

067-0595-00 CALIBRATION FIXTURE

200 MHz Notch Filter



The Tektronix Type 067-0595-00 Calibration Fixture is a 200 MHz Notch Filter designed for use with Type 067-0594-00 Harmonic Generator. These calibration fixtures, together with a time-mark generator provide frequency markers suitable for calibrating microwave spectrum analyzers.

The 200 MHz Notch Filter attenuates the IF feedthrough signal so that the converted signals may be easily observed.

DATA SHEET

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SECTION 1

OPERATING INSTRUCTIONS

The following procedure describes the operation of the 200 MHz Notch Filter when used with a microwave spectrum analyzer. Detailed information for calibrating the spectrum analyzer is described in the instruction manual supplied with the analyzer.

Usually, the 200 MHz Notch Filter is used with its associated Harmonic Generator (Type 067-0594-00 Calibration Fixture). Figure 1-1 shows the interconnections necessary for generating and observing frequency-marks in the frequency domain.

For the Type 184 Time-mark Generator, each time-mark output is harmonically related to 200 MHz (except 2ns). The Harmonic Generator (Type 067-0594-00 Calibration Fixture) produces a series of frequency-marks beginning with the fundamental (or driving) frequency and at virtually every harmonic number into the GHz region. For this reason, non-converted signals, image signals, and harmonic conversion signals will be seen in the spectrum analyzer display. Refer to the analyzer instruction manual for identifying the various responses. When observing the high-numbered harmonics, the IF feedthrough signal, 200 MHz, could cause intermodulation distortion as well as an unwanted signal. The 200 MHz Notch Filter is intended to attenuate this signal. However, since it is outside the analyzer, it attenuates all 200 MHz signals being applied to the analyzer. Figure 1-2 describes the frequency characteristics of the filter.

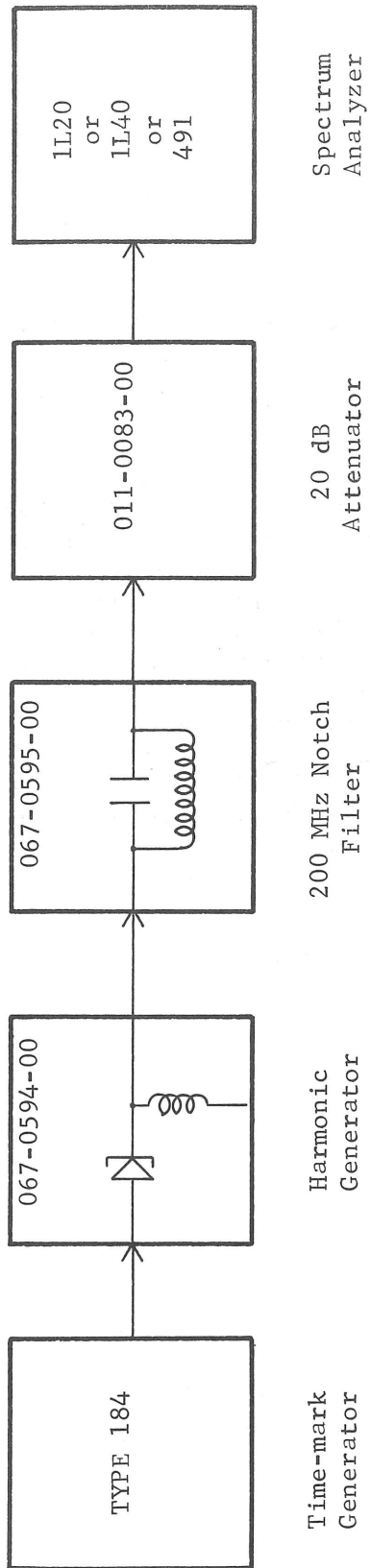
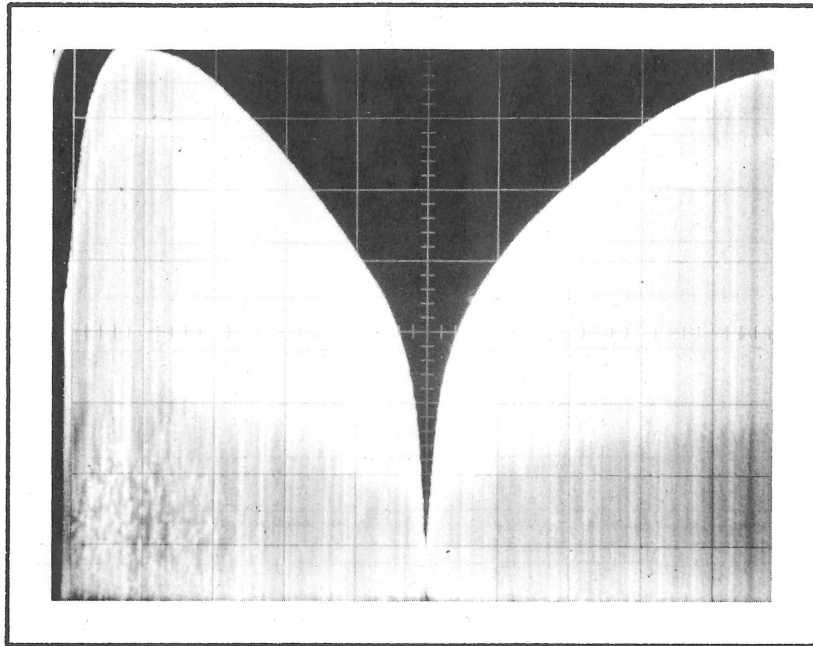


