



To: Jim Blaha,  
L.S. Compliance, Inc.

cc: Federal Communication Commission  
FCC Filing: EA 94746  
FCC ID No. B348PRPST250

From: Mark Wolski,  
L.S. Research, Inc.

Date: August 9, 1999

Subject: Amendment Change to FCC Part 90 – Conducted Emissions Report.

The previous report for the Audio Intelligence Devices 250 mW Surveillance Transmitter contained one conducted test condition that failed. Specifically, in the report, Section II-A-5, the transient test condition (FCC Part 90.214) fails at 150 MHz.

This failure was repaired with a component value change. The new measured test results for the transient performance are shown on the following pages. The component value change does not affect the compliance in any of the other tests.

Please accept this amendment as an update to the conducted emissions report. Specifically, the enclosed pages supercede pages 18 to 28.



5. 90.214: Transient Frequency Behavior.

a) Test Requirement

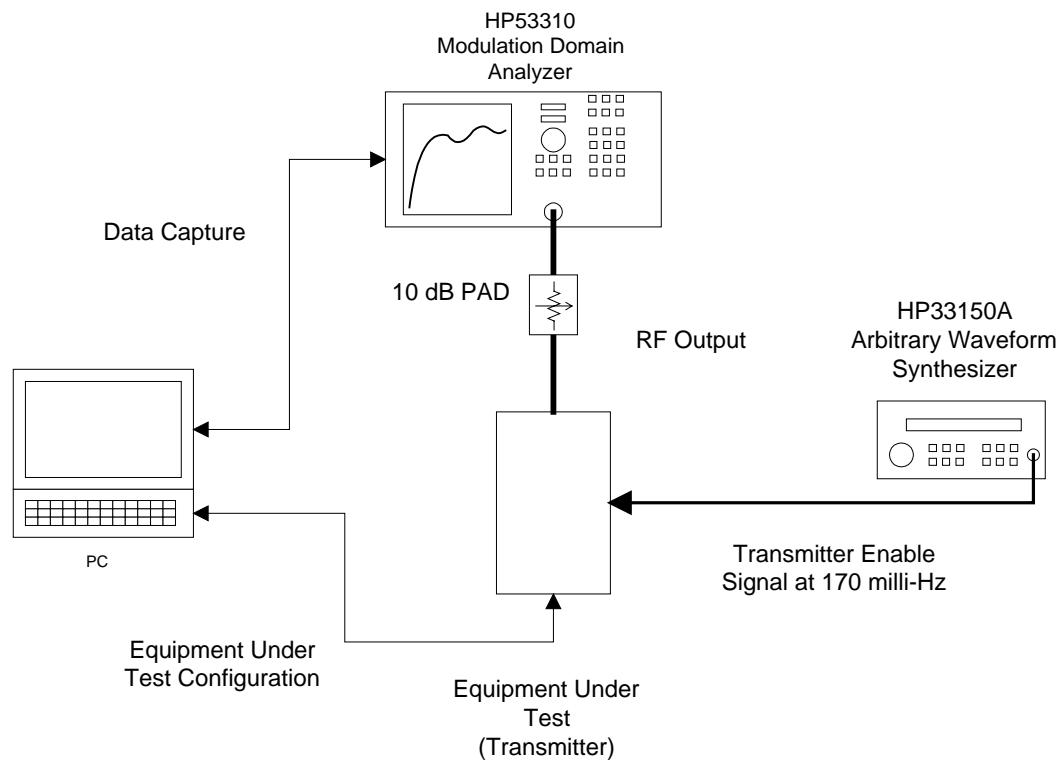
Transmitters designed to operate within the 150 to 174 MHz bands must maintain transient frequencies within the maximum frequency difference during the time intervals indicated in the table below. This device is designed to operate on 12.5 kHz channel bandwidth. The output power of the device is less than 6 Watts, therefore the transient frequency can exceed the limit for the time intervals  $t_{on}$  to  $t_1$  and  $t_{off}$  to  $t_3$ .

The time,  $t_{on}$ , is defined when the transmitter power exceeds  $-13$  dBm at the transmitter output. The modulation domain analyzer is triggered on the envelope of the RF power and the zero time indication is reference to this trigger level. The time,  $t_{off}$ , is defined when the transmitter is turned off and the power level falls below  $-13$  dBm.

