

## 18. Transient Frequency behavior. (47 CFR 90.214)

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 EUT is designed to operate on 12.5 kHz channel bandwidth.

The time,  $t_{on}$ , is defined when the transmitter power exceeds  $-25$  dBm at the transmitter output. The modulation domain analyzer (HP 53310A) is triggered on the envelope of the RF power and the zero time indication is referenced to this trigger level. The time,  $t_{off}$ , is defined when the transmitter is turned off and the power level falls below  $-25$  dBm. The output of the EUT is fed through a coupler, and a 40 dB attenuator, and into the HP 53310A, which is set to trigger on the carrier signal. Triggering was manual, when the input signal was keyed on or off.

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

The output power of the device is less than 6 Watts, therefore the transient frequency can exceed the 12.5 kHz limit for the time intervals  $t_{on}$  to  $t_1$  and  $t_{off}$  to  $t_3$ . (\*)

View of setup for Transient Behavior:

