Transient frequency behaviour

Standard:	ANSI C63.26 (2015)
Tested by:	JAT
Date:	5 November 2020
Temperature:	23 °C
Humidity:	32 %RH
Test result:	**PASS**

FCC Rule: 90.214
RSS-119 5.9

When a transmitter is turned on or off, the radio frequency may take some time to stabilize. During this initial period, the frequency error or frequency difference (i.e., between the instantaneous and the steady state frequencies) shall not exceed the limits specified for the equipment's frequency band and channel bandwidth:

Channel Bandwidth (kHz)	Time Intervals	Maximum Frequency Difference (kHz)	Transient Duration Limit (ms)
12.5	t_1	±12.5	10
	t_2	±6.25	25
	t_3	±12.5	10
25	t_1	±25	10
	t_2	±12.5	25
	t_3	±25	10

- t_{on} is the instant when a 1 kHz test signal is completely suppressed, including any capture time due to phasing
- t_1 is the time period immediately following t_{on}
- t_2 is the time period immediately following t_1
- t_3 is the time period from the instant when the transmitter is turned off until t_{off}
- t_{off} is the instant when the 1 kHz test signal starts to rise

The test was performed with unmodulated carrier at maximum power level.

Transmitter OFF to ON (12.5 kHz channel bandwidth)

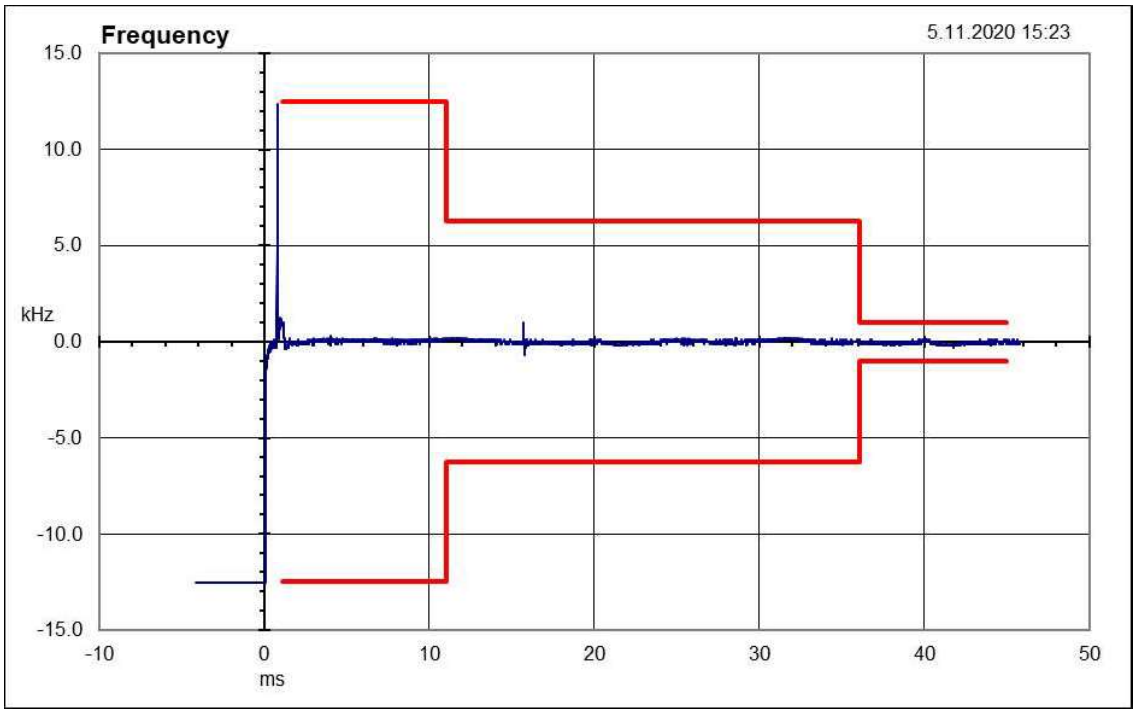

Figure 220: 410.0 MHz

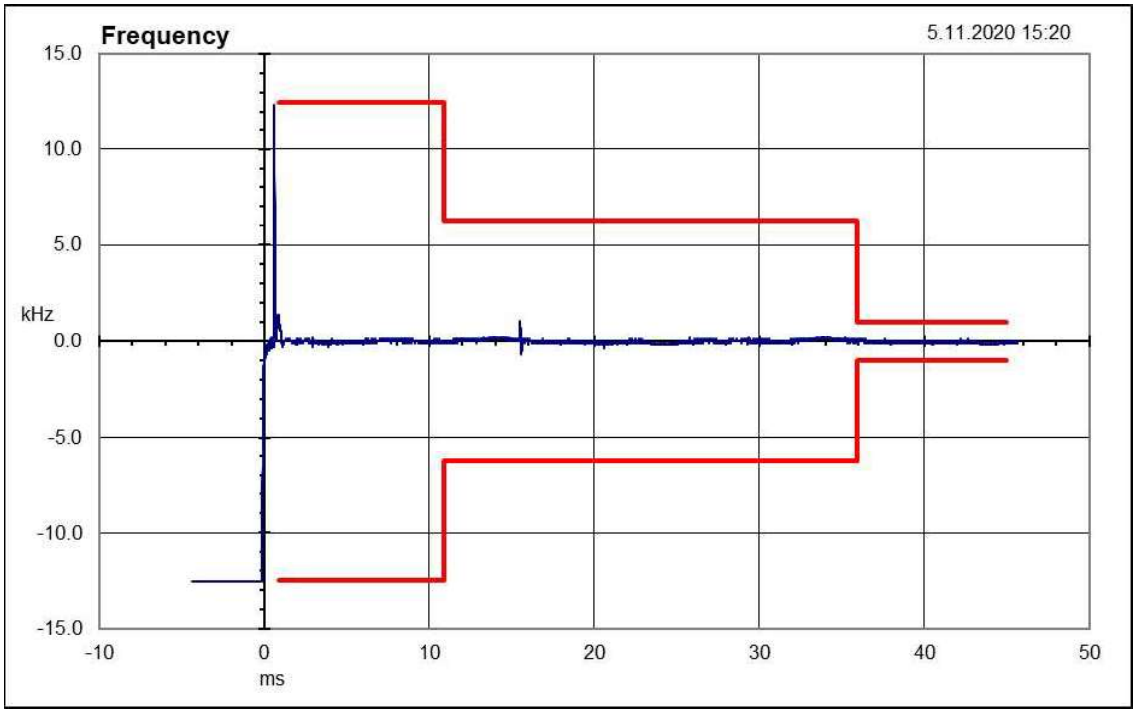

Figure 221: 429.5 MHz

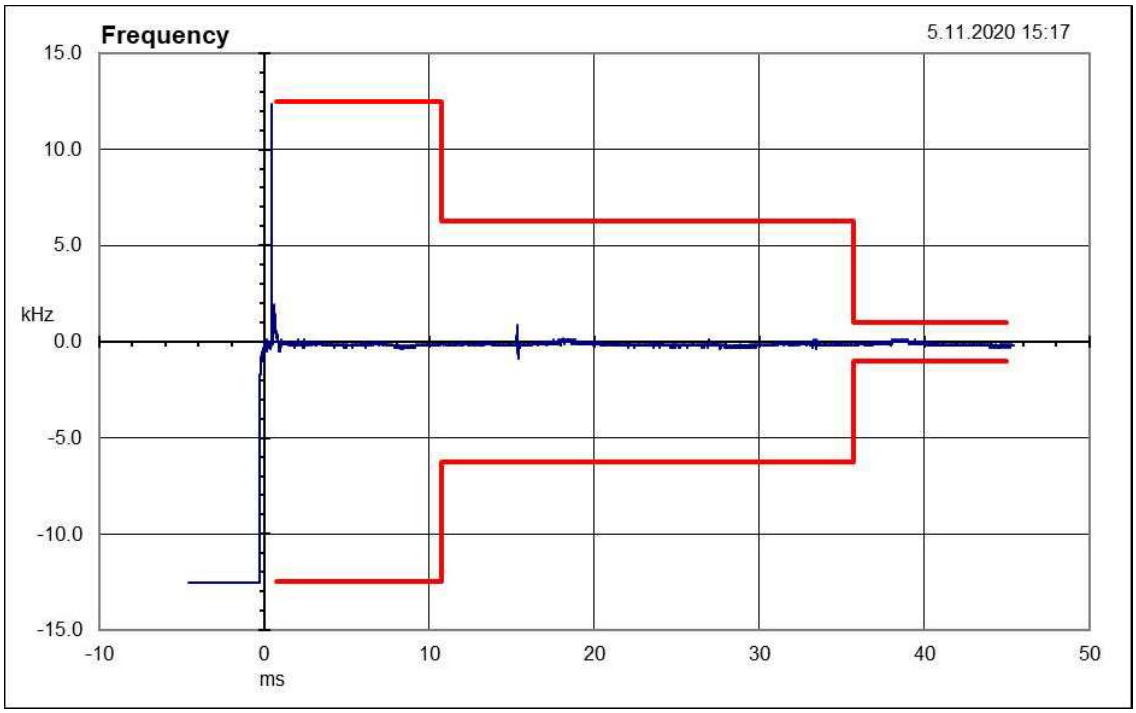

Figure 222: 450.5 MHz

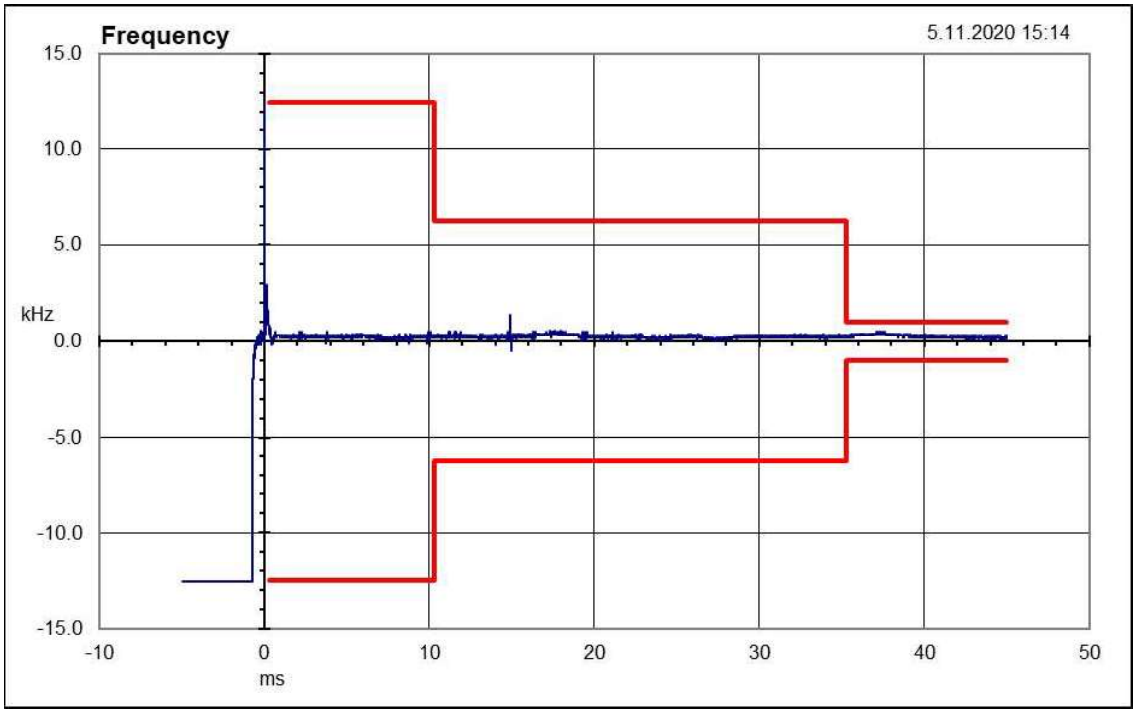

Figure 223: 469.5 MHz

Transmitter OFF to ON (25 kHz channel bandwidth)