Time Interval	Transient Frequency Limit	Settling Time
$t_1$	$\pm 12.5$ kHz	5.0 ms
$t_2$	$\pm 6.25$ kHz	25.0 ms
$t_3$	$\pm 12.5$ kHz	5.0 ms

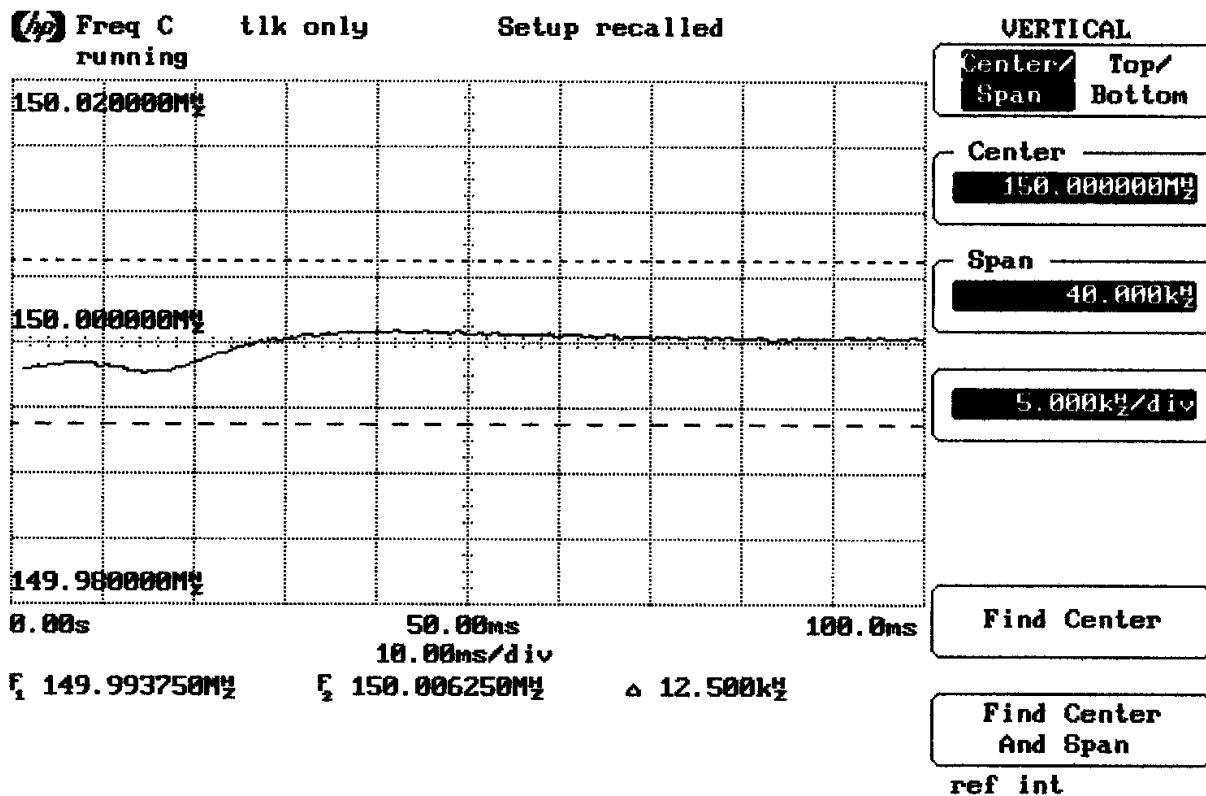


b) Test Configuration





c) Test Conditions and Test Indications



Test Condition: 150 MHz, 250 mW. Frequency Up to 100 ms

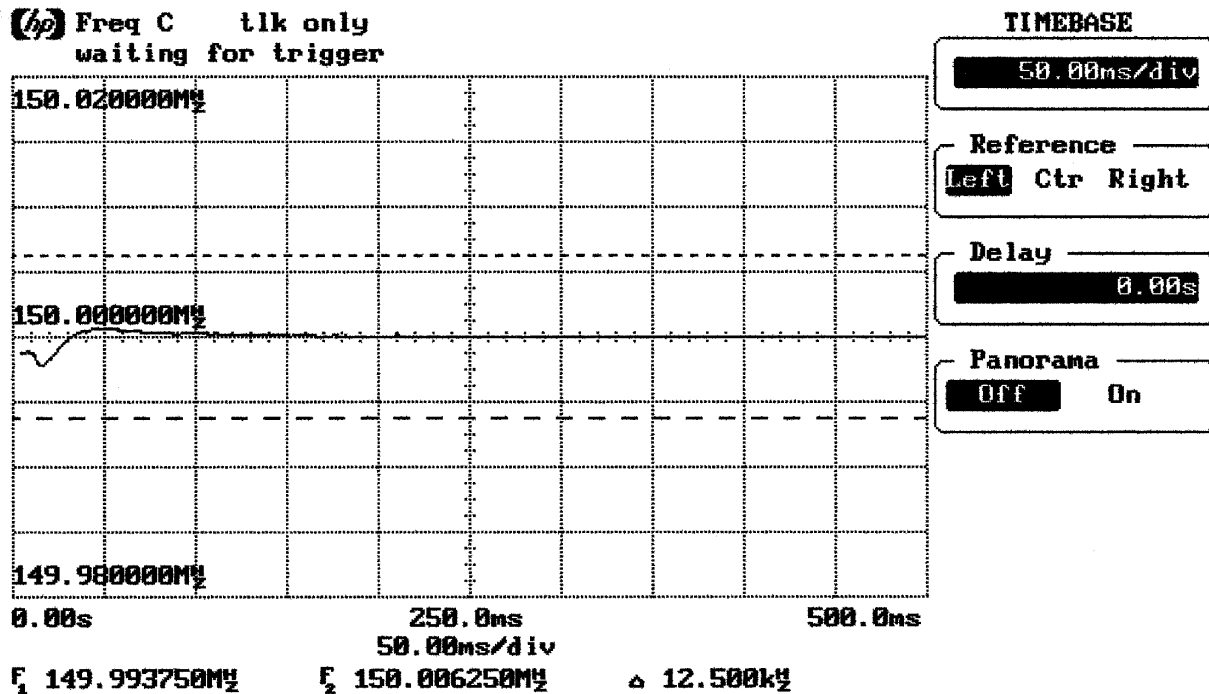
Test Limit:  $\pm 12.5$  kHz within 5 ms,  $\pm 6.25$  kHz within 25 ms

