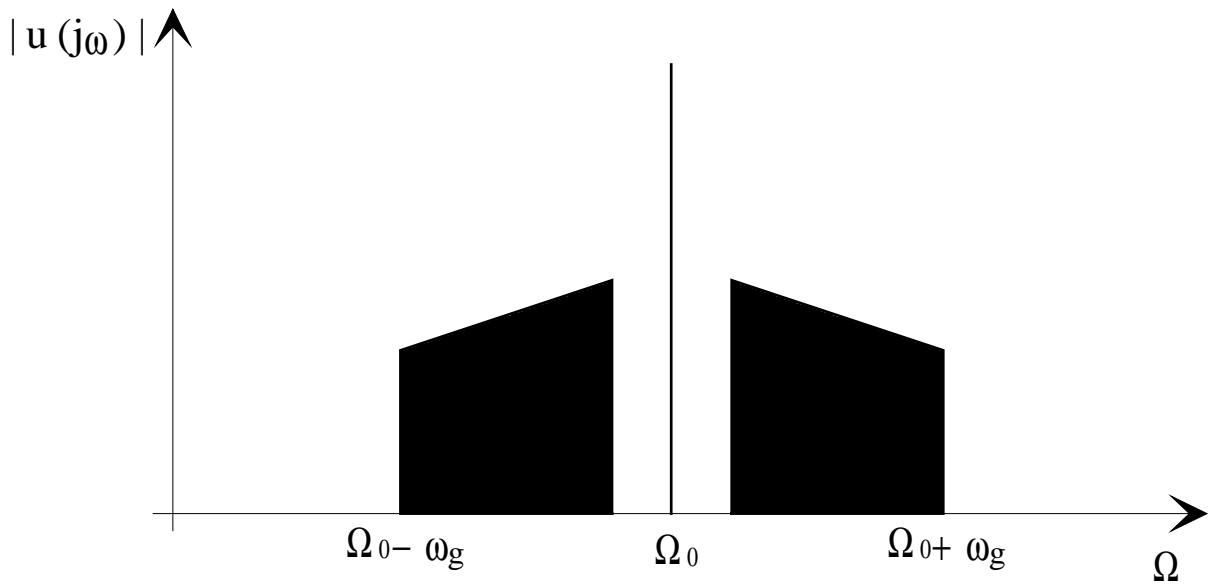
Geometrisches Codemodell



Folie 12 Multiplexsystem

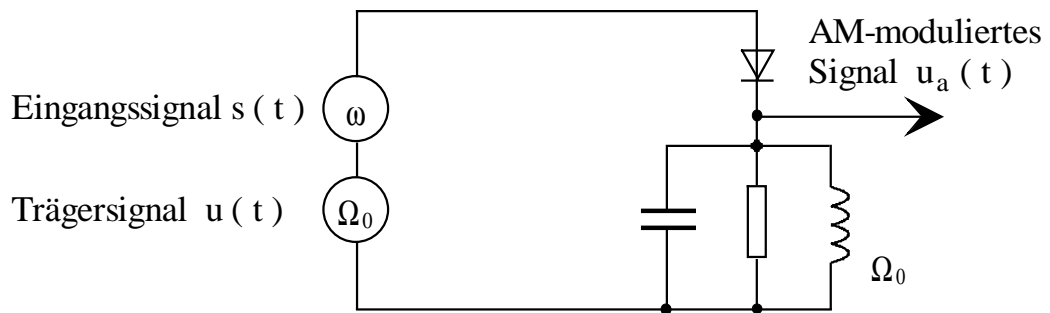


Folie 13 Entstehung der Seitenfrequenzen bei der Amplitudenmodulation



