V59: Modulation und Demodulation

a) Modulationsspannung: $\omega_M = 43.8 \pm 0.5$ kHz p-p: $U = 95 \pm 1$ mV

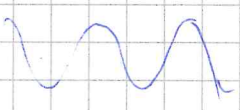
Trägerspannung: $\omega_T = 970 \pm 1$ kHz p-p: $U = 540$ mV

b)

$\omega_1 =$ $\omega_2 = 1016.6$ kHz

$\omega_d = 973.1$ kHz

c)



Diffusion min max: $U_{diff} = 19.750$ mV ± 0.02

$U_{T,max} = 43.250 \pm 0.02$ mV

Dioden-fehler $U = 13.750 \pm 0.02$ mV

d) $\omega_M = 211,5 \pm 0,4$ kHz

$\omega_T = 973 \pm 2$ kHz

e)

f in kHz (± 1)	U in mV (± 0.1)
10	0.5
20	4.7
30	12.4
40	20.7
50	28.0
60	34.7
70	41.1
80	46.7
90	52.0
100	56.7

Lautstärkeregler: $T = 250$ ns

f in MHz	U in V
0.1	-0.138
0.5	-0.109
1	-0.090
1.5	+0.043
2	+0.160
2.5	+0.148
3	+0.028
3.5	-0.091
4	-0.176

f in MHz (± 0.005)	U in V (± 0.001)
0.102	-0.155
0.299	-0.136
0.539	-0.075
1.000	0.012
1.330	0.077
1.675	0.136
2.000	0.175
2.515	0.108
3.015	0.004
3.500	-0.093
3.985	-0.166
4.495	-0.126
4.995	-0.028

5.500	0.075
5.980	0.153