Test Indication: Transient Frequency  $< \pm 6.25$  kHz for all times beyond  $t_{on}$ .

Test Outcome: Transient Frequency within limits  $\rightarrow$  Pass.

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Test Condition: 150 MHz, 250 mW. Frequency Up to 500 ms

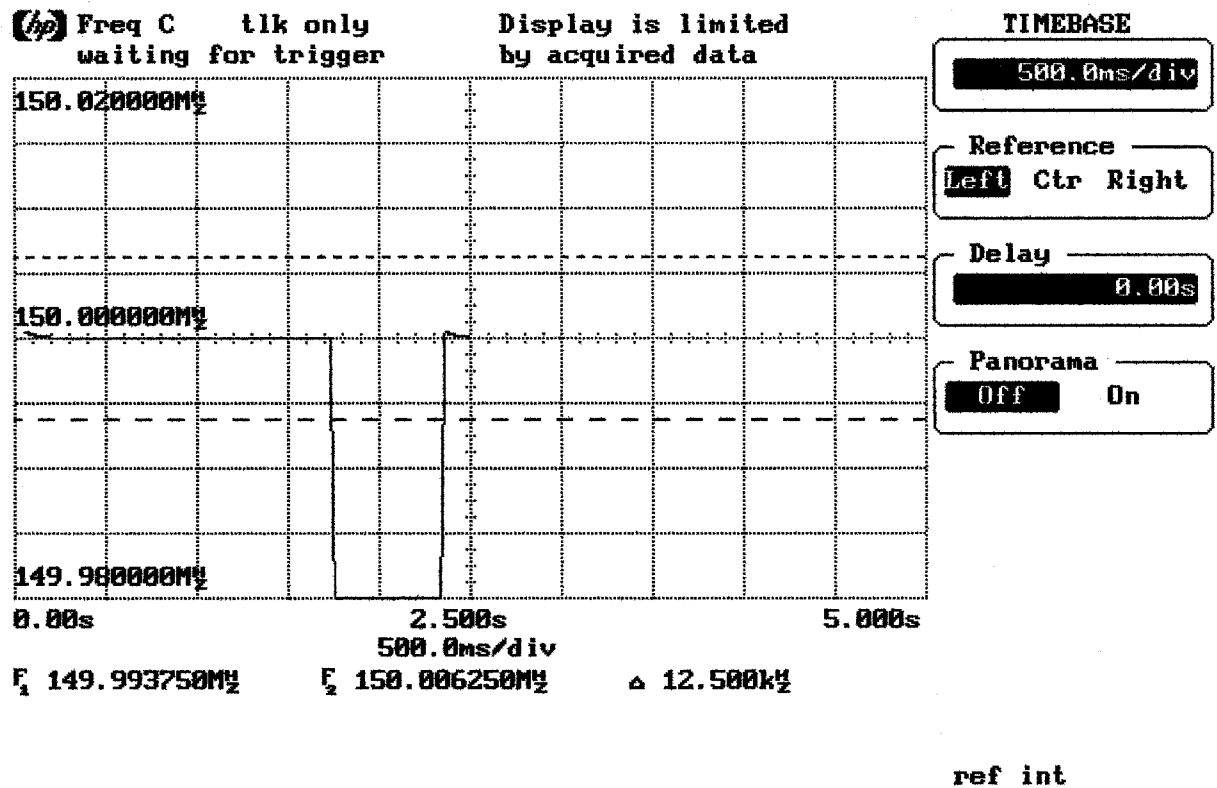
Test Limit:  $\pm 12.5$  kHz within 5 ms,  $\pm 6.25$  kHz within 25 ms