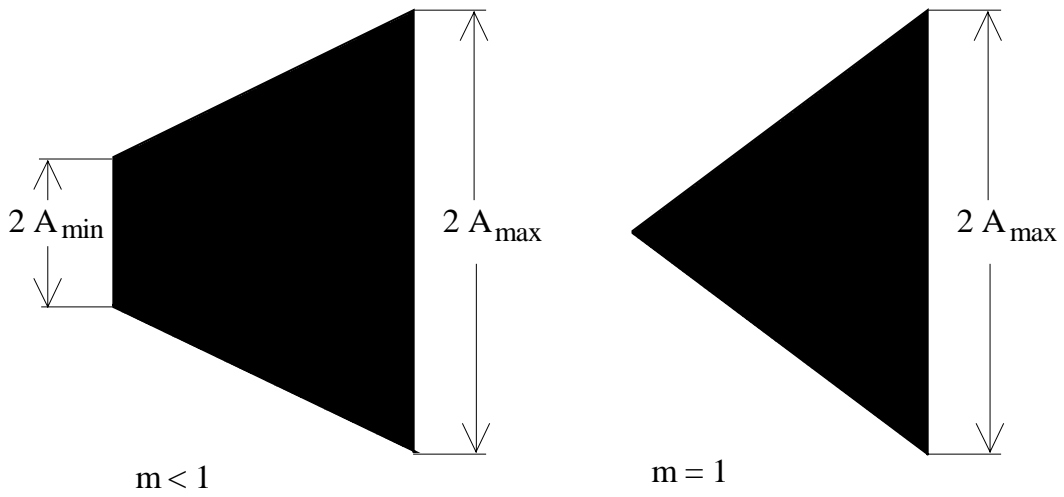
Folie 14

Seitenbänder bei der DSB

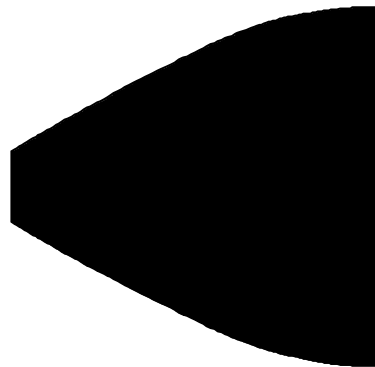


Folie 15

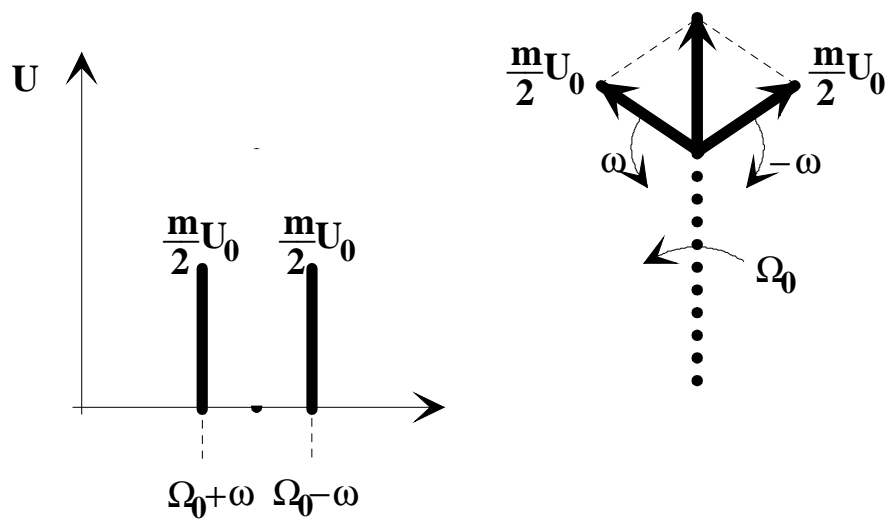
Beispiel einer Amplitudenmodulation an einer Diode



