



11.0 FCC Rules and Regulations Part 90 §90.214 : TRANSIENT FREQUENCY BEHAVIOR

11.1 Test Procedure

ANSI/TIA/EIA-603-1992, section 2.2.19

11.2 Test Data

Limits:

Requirements for EUT with 25 kHz channel spacing:

Time Intervals (*)(**)	Maximum Frequency Difference(***)	150-174 MHz	421-512 MHz
t1(****)	± 25 kHz	5.0 mSec	10.0 mSec
t2	± 12.5 kHz	20.0 mSec	25.0 mSec
t3(****)	± 25 kHz	5.0 mSec	10.0 mSec

Requirements for EUT with 12.5 kHz channel spacing:

Time Intervals (*)(**)	Maximum Frequency Difference(***)	150-174 MHz	421-512 MHz
t1(****)	± 12.5 kHz	5.0 mSec	10.0 mSec
t2	± 6.25 kHz	20.0 mSec	25.0 mSec
t3(****)	± 12.5 kHz	5.0 mSec	10.0 mSec

(*) 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 ton.

t2 is the time period immediately following t1.

t3 is the time period from the instant when the transmitter is turned off until toff.

toff is the instant when the 1 kHz test signal starts to rise.

(**) During the time from the end of t2 to the beginning of t3, the frequency difference must not exceed the limits specified in § 90.213.

(***) Difference between the actual transmitter frequency and the assigned transmitter frequency.

(****) If the transmitter carrier output power rating is 6 watts or less, the frequency difference during this time period may exceed the maximum frequency difference for this time period.

Maximum frequency difference between time T2 and T3: Calculation for Channel 6:

The frequency stability is required to be 2.5ppm.

Calculation for Channel 6:

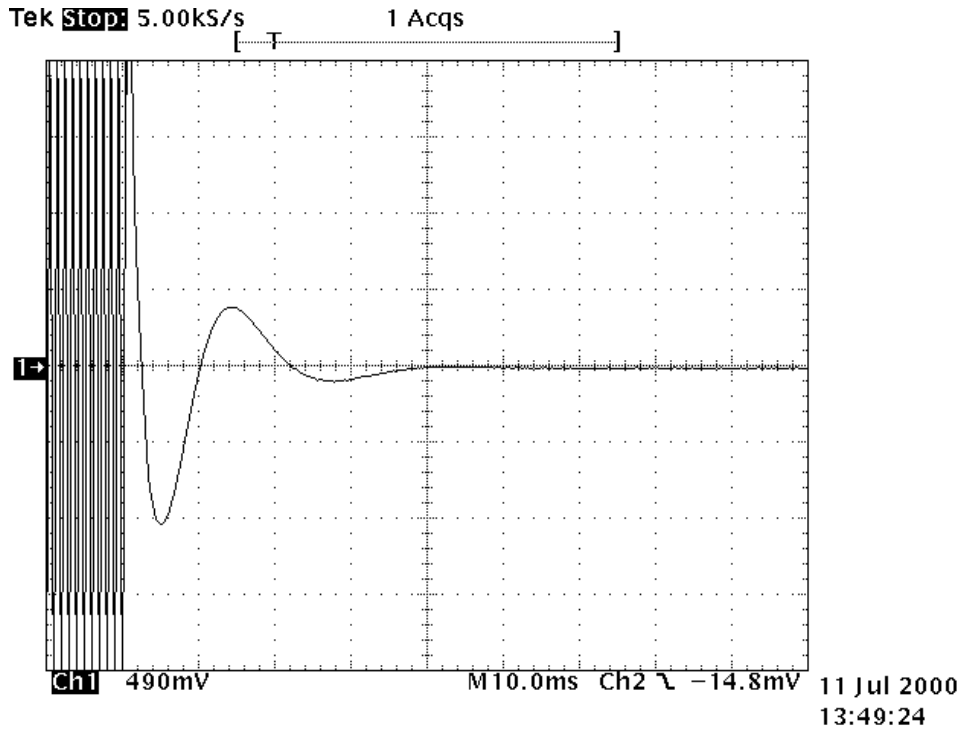
4 div. on scope represent 12.5kHz for narrow band channel.