Test Indication: Transient Frequency  $< \pm 6.25$  kHz for all times beyond  $t_{on}$ .

Test Outcome: Transient Frequency within limits  $\rightarrow$  Pass.

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Test Condition: 150 MHz, 250 mW. Transmitter Release Transient Frequency.

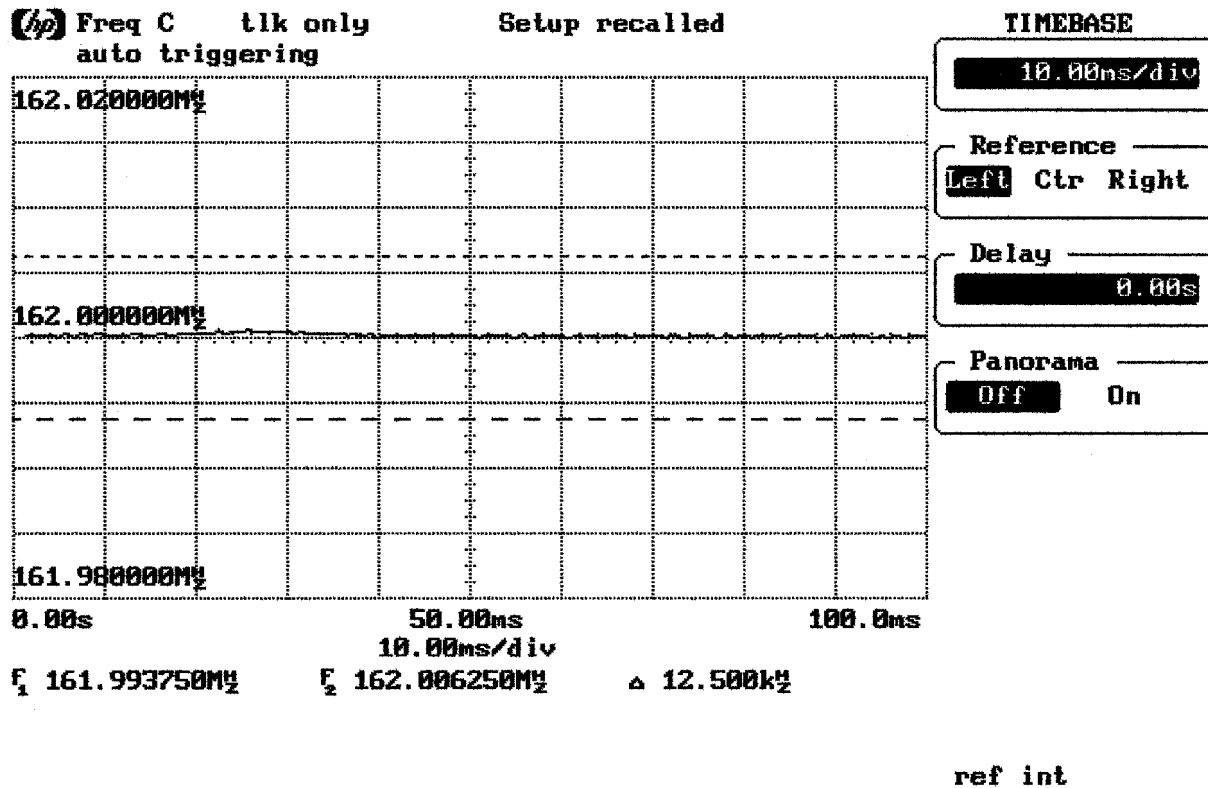
Test Limit:  $\pm 12.5$  kHz within 5 ms of  $t_{off}$

Test Indication: Transmitter exhibits no post-release transient behavior, power level drops below  $-13$  dBm. .