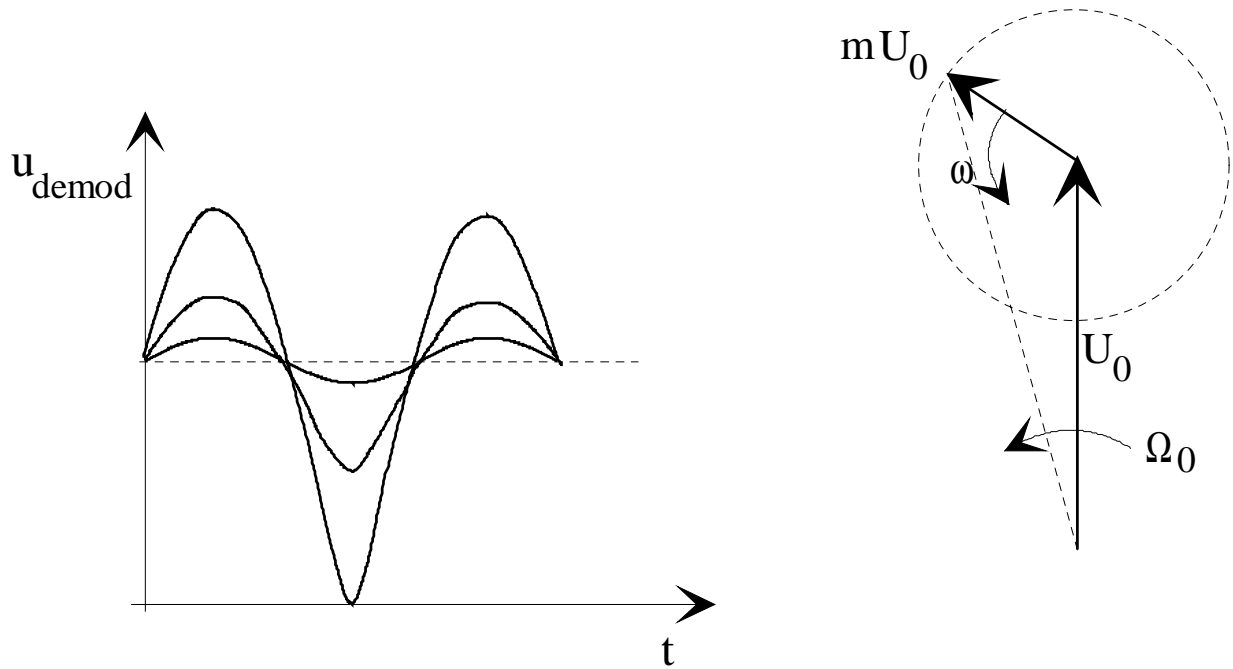
Folie 16 Modulationstrapez



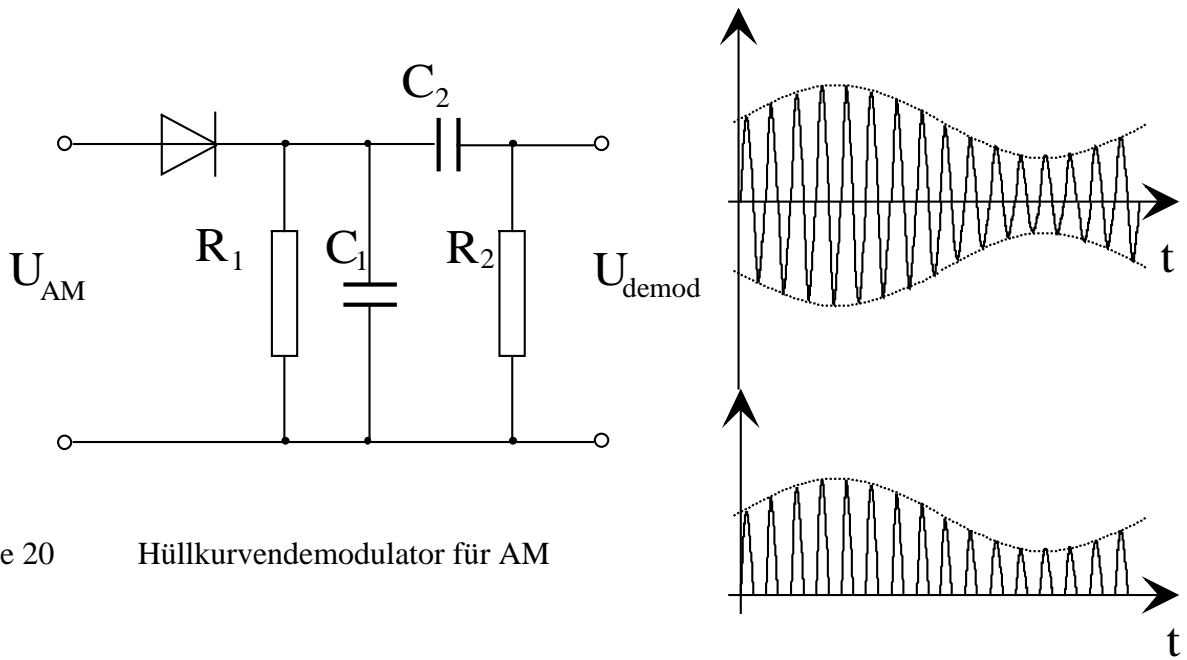
Folie 17 Modulationstrapez einer amplitudenmodulierten Schwingung mit Verzerrungen