Therefore, 487.975M times 2.5 ppm times +/- 4 Divisions divided by 12.5kHz equals about +/- 0.4 division. 0.4 Div. correspond to 1.219 kHz



COMPANY NAME: COM NET ERICSSON.
EUT: UHF-M SPLIT 450-488 MHz PANTHER 300P
CLIENT REFERENCE NUMBER:
WORK ORDER NUMBER: 2000278
FCC ID: OWDTR-0003-A

Carrier ON time:
High Power: 4 W rated
Channel 1 : 450.025 MHz WB(25kHz)
RF Signal Generator: Modulation 25kHz deviation



Timebase: 10 ms/div
Trigger: On negative edge of Ch2, level -14.8mV
Ch1: 490 mV/div, Probe 1.000:1
Vertical scale: +/- 4 div. corresponds to +/- 25 kHz



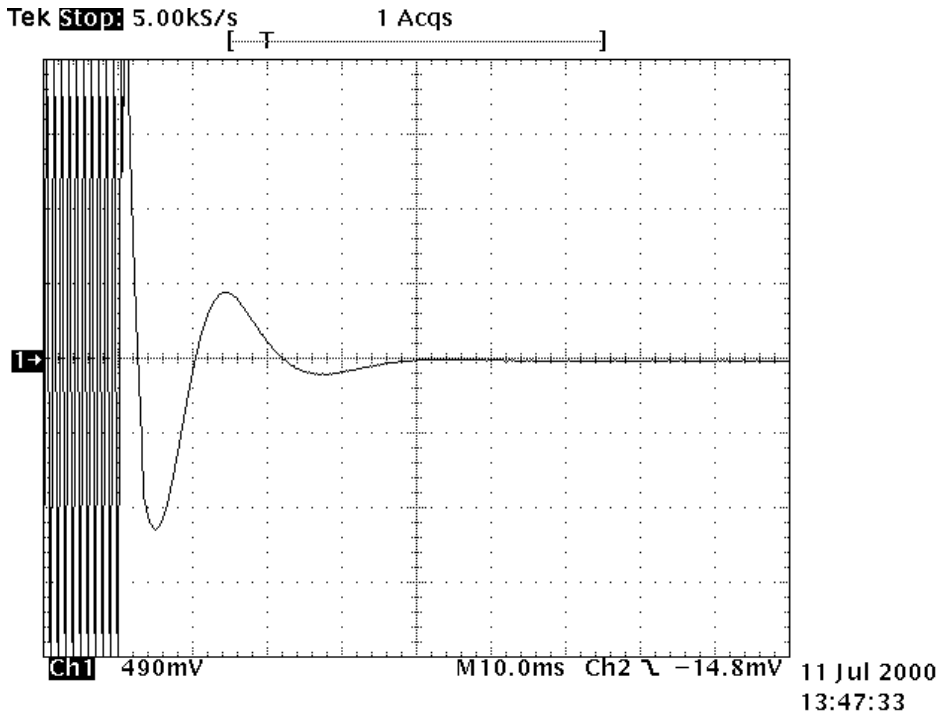
COMPANY NAME: COM NET ERICSSON.
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CLIENT REFERENCE NUMBER:
WORK ORDER NUMBER: 2000278
FCC ID: OWDTR-0003-A

Carrier ON Time:

High Power: 4 W rated

Channel 2 : 469.975 MHz WB(25kHz)