Test Outcome: Transient Frequency within limits → Pass.

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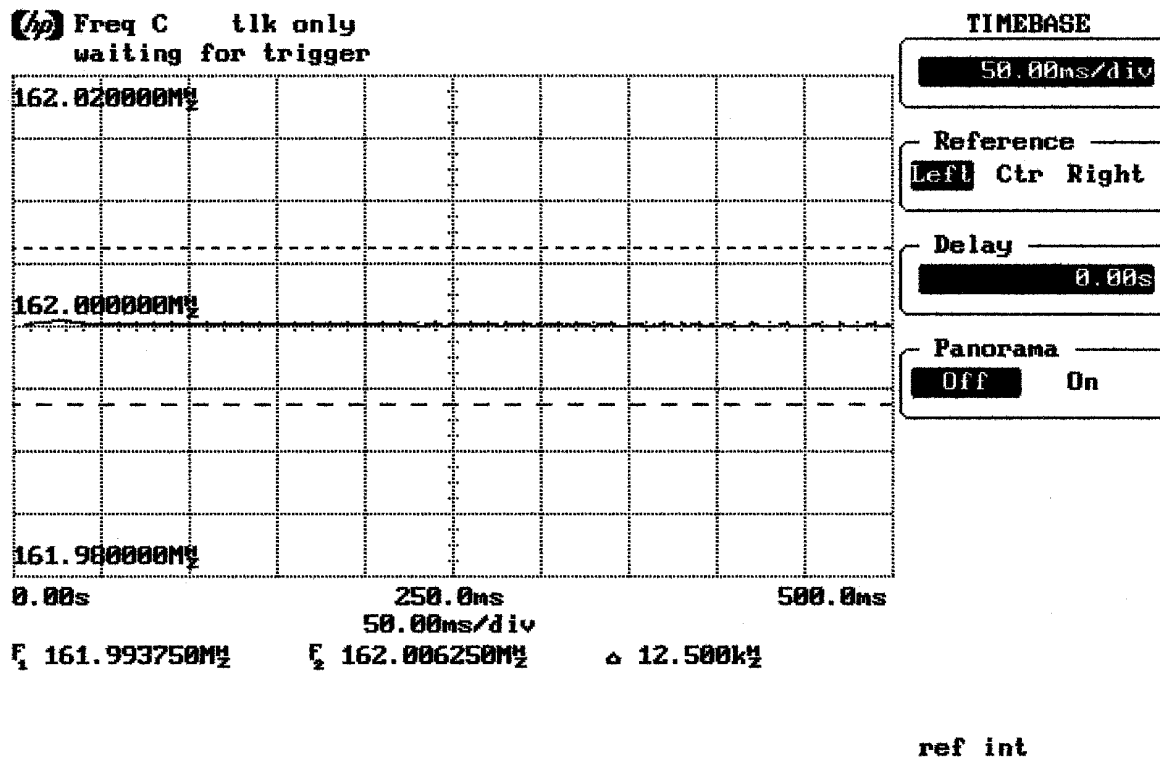


Test Condition: 162 MHz, 250 mW. Frequency Up to 100 ms

Test Limit:  $\pm 12.5$  kHz within 5 ms,  $\pm 6.25$  kHz within 25 ms

Test Indication: Transient Frequency  $< \pm 6.25$  kHz for all times beyond  $t_{on}$ .

Test Outcome: Transient Frequency within limits  $\rightarrow$  Pass.