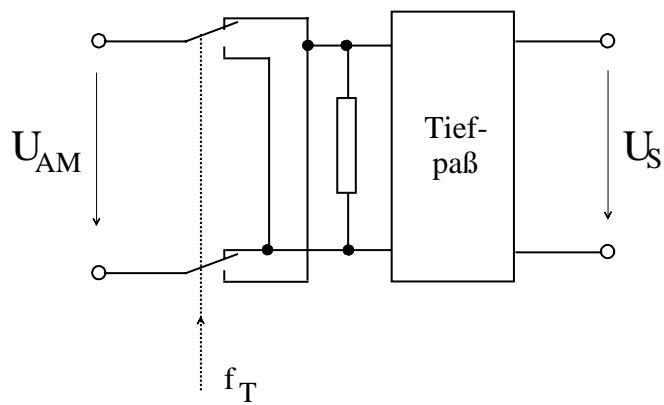
Folie 18 DSB mit Trägerunterdrückung



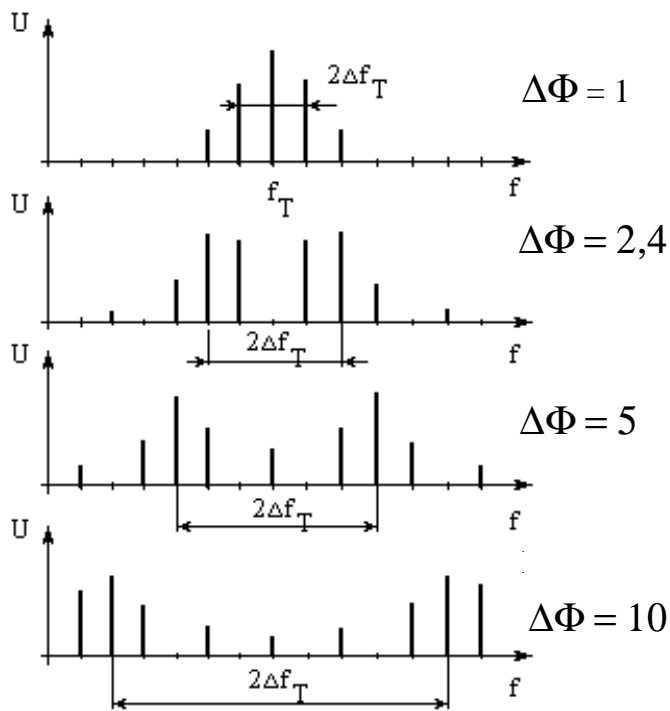
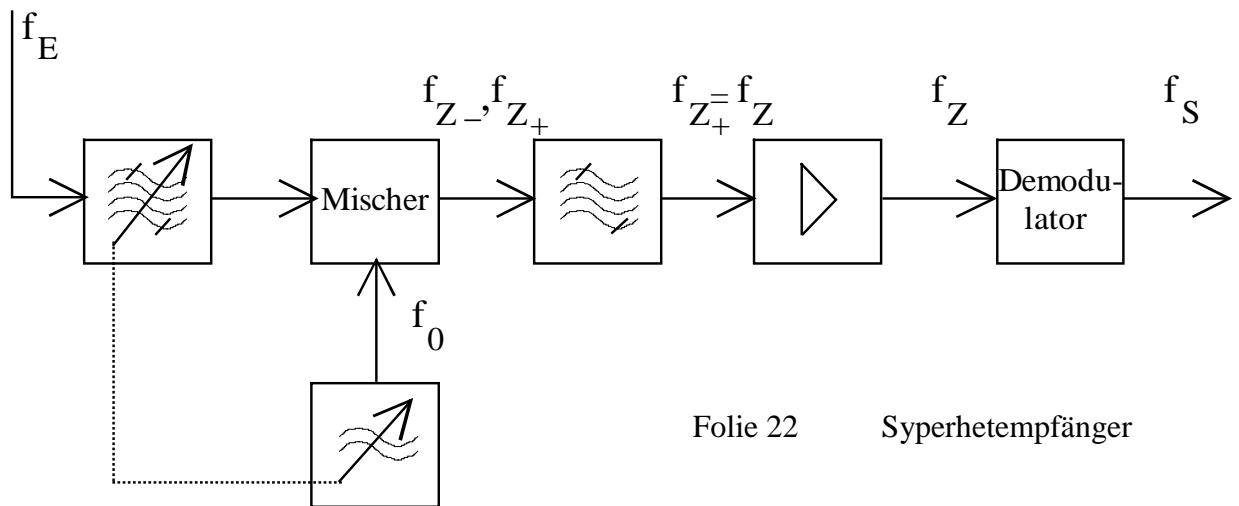
Folie 19 Zeigerbild und demoduliertes Signal einer SSB mit verschiedenen Modulationsgrad



