Model 8853

FREQUENCY CONVERTER

18 to 40 GHz

IEEE - 488

PLANAR CROWN® CONNECTOR SYSTEM

Extends Your VM-7 Capabilities to 40 GHz in Coax!!!

The Model 8853 Frequency Converter is intended for use with any TEGAM Model VM-7 Attenuator/Signal Calibrator to create an 18 to 40 GHz measurement system. This Frequency Converter downconverts the 18 to 40 GHz measurement signal to a 30 MHz IF signal which can be measured by the VM-7. Using the Model 8853 with the Model 8852 Frequency Converter will allow the user to measure attenuation from 0.01 to 40 GHz without the use of an additional LO source. Figure 1 shows a typical Model 8853 Measurement System setup. Other features of the Model 8853 include:

- **Does NOT require a 40 GHz Signal Source.**
- **LOW TEST PORT SWR:** < 1.6
- **NO Additional Signal Sources Required -** When used with the Model 8850 Attenuation Measurement System the Model 8853 does not require any additional signal sources.
- **90 dB dynamic range with + O.O4 dB/10 dB accuracy.**
- **Rack Mounting -** This instrument can be easily stacked with other TEGAM instruments or mounted in any cabinet or rack designed according to EIA RS-310 and MIL-STD-189 using the appropriate rack mounting kit.

Weinschel PLANAR CROWN® CONNECTOR SYSTEM
The use of Weinschel PLANAR CROWN® connectors at the INPUT connectors provides the Model 8853 user with easy exchange of connector types and eliminates the need for adapters and other devices that would create additional insertion loss. This "Torque Free" type of connector also provides quick replacement of defective connectors. All crowns will mate nondestructively with connectors per