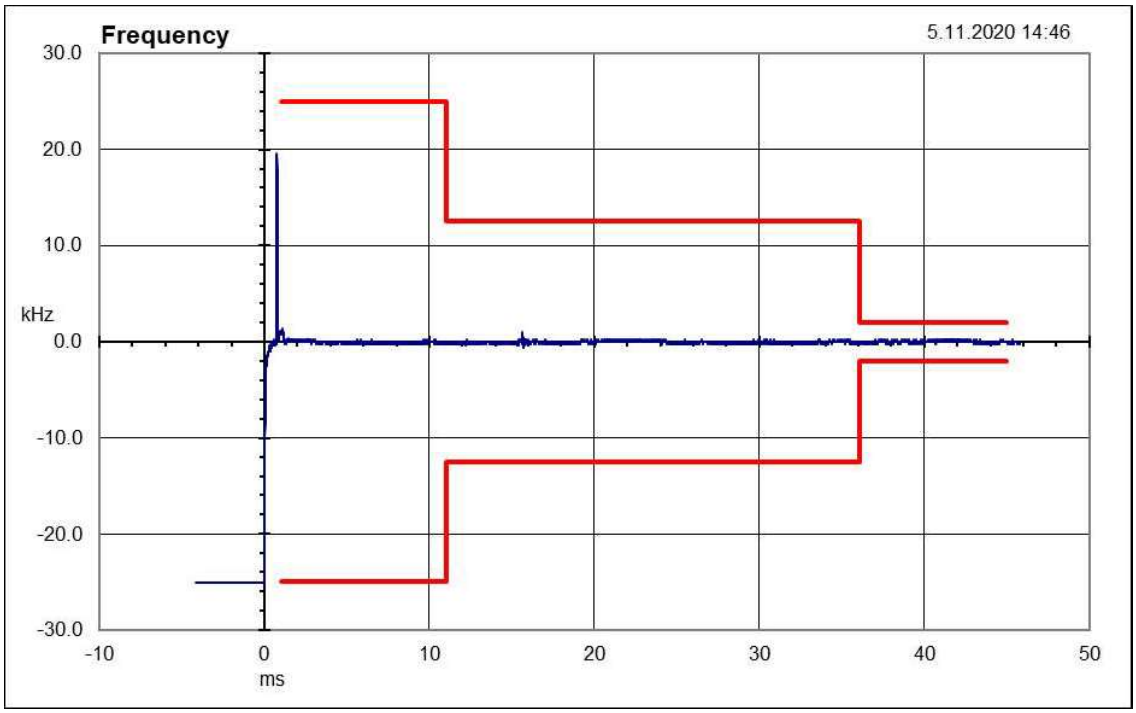

Figure 224: 410.0 MHz

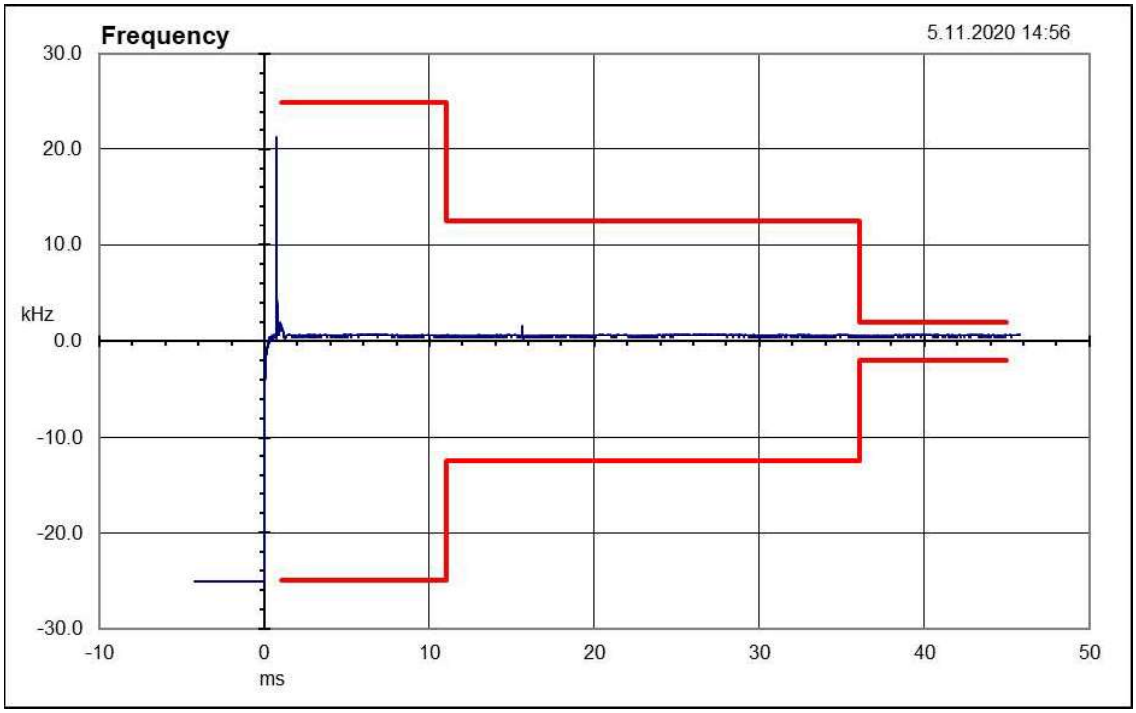

Figure 225: 429.5 MHz

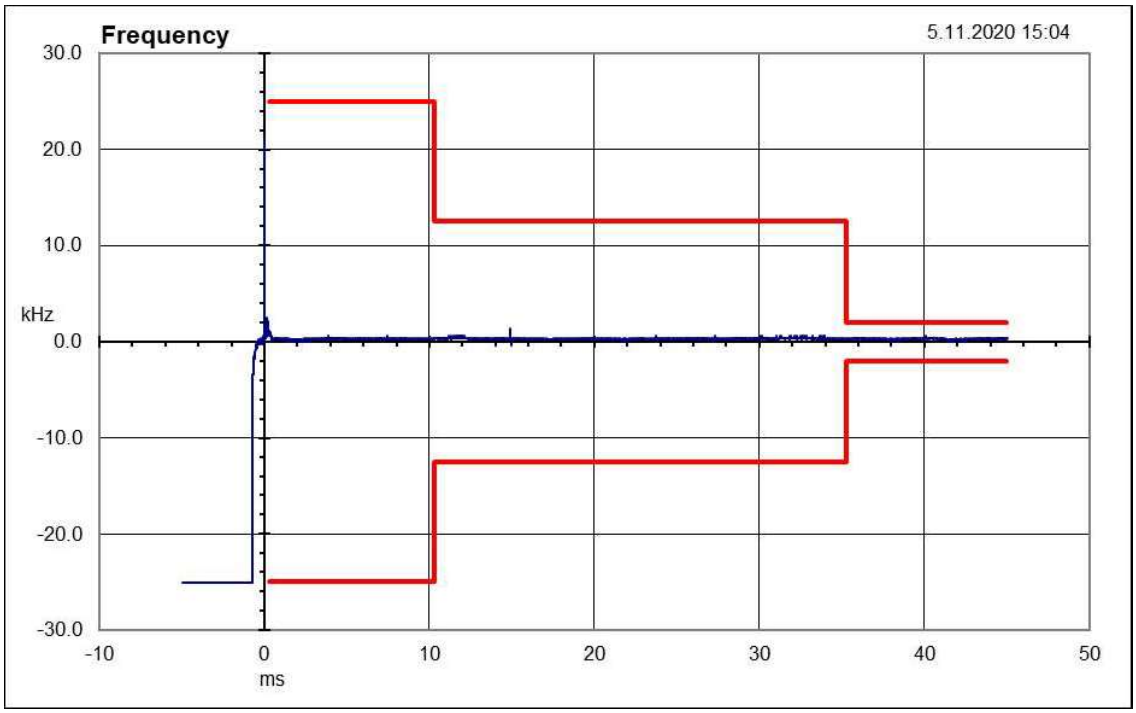