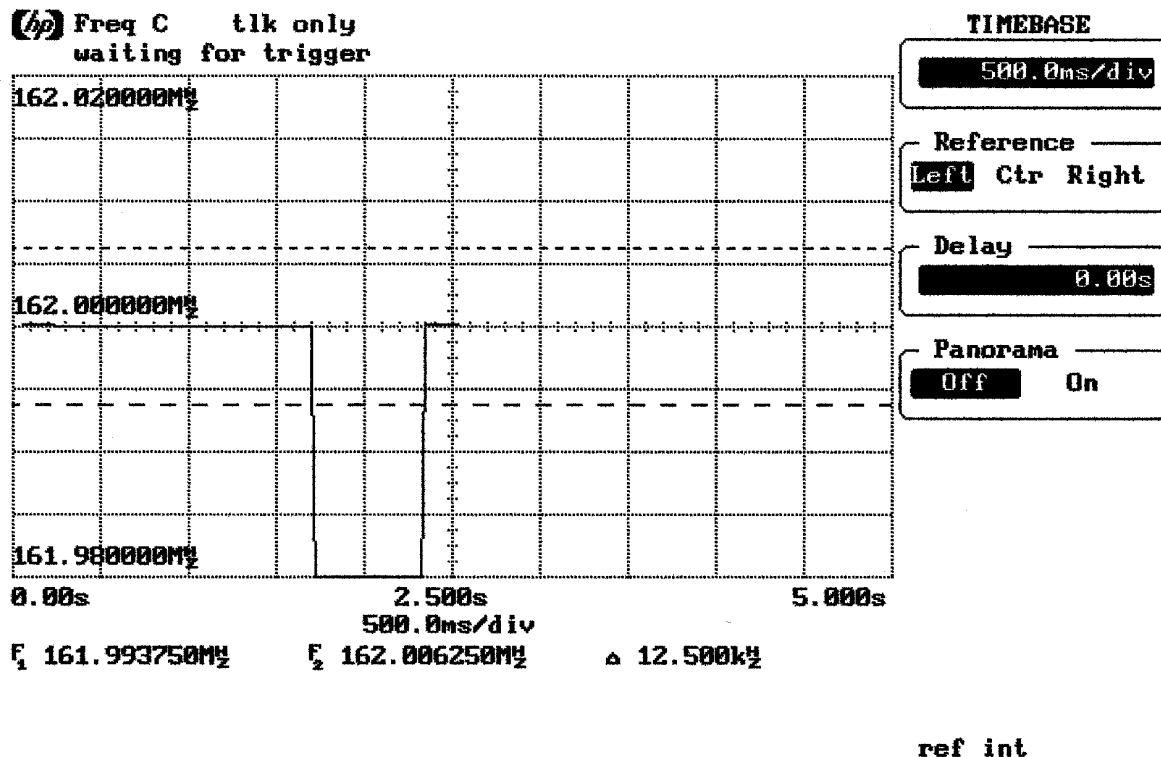
Test Condition: 162 MHz, 250 mW. Frequency Up to 500 ms

Test Limit:  $\pm 12.5$  kHz within 5 ms,  $\pm 6.25$  kHz within 25 ms

Test Indication: Transient Frequency  $< \pm 6.25$  kHz for all times beyond  $t_{on}$ .

Test Outcome: Transient Frequency within limits  $\rightarrow$  Pass.





Test Condition: 162 MHz, 250 mW. Transmitter Release Transient Frequency.