RF Signal Generator: Modulation 25kHz deviation



Timebase: 10 ms/div

Trigger: On negative edge of Ch2, level -14.8 mV

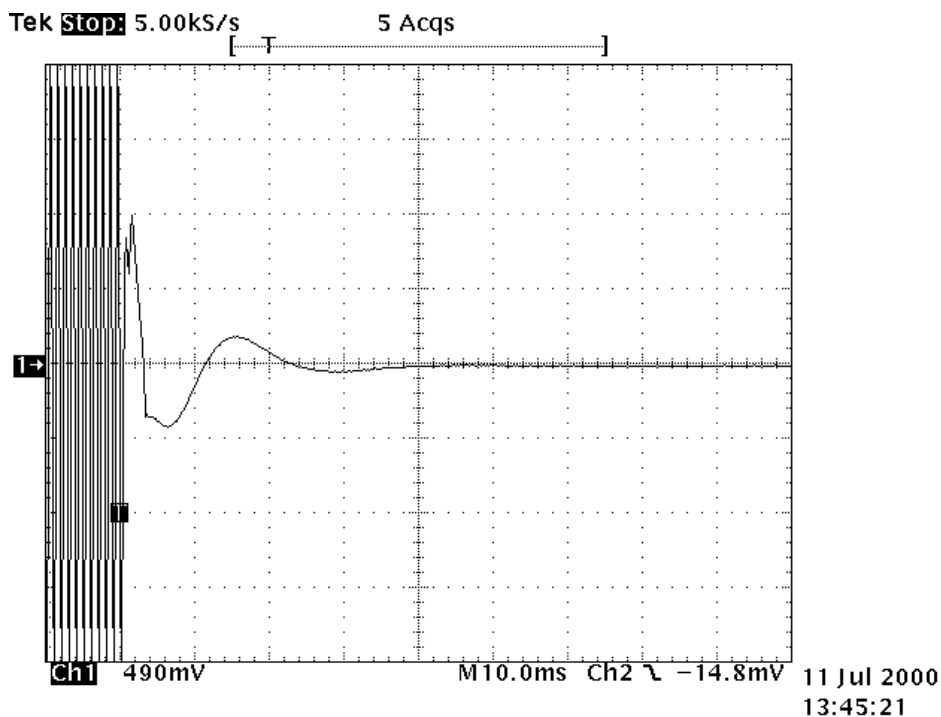
Ch1: 490 mV/div, Probe 1.000:1

Vertical scale: +/- 4 div. corresponds to +/- 25 kHz



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Carrier ON time:
High Power: 4 W rated
Channel 3: 487.975 MHz WB (25kHz)
RF Signal Generator: Modulation 25kHz deviation



Timebase: 10 ms/div
Trigger: On negative edge of Ch2, level -14.8mV
Ch1: 490 mV/div, Probe 1.000:1
Vertical scale: +/- 4 div. corresponds to +/- 25 kHz



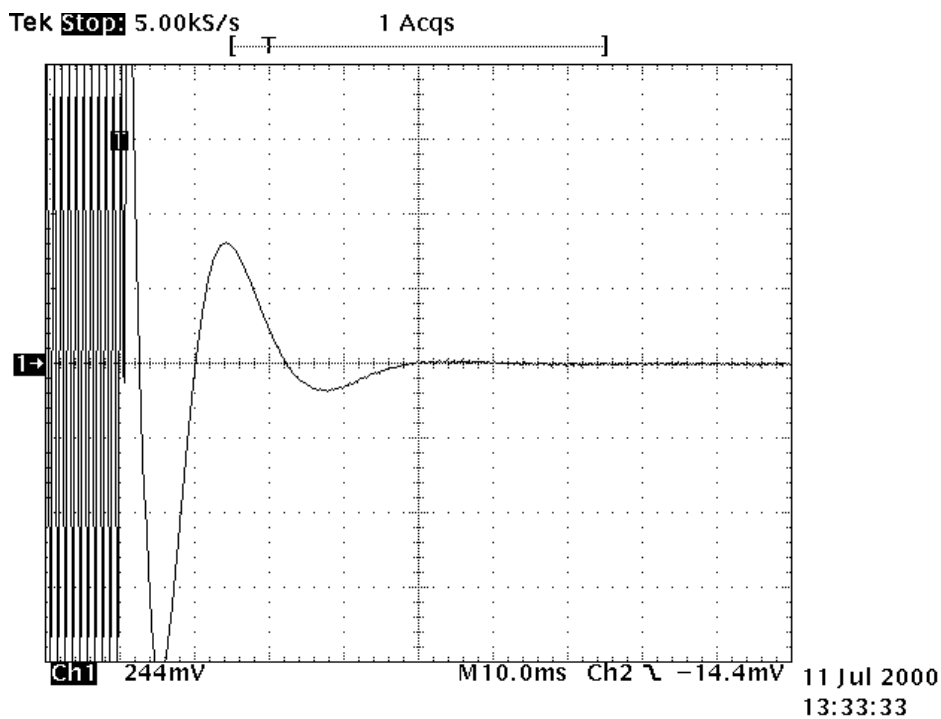
COMPANY NAME: COM NET ERICSSON.
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Carrier ON time:

High Power: 4 W rated

Channel 4 : 450.025 MHz NB(12.5kHz)