FIG. 1-1

Equipment interconnections for generating and observing frequency-marks.

Log
Scale



10 MHz/Div

FIG. 1-2

Frequency response of 200 MHz notch filter.

SECTION 2
MAINTENANCE

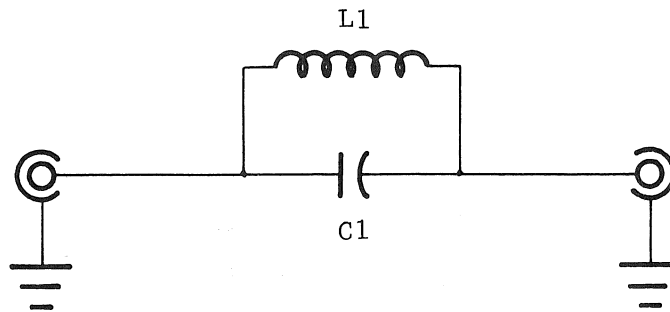
This section contains information necessary to re-calibrate the 200 MHz notch filter.

Connect the equipment as shown in figure 1-1, Operating Instructions. Preset the controls:

Type 184 Time-mark Generator	10 ns
Spectrum Analyzer	
TIME/DIV	5 ms
TRIGGERING	Free-running sweep
DISPERSION	10 MHz/Div
IF CENTER FREQUENCY	000
IF ATTENUATOR	All Off
RF CENTER FREQUENCY	205 MHz (if available, otherwise tuned for no marks in center 2 Div)
MIXER PEAKING	ccw
PHASE-LOCK	OFF
VERTICAL DISPLAY	LOG
GAIN	for 6 Div display of 200 MHz IF feedthrough signal

Adjust the coil turn spacing for minimum amplitude of the 200 MHz signal (either IF feedthrough or converted). The coil should be located near the long axis of the coaxial insertion unit. The attenuation may be measured by removing the filter and using the IF attenuator switches to obtain the same amplitude display.

SECTION 3
REPLACEMENT PARTS



Values are fixed unless marked Variable.