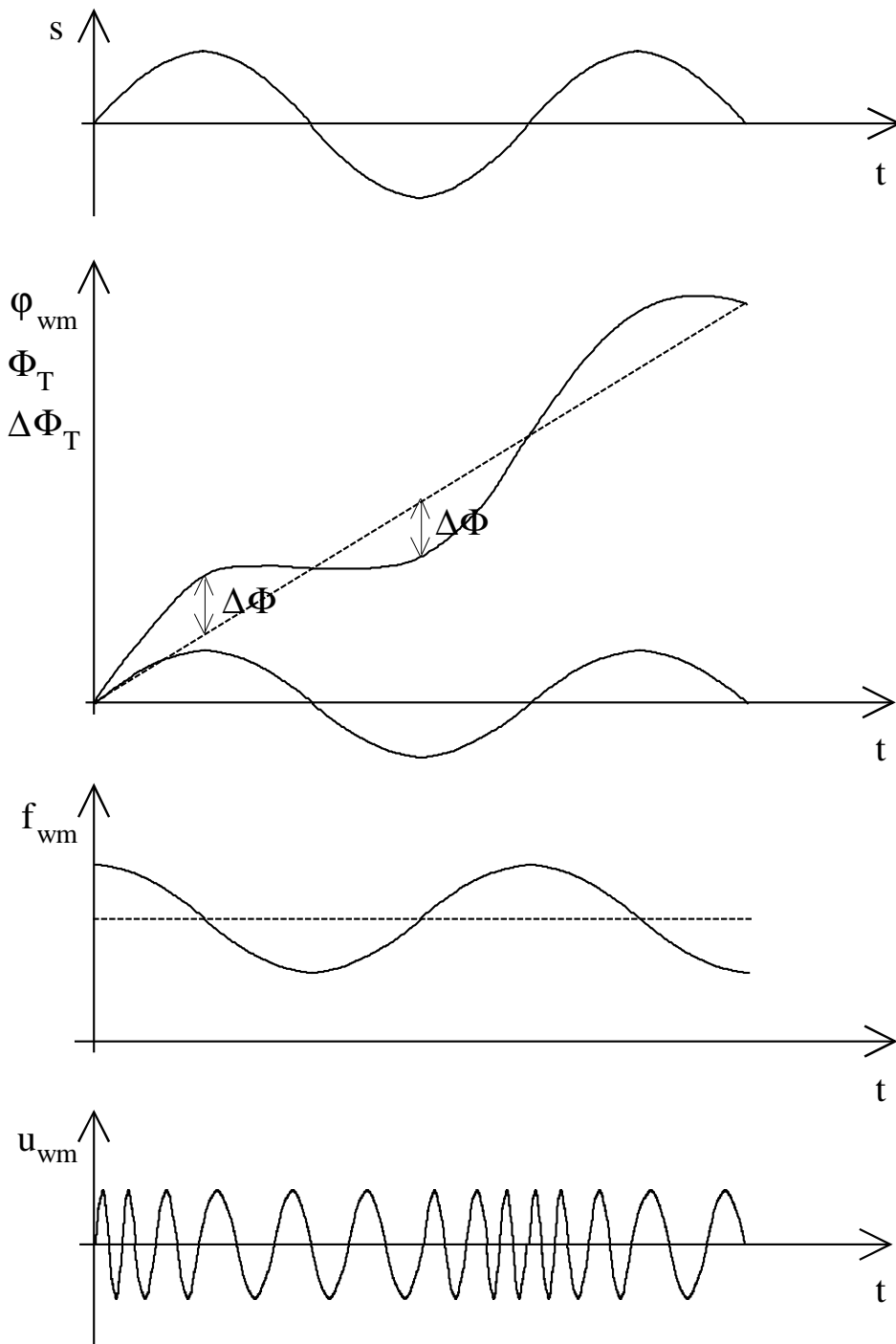
Folie 20 Hüllkurvendemodulator für AM



Folie 21 Prinzip Synchrondemodulator

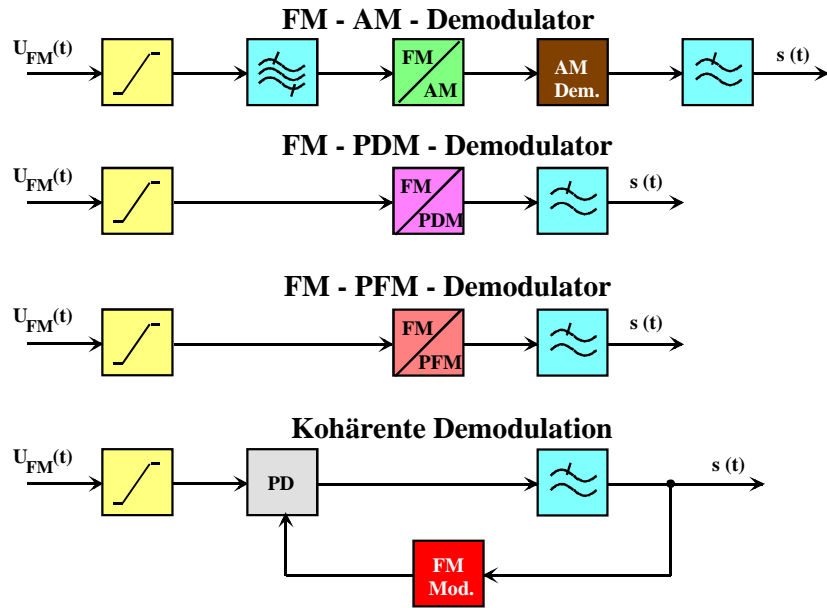


Folie 23 Spektrum einer winkelmodulierten Schwingung



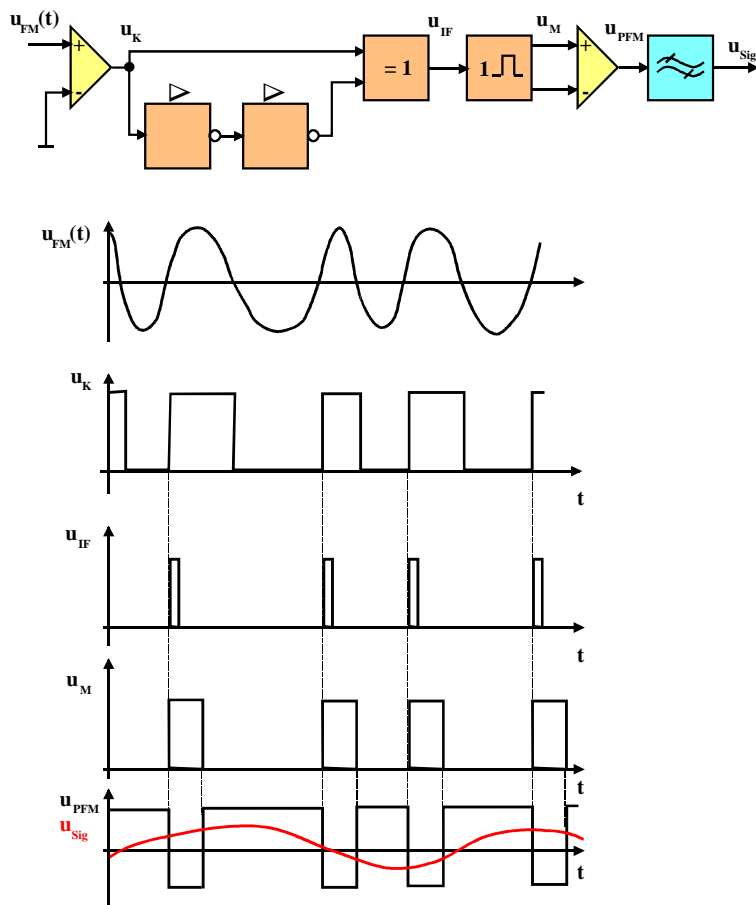