Figure 226: 450.5 MHz

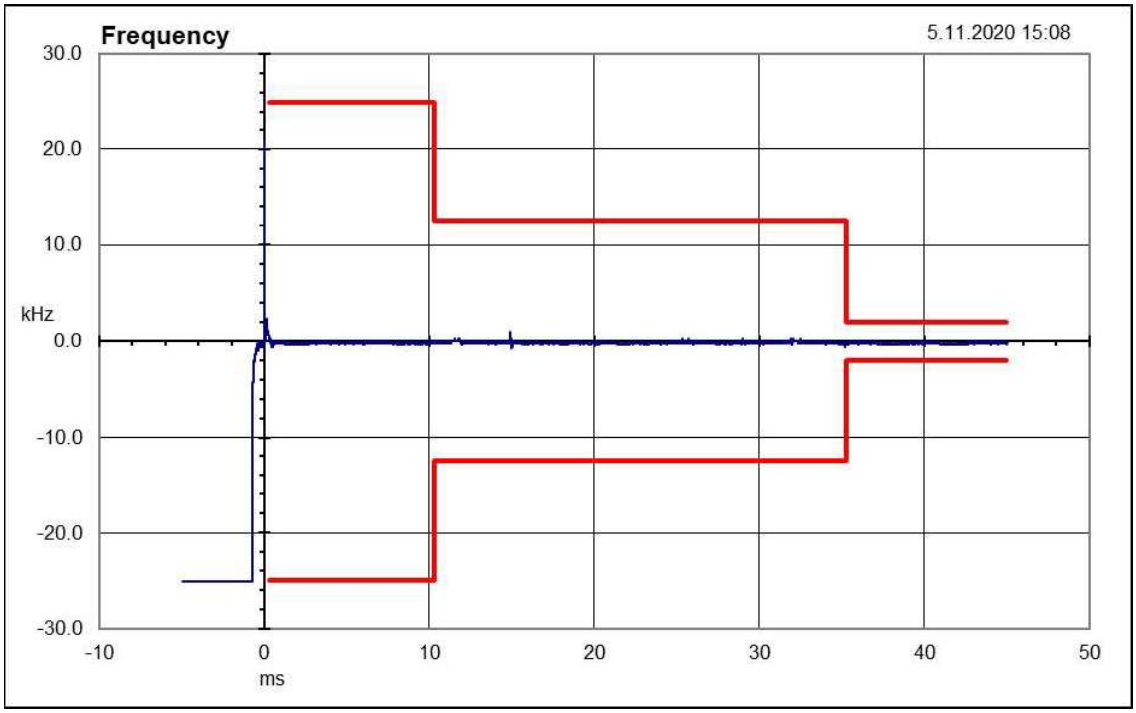

Figure 227: 469.5 MHz

Transmitter ON to OFF (12.5 kHz channel bandwidth)