RF Signal Generator: Modulation 12.5kHz deviation



Timebase: 10 ms/div

Trigger: On negative edge of Ch2, level -14.4mV

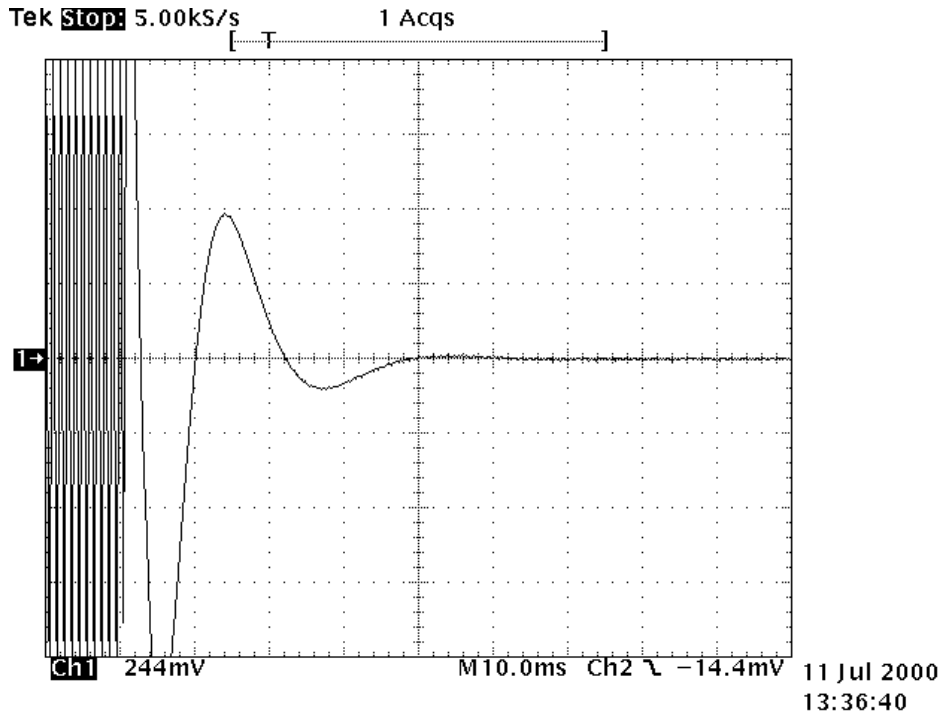
Ch1: 244 mV/div, Probe 1.000:1

Vertical scale: +/- 4 div. corresponds to +/- 12.5 kHz



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Carrier ON time:
High Power: 4 W rated
Channel 5 : 469.075 MHz NB(12.5kHz)
RF Signal Generator: Modulation 12.5kHz deviation

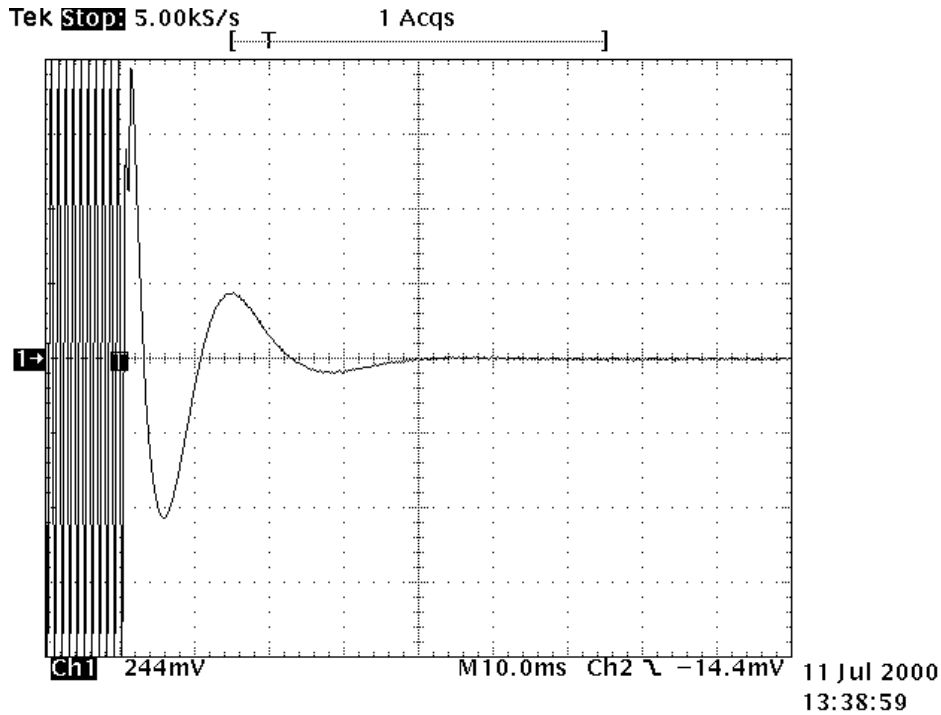


Timebase: 10 ms/div
Trigger: On negative edge of Ch2, level -14.4 mV
Ch1: 244 mV/div, Probe 1.000:1
Vertical scale: +/- 4 div. corresponds to +/- 12.5 kHz