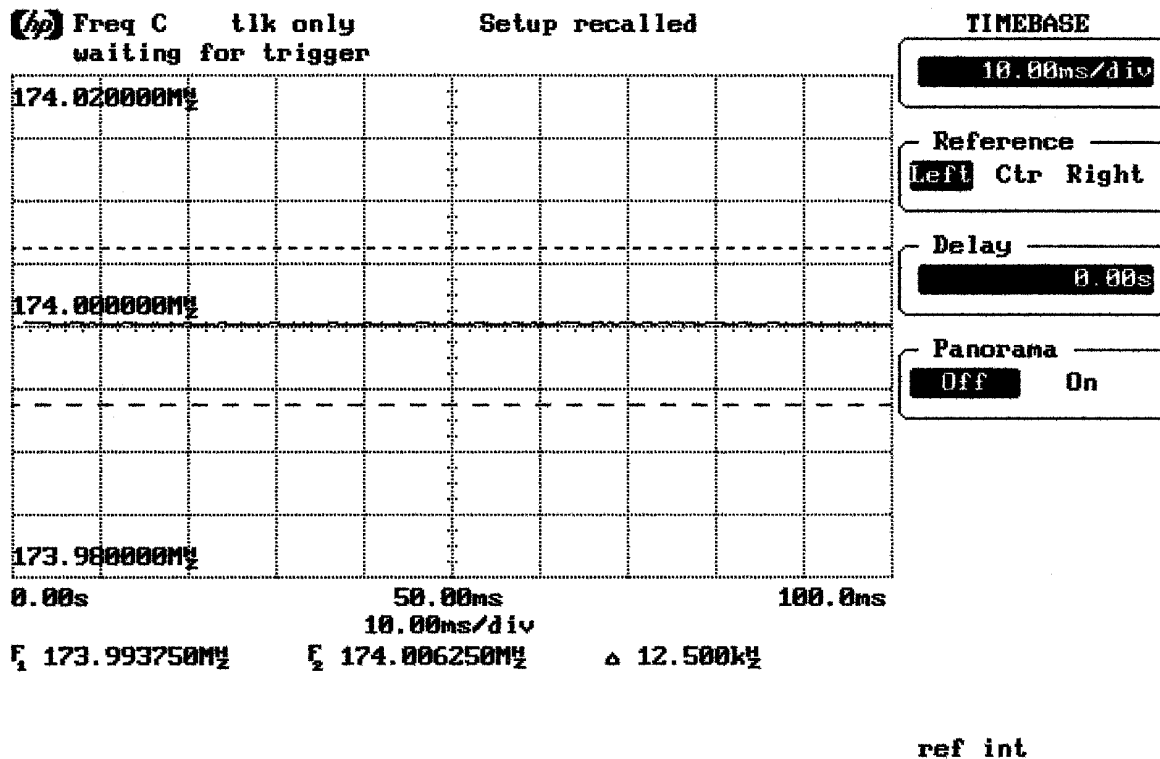
Test Limit:  $\pm 12.5$  kHz within 5 ms of  $t_{off}$

Test Indication: Transmitter exhibits no post-release transient behavior, power level drops below  $-13$  dBm. .

Test Outcome: Transient Frequency within limits → Pass.

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Test Condition: 174 MHz, 250 mW. Frequency Up to 100 ms

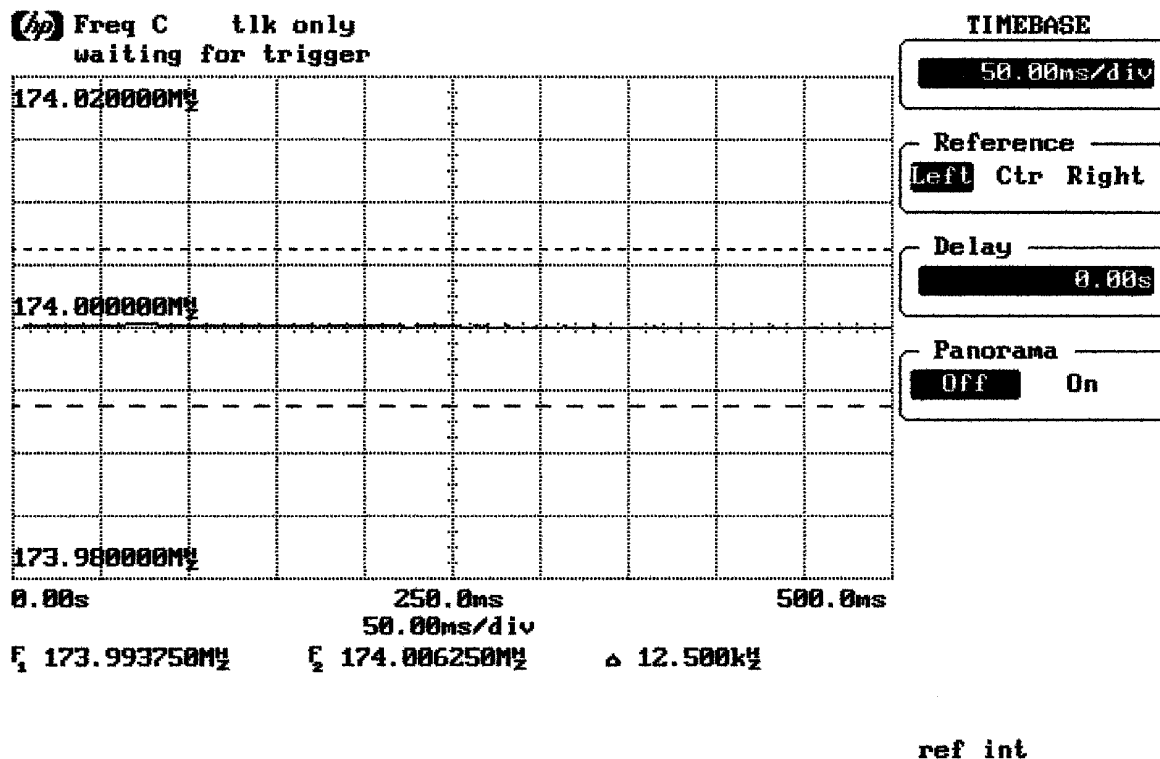
Test Limit:  $\pm 12.5$  kHz within 5 ms,  $\pm 6.25$  kHz within 25 ms

Test Indication: Transient Frequency  $< \pm 6.25$  kHz for all times beyond  $t_{on}$ .