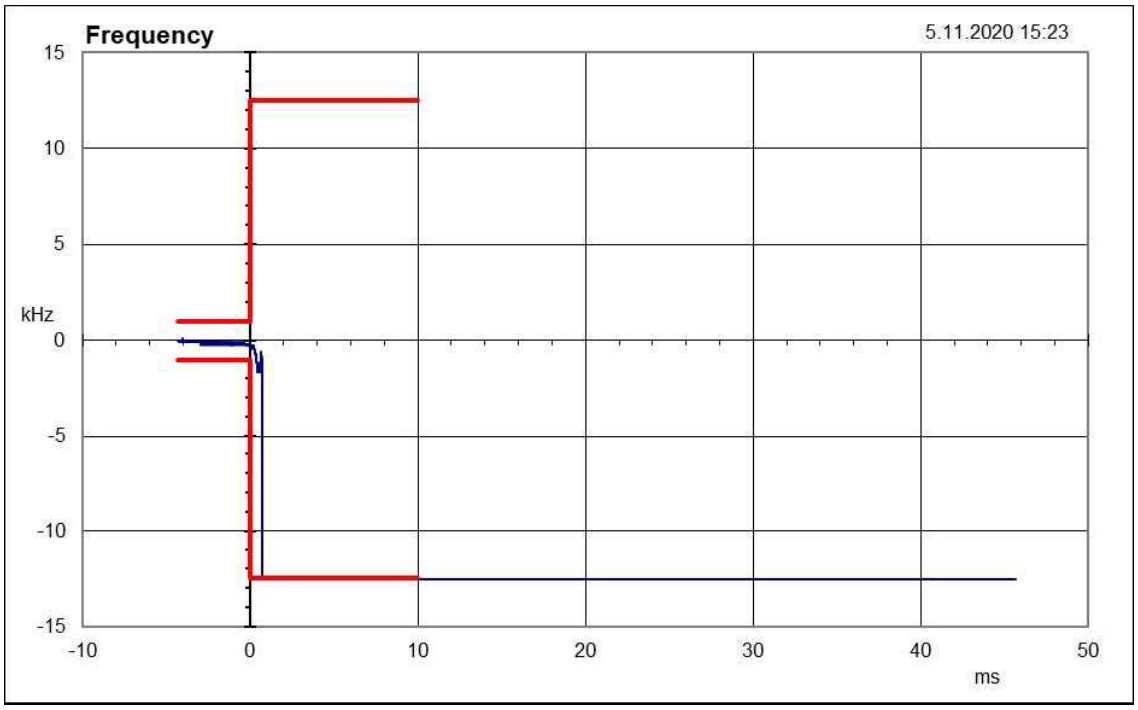

Figure 228: 410.0 MHz

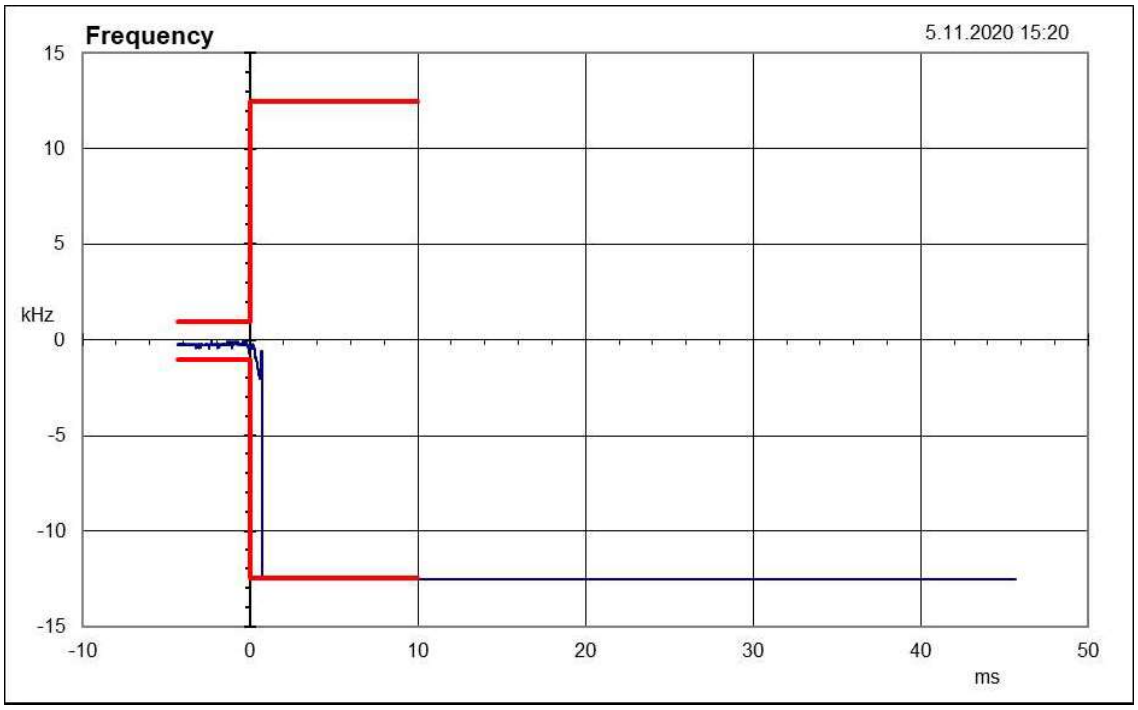

Figure 229: 429.5 MHz

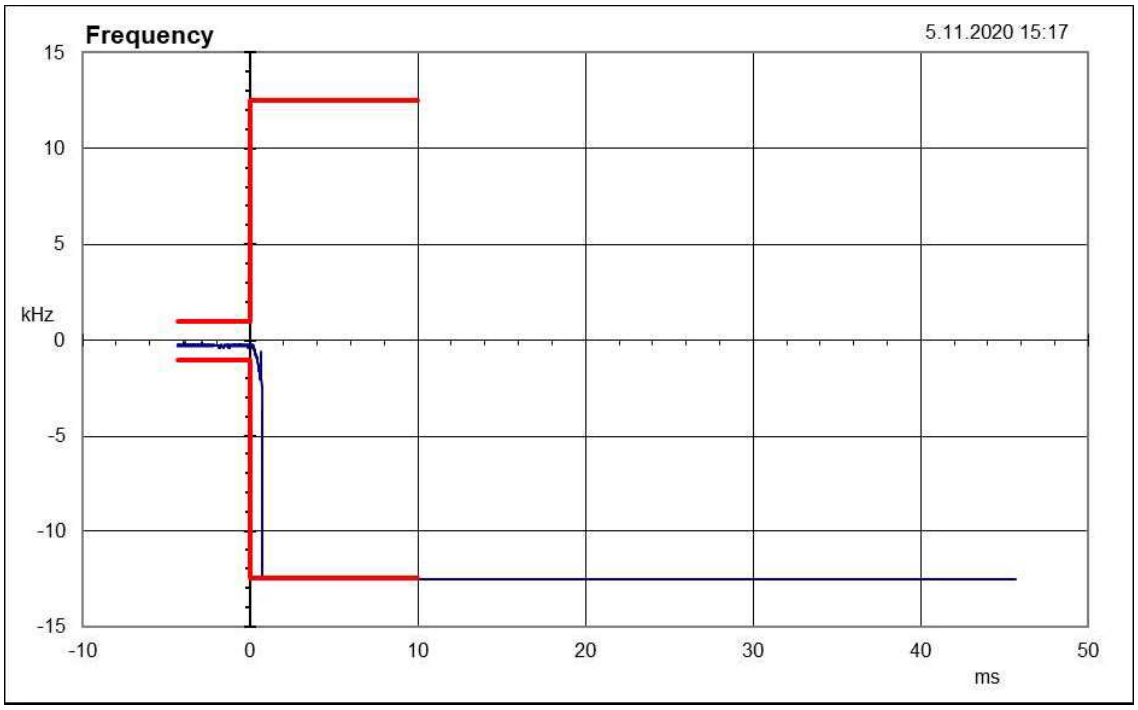