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Carrier ON time:
High Power: 4 W rated
Channel 6 : 487.975 MHz NB(12.5kHz)
RF Signal Generator: Modulation 12.5kHz deviation

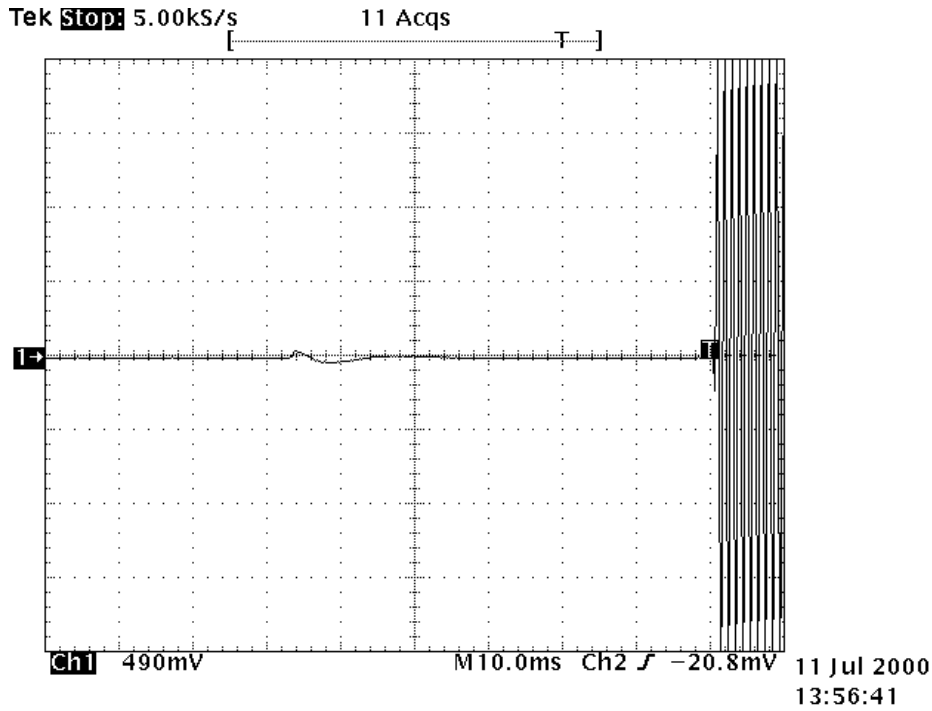


Timebase: 10 ms/div
Trigger: On negative edge of Ch2, level -14.4mV
Ch1: 244 mV/div, Probe 1.000:1
Vertical scale: +/- 4 div. corresponds to +/- 12.5 kHz



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Carrier OFF time:
High Power: 4 W rated
Channel 1 : 450.025 MHz WB(25 kHz)
RF Signal Generator: Modulation 25 kHz deviation



Timebase: 10 ms/div
Trigger: On negative edge of Ch2, level -20.8 mV
Ch1: 490 mV/div, Probe 1.000:1
Vertical scale: +/- 4 div. corresponds to +/- 25 kHz