Test Outcome: Transient Frequency within limits  $\rightarrow$  Pass.

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Test Condition: 174 MHz, 250 mW. Frequency Up to 500 ms

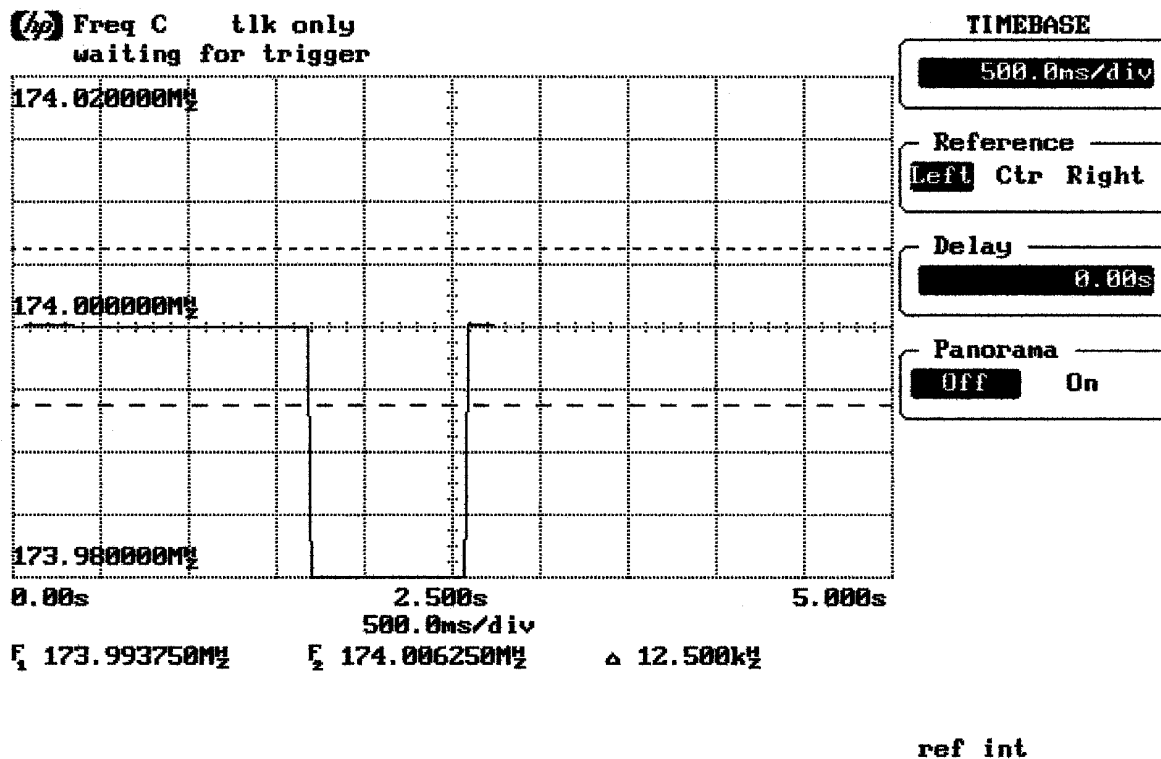
Test Limit:  $\pm 12.5$  kHz within 5 ms,  $\pm 6.25$  kHz within 25 ms

Test Indication: Transient Frequency  $< \pm 6.25$  kHz for all times beyond  $t_{on}$ .

Test Outcome: Transient Frequency within limits  $\rightarrow$  Pass.

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Test Condition: 174 MHz, 250 mW. Transmitter Release Transient Frequency.

Test Limit:  $\pm 12.5$  kHz within 5 ms of  $t_{off}$

Test Indication: Transmitter exhibits no post-release transient behavior, power level drops below  $-13$  dBm. .

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Test Outcome: Transient Frequency within limits → Pass.