Folie 24 Prinzip der Winkelmodulation

FM - Demodulationsprinzipien



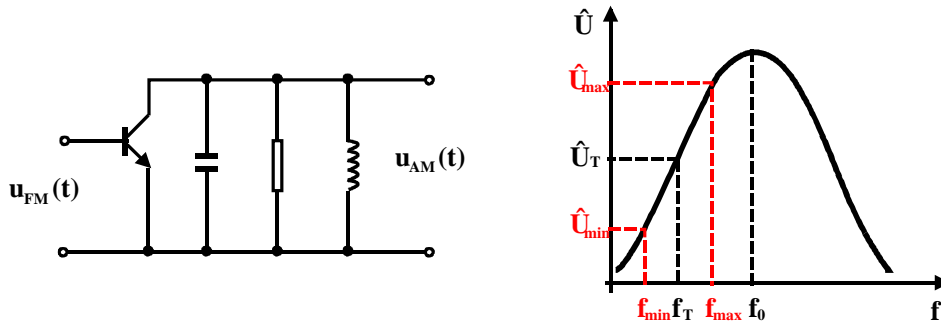
Folie 25

Prinzip der FM - PFM - Wandlung



Folie 26

Prinzip der FM - AM -Wandlung



Prinzip der FM - AM -Wandlung