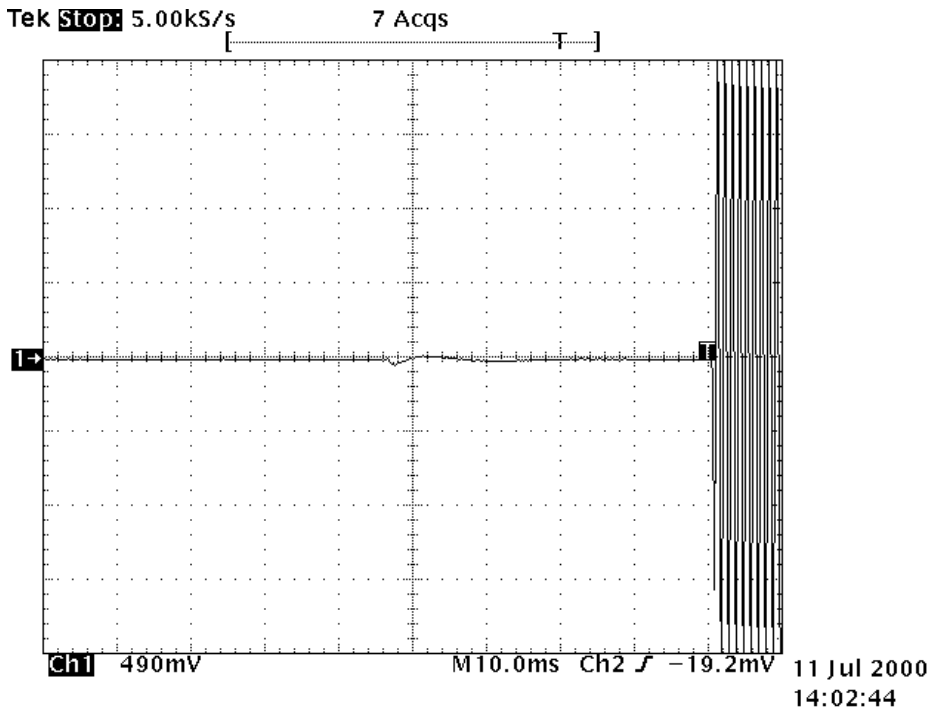
COMPANY NAME: COM NET ERICSSON.
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CLIENT REFERENCE NUMBER:
WORK ORDER NUMBER: 2000278
FCC ID: OWDTR-0003-A

Carrier OFF Time:

High Power: 4 W rated

Channel 2 : 469.975 MHz WB(25 kHz)

RF Signal Generator: Modulation 25 kHz deviation



Timebase: 10 ms/div

Trigger: On negative edge of Ch2, level - 19.2 mV

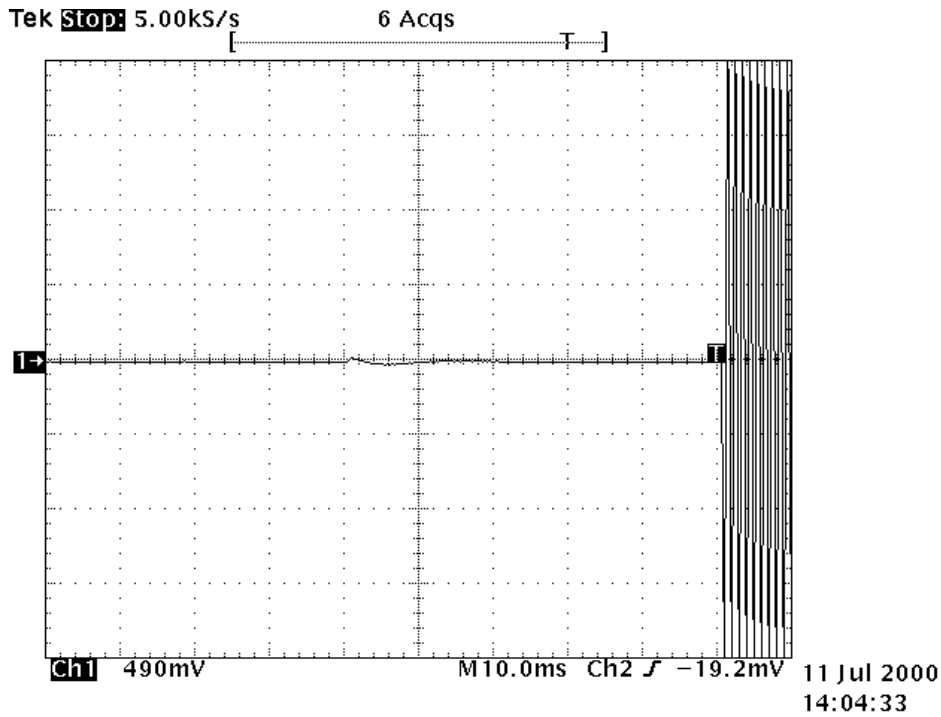
Ch1: 490 mV/div, Probe 1.000:1

Vertical scale: +/- 4 div. corresponds to +/- 25 kHz



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Carrier OFF time:
High Power: 4 W rated
Channel 3 : 487.975 MHz WB(25 kHz)
RF Signal Generator: Modulation 25 kHz deviation