Figure 230: 450.5 MHz

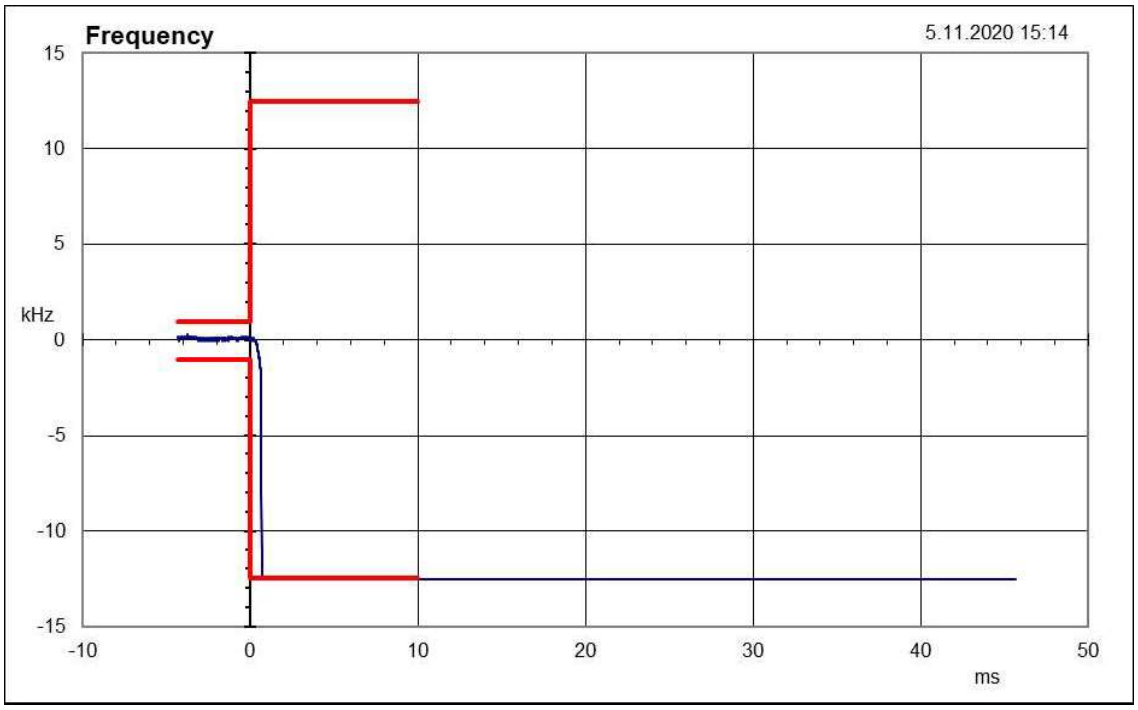

Figure 231: 469.5 MHz

Transmitter ON to OFF (25 kHz channel bandwidth)

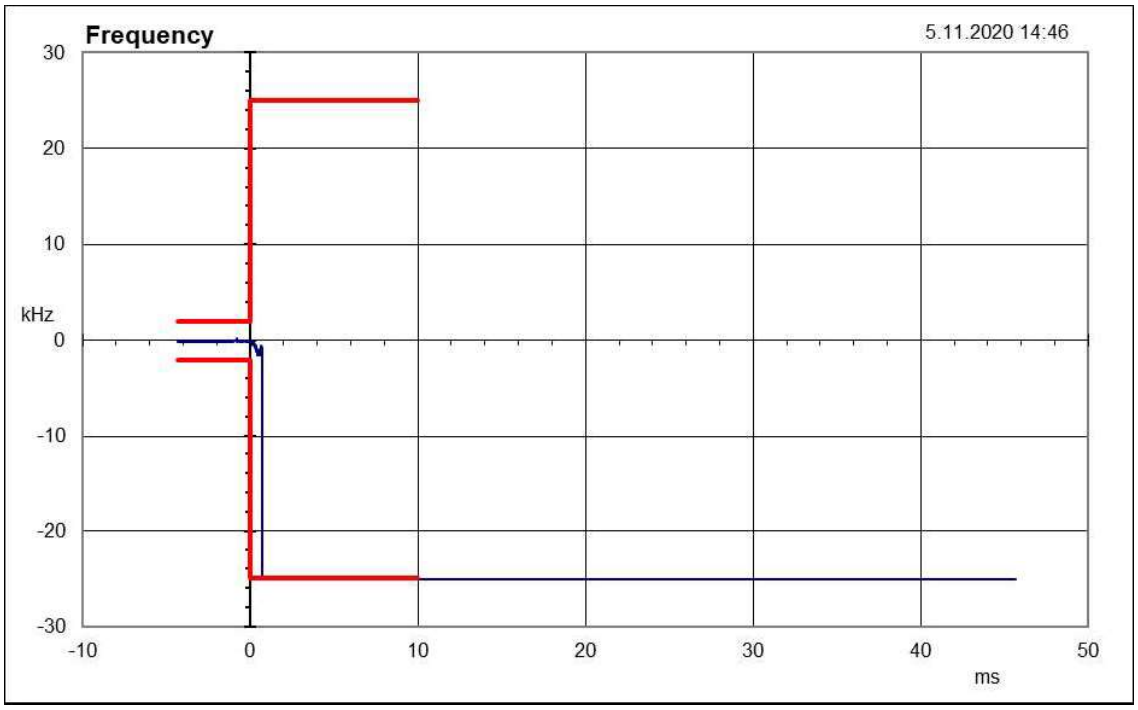

Figure 232: 410.0 MHz

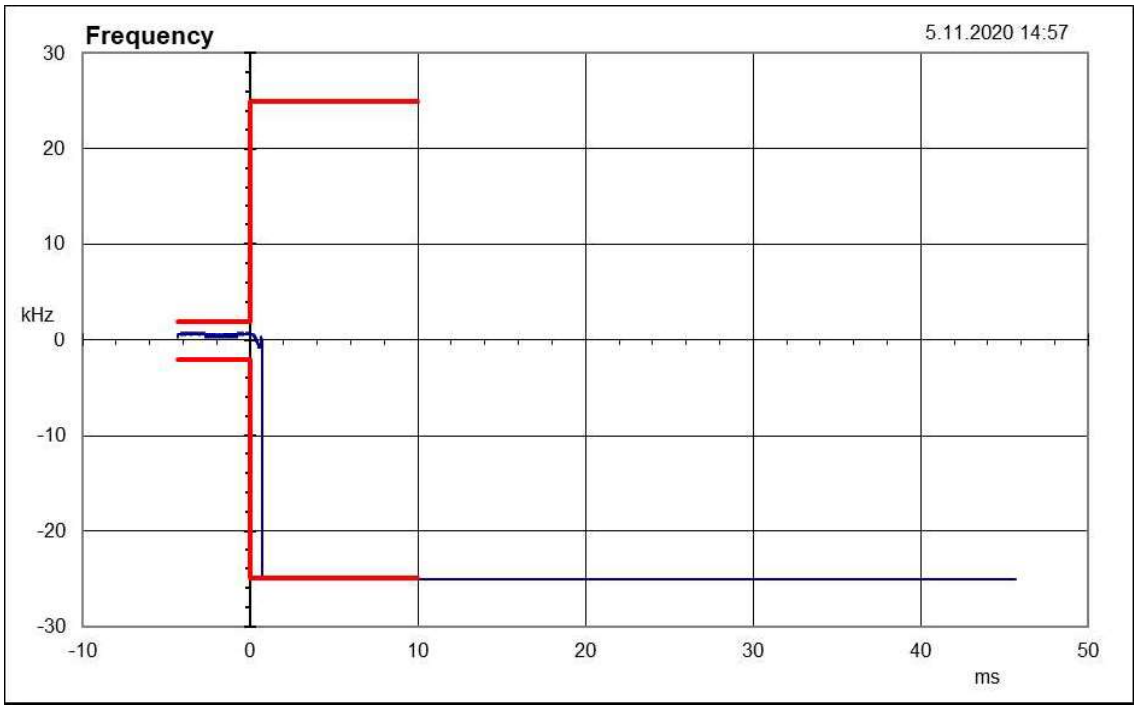

Figure 233: 429.5 MHz

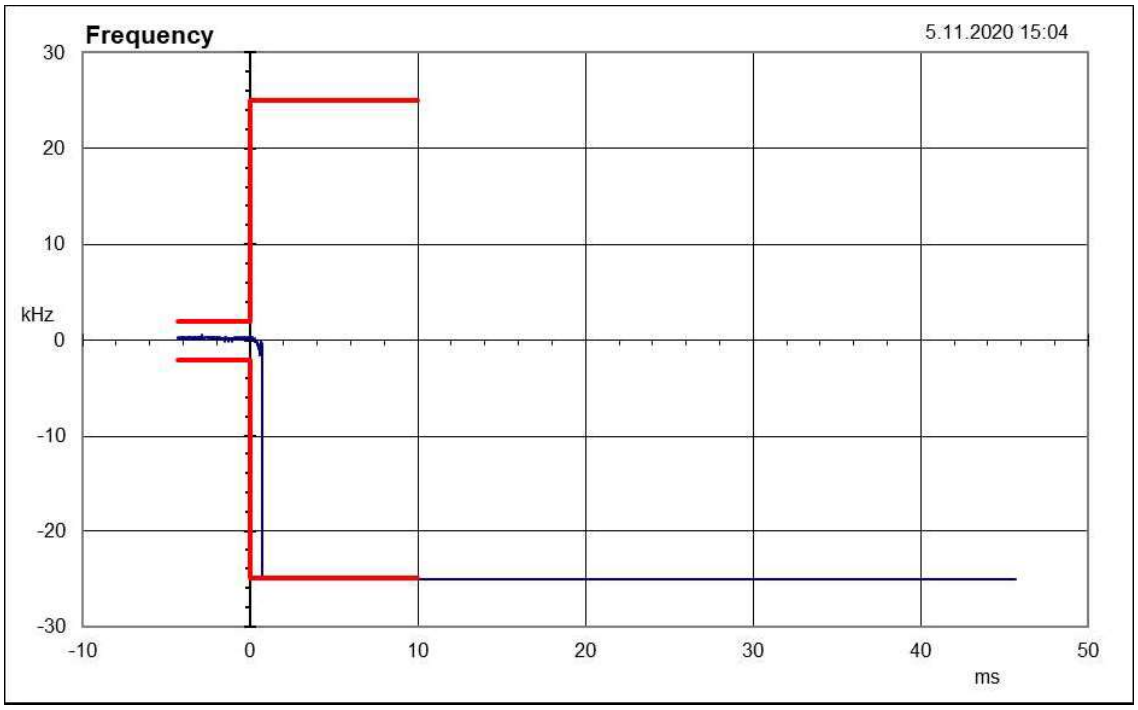

Figure 234: 450.5 MHz

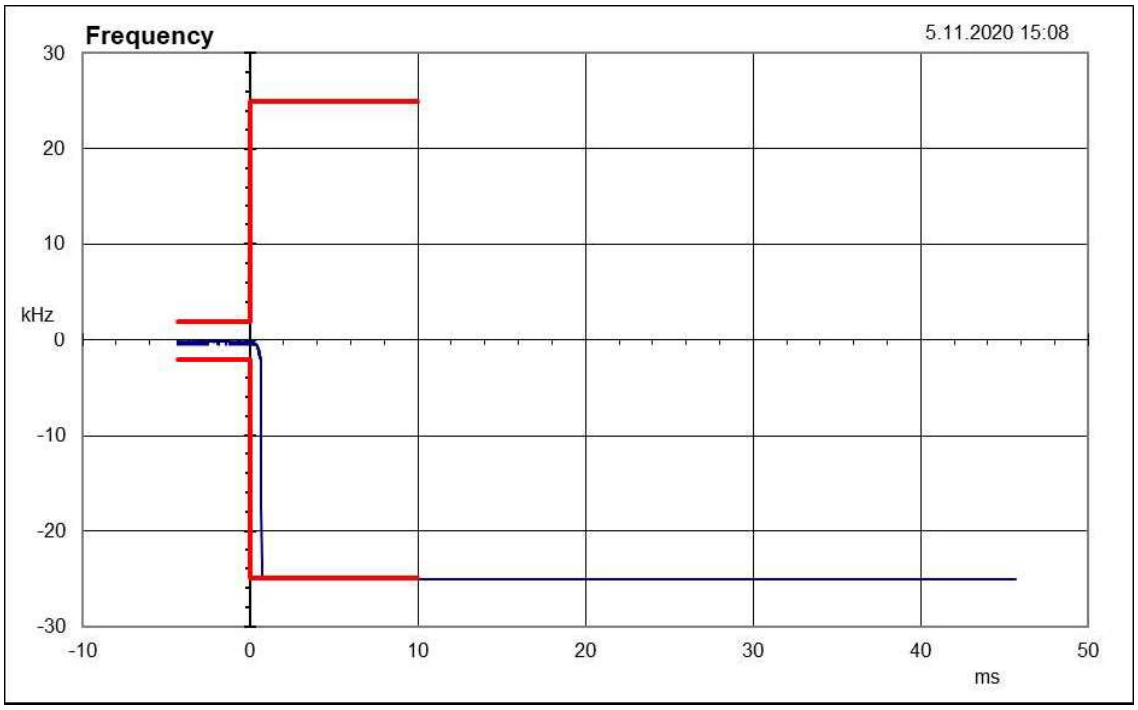

Figure 235: 469.5 MHz

TEST EQUIPMENT

EQUIPMENT	MANUFACTURER	TYPE	INV OR SERIAL	PREV CALIB	NEXT CALIB
ANTENNA	EMCO	3117	inv:7293	2020-03-11	2022-03-11
ANTENNA	ROHDE & SCHWARZ	HFH2-Z2 , 335.4711.52	inv:8013	2018-10-30	2020-10-30
				2020-10-28	2022-10-28
ANTENNA	SCHWARZBECK	VULB 9168	inv:8911	2018-10-25	2020-10-25
				2020-11-04	2022-11-04
ANTENNA MAST	MATURO	TAM 4.0E	inv:10181	NCR	NCR
ATTENUATOR	PASTERNACK	PE 7004-4 (4Db)	inv:10126	2019-04-01	2021-04-01
ATTENUATOR	ZYSEN	ZSJ70/1-06-2A2	inv:10332	1)	
AUDIO AMPLIFIER	SGS FIMKO	PRL	inv:9366	1)	
EMI TEST RECEIVER	ROHDE & SCHWARZ	ESW26	inv:10679	2020-06-16	2021-06-16
FILTER	WAINWRIGHT	HP, WHKX1.0/15G-10SS	inv:8267	2019-04-01	2021-04-01
HYBRID	ANZAC	H 9	inv:9383	1)	
MAST & TURNTABLE CONTROLLER	MATURO	NCD	inv:10183	NCR	NCR
MODULATION ANALYZER	HEWLETT PACKARD	HP 8901B	inv:9739	2020-02-22	2022-02-20
OSCILLOSCOPE	LECROY	WAVE SURFER 42Xs	inv:9737	2020-01-27	2021-01-27
POWER DIVIDER	ANZAC	DS-4-4	inv:9499	1)	
POWER SUPPLY	THANDAR	PL330TP	inv:9787	NCR	NCR
PRECISION DC POWER SUPPLY	THANDAR	TS3021S	inv:3484	NCR	NCR
RF PREAMPLIFIER	CIAO	CA118-3123	inv:10278	2019-10-09	2020-10-09
				2020-10-09	2021-10-09
RF SIGNAL GENERATOR	MARCONI	2030 + OPT08	inv:7931	2020-02-18	2022-02-18
SIGNAL ANALYZER	ROHDE & SCHWARZ	FSV40	inv:9093	2019-11-18	2020-11-18
SPECTRUM ANALYZER	AGILENT	E7405A	inv:9746	2020-02-17	2022-02-17
TEMPERATURE CHAMBER	CTS	T-65/50	inv:10521	NCR	NCR
TEST SOFTWARE	ROHDE & SCHWARZ	EMC-32	-	NCR	NCR
TURNTABLE	MATURO	DS430 UPGRADED	inv:10182	NCR	NCR

1) The equipment was calibrated for this test case

NCR = No Calibration Required

END OF TEST REPORT