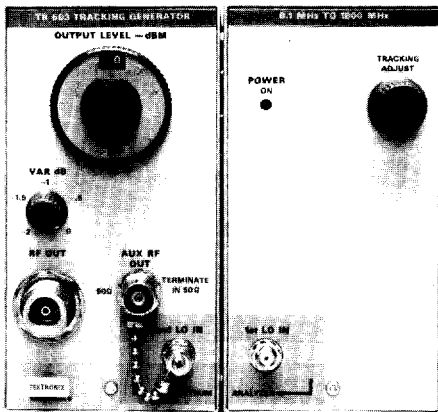


TEK 100 kHz TO 1800 MHz TRACKING GENERATORS



TR 502/TR 503 Tracking Generators

Swept Measurements to 1.8 GHz

Enhances Dynamic Range to Better Than 110 dB

Very Stable—Resolve Signals Using 30 Hz Resolution Bandwidth

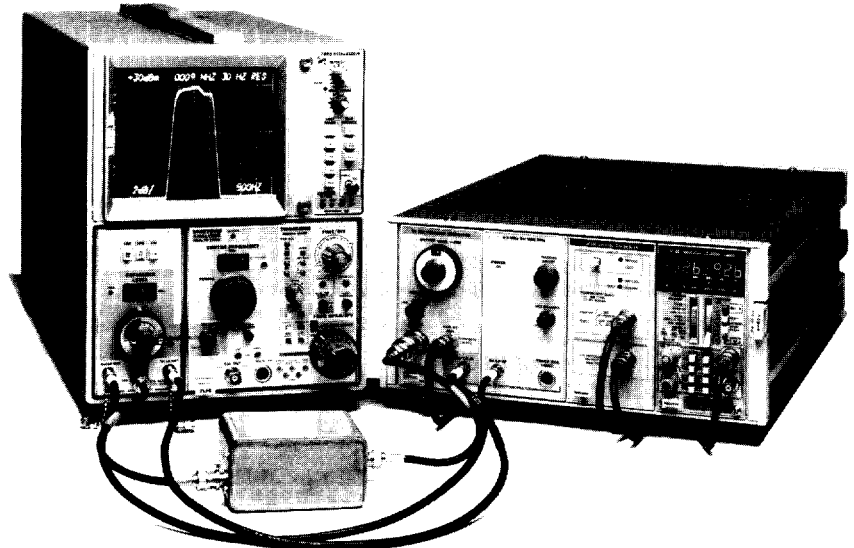
Auxiliary, Constant-Level Output Provides for Frequency Counter Measurement—Even of Signals at the Noise Floor

The TR 502 works with the 7L12 and 7L14 and the TR 503 works with all 490 Series spectrum analyzers to provide constant level, calibrated RF sources for swept frequency tests to 1.8 GHz.

The low residual FM of these systems enhances narrow bandwidth frequency response measurements. When used as a cw signal source with the analyzer in a manual mode, these systems have excellent frequency stability.

CHARACTERISTICS

	TR 503/All 490 Series	TR 502/7L14	TR 502/7L12
Frequency Range	100 kHz – 1.8 GHz	100 kHz – 1.8 GHz	100 kHz – 1.8 GHz
Output Level	(Maximum) 0 dBm ± 0.5 dB	0 dBm ± 0.5 dB	0 dBm ± 0.5 dB
Range	0 to –59 dB in 10 dB and 1 dB steps	0 to –59 dB in 10 dB and 1 dB steps	0 to –59 dB in 10 dB and 1 dB steps
Flatness	Within ± 2.25 dB Max from 100 kHz to 1.8 GHz (Typically ± 1.5 dB)	Within ± 2 dB maximum from 100 kHz to 1.8 GHz (Typically ± 1.5 dB)	Within ± 3.0 dB maximum from 100 kHz to 1.8 GHz (Typically ± 2.0 dB)
Dynamic Range	≥ 110 dB	≥ 110 dB	≥ 100 dB
Residual FM	50 Hz p-p	13 Hz p-p	200 Hz p-p
Output Impedance	50 Ω Nominal, VSWR 2:1 or less to 1.8 GHz	50 Ω nominal, VSWR 2:1 or less to 1.8 GHz	50 Ω nominal, VSWR 2:1 or less to 1.8 GHz
Auxiliary Output	0.1 V into 50 Ω load –7 dBm minimum	0.1 V RMS into 50 Ω Load	0.1 V RMS into 50 Ω Load
Spurious Signoff	Harmonic: –20 dBc Nonharmonic: –40 dBc	Harmonic: –20 dBc Nonharmonic: –40 dBc	Harmonic: –20 dBc Nonharmonic: –40 dBc



For swept frequency tests and precise frequency measurements, the TR 502 Tracking Generator may be used with a DP 501 Digital Prescaler and DC 509 Option 01 Digital Counter, in a TM 504 Power Module. The TR 502 is linked to the 1st and 2nd LO of a 7L14 Spectrum Analyzer in a 7603 mainframe.

The tracking generators are two-wide units compatible with the TM 500 and TM 5000 Modular Instrument Series.

The TR 502/TR 503 Aux RF Output may be used to drive a frequency counter package, such as the recommended DP 501, DC 509 Option 01. Frequencies up to 1.8 GHz may be measured accurately in the presence of high level adjacent signals to the sensitivity limits of the analyzer.

The tracking generator sweep rates are controlled with the spectrum analyzer, and the output level is controlled from the tracking generator. The output frequency of the tracking generator is the same as the frequency of the analyzer at any instant of the sweep.

Dot marker frequency measurement capability may be obtained with the TR 502/7L14 Spectrum Analyzer. For more information concerning the dot marker capability, contact your local Tektronix sales engineer.

OUTPUT CONNECTORS

RF Out — 0 dBm to –61 dBm signal source that tracks input frequency of spectrum analyzer. Output level is set by Output Level control and Var dB control.

Aux RF Out — For use with frequency counter.

ORDERING INFORMATION

TR 502 Tracking Generator \$6,620

Includes: Two 50 Ω coax cables (012-0649-00); logic interface cable (012-0648-00); N male to BNC female adaptor (103-0045-00); retainer plug-in (343-0604-00); 3 mm male to BNC female adaptor (015-1018-00); instruction manual (070-1735-00).

TR 503 Tracking Generator \$6,620

Includes: Same as TR 502 except no logic interface cable and instruction manual (070-3526-00).

OPTIONAL ACCESSORIES

TM 503 — (TR 503 only) Power Module. **\$390**

TM 504 — (TR 502 only) Power Module. **\$480**

DC 509 Option 01 — Digital Counter with high stability time base. **\$2,475**

DP 501 — Digital Prescaler. **\$575**

Blank Panel — Order 016-0195-03 **\$25**

10 dB, 3 mm Attenuator — Used in the 2nd LO input line to improve TR 502/7L12 Isolation. Order 307-0553-00 **\$44**