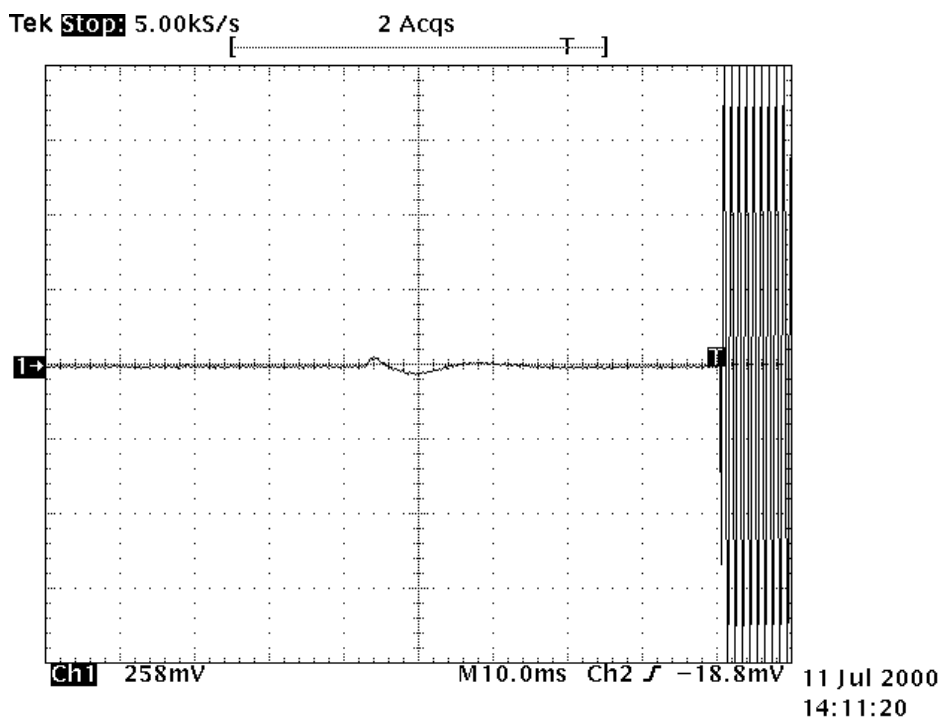


Timebase: 10 ms/div
Trigger: On negative edge of Ch2, level -19.2 mV
Ch1: 490 mV/div, Probe 1.000:1
Vertical scale: +/- 4 div. corresponds to +/- 25 kHz



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Carrier OFF time:
High Power: 4 W rated
Channel 4 : 450.025 MHz NB(12.5kHz)
RF Signal Generator: Modulation 12.5kHz deviation