Ckt. No.	Tektronix Part No.	Serial/Model No. Eff	Disc	Description
				Capacitor
C1	283-0132-00		10 pF	Cer 50 V ±0.5 pF
				Inductor
L1	*108-0306-00		0.09 μH	

EXPLODED VIEW

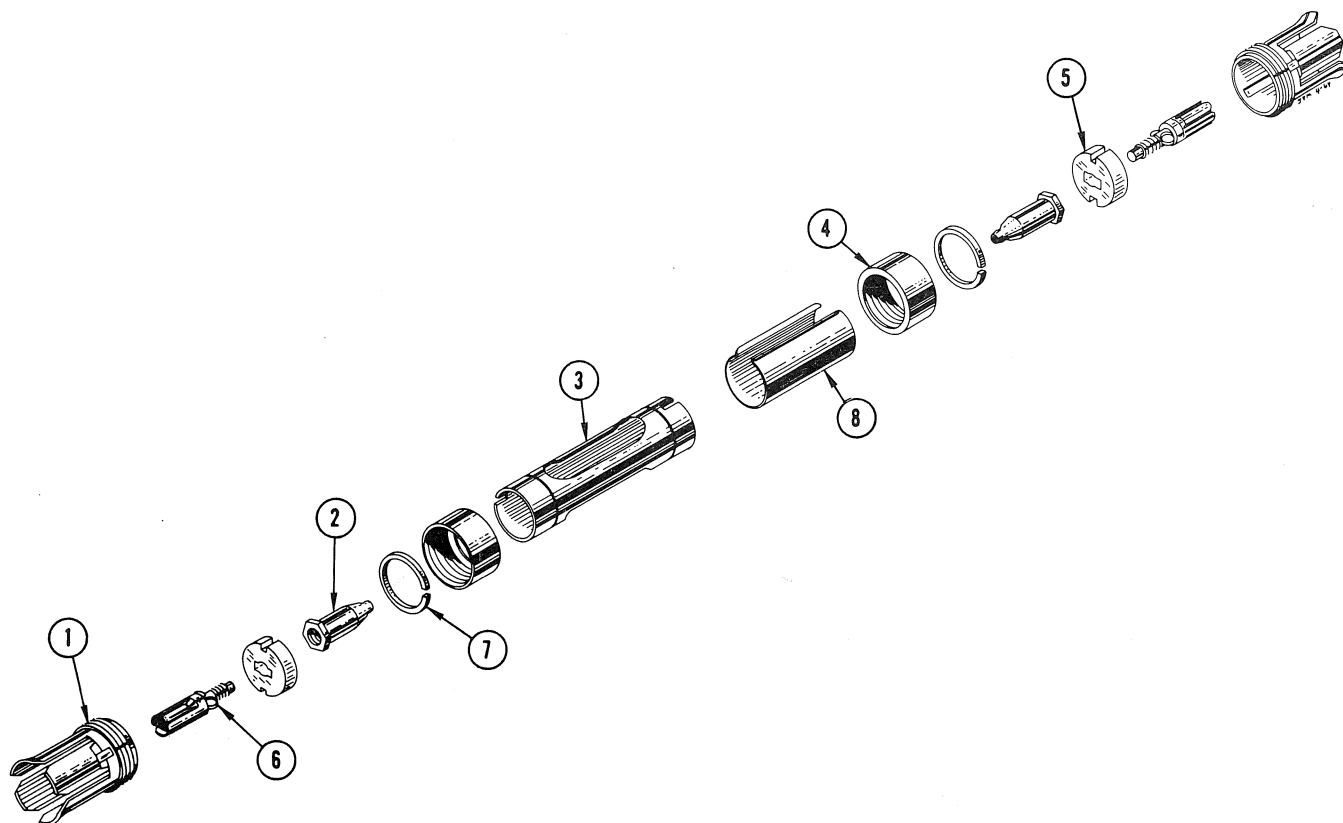


Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	No. Disc	Q						Description
					1	2	3	4	5	
1	132-0002-00			2						SLEEVE, conductor, outer
2	132-0027-00			2						INNER TRANSITION
3	132-0074-00			1						SHELL
4	132-0001-00			2						NUT, coupling
5	132-0045-00			2						INSULATOR
6	132-0029-00			2						INNER CONDUCTOR
7	132-0007-00			2						SNAP RING
8	337-0403-00			1						SHIELD
	334-1393-00			1						TAG, indentification (not shown)