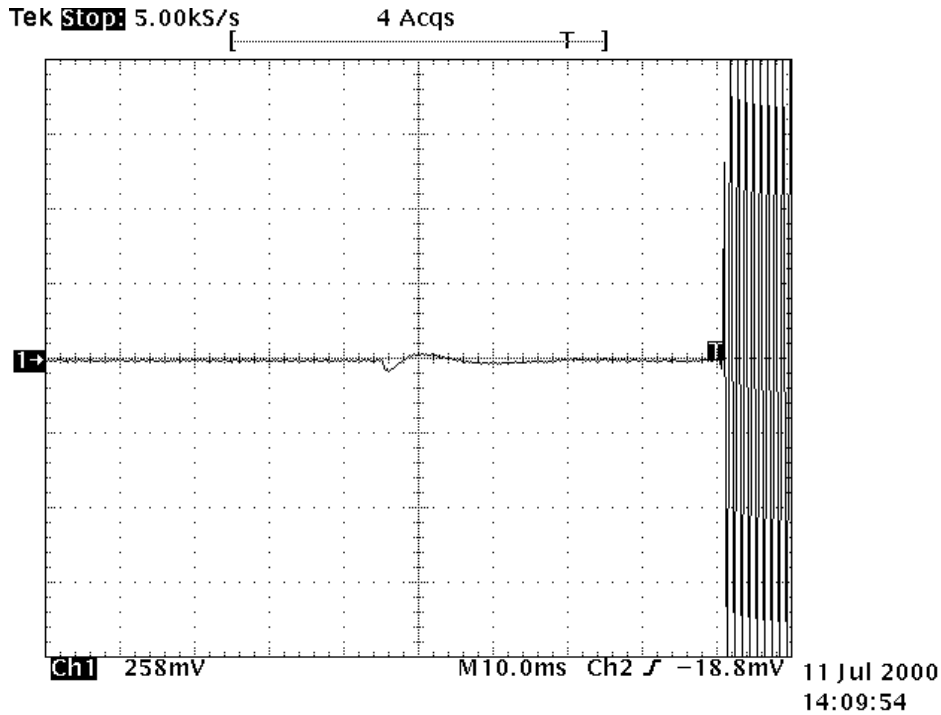


Timebase: 10 ms/div
Trigger: On negative edge of Ch2, level -18.8 mV
Ch1: 258 mV/div, Probe 1.000:1
Vertical scale: +/- 4 div. corresponds to +/- 12.5 kHz



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Carrier OFF time:
High Power: 4 W rated
Channel 5 : 469.075 MHz NB(12.5kHz)
RF Signal Generator: Modulation 12.5kHz deviation

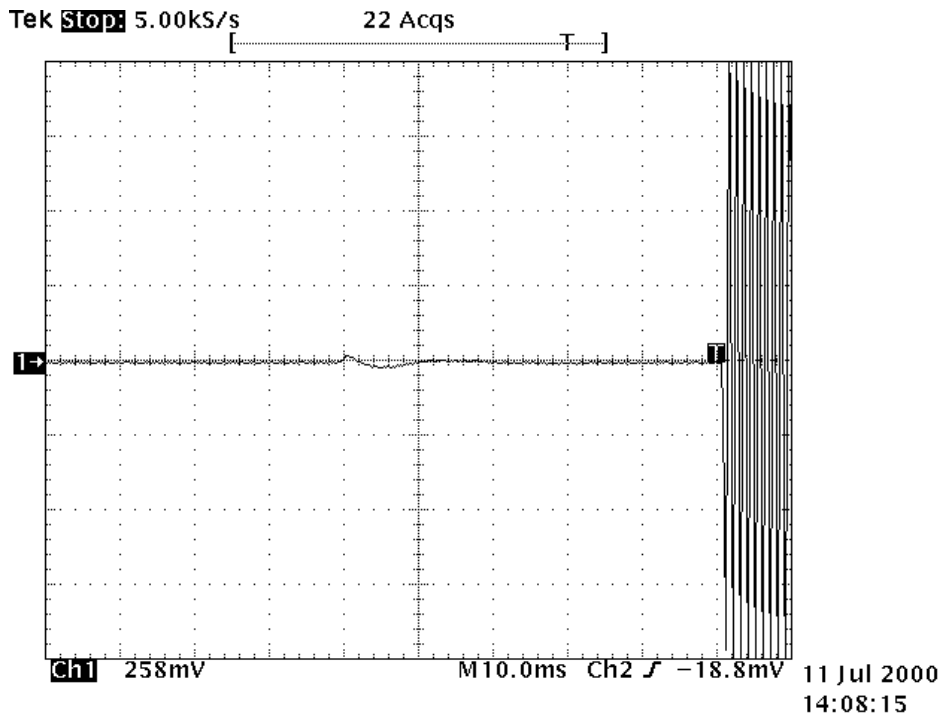


Timebase: 10 ms/div
Trigger: On negative edge of Ch2, level -18.8 mV
Ch1: 258 mV/div, Probe 1.000:1
Vertical scale: +/- 4 div. corresponds to +/- 12.5 kHz



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Carrier OFF time:
High Power: 4 W rated
Channel 6 : 487.975 MHz NB(12.5kHz)
RF Signal Generator: Modulation 12.5kHz deviation



Timebase: 10 ms/div
Trigger: On negative edge of Ch2, level -18.8 mV
Ch1: 258 mV/div, Probe 1.000:1
Vertical scale: +/- 4 div. corresponds to +/- 12.5 kHz

11.3 Test Equipment

Detector: HP8471D s/n 2952A
RF signal generator: HP8648C s/n 3537A01741
Modulation Analyzer: HP8901A s/n 2545A04102
Oscilloscope: Tektronix TDS540B s/n B020129
Receiver: HP 8546A s/n 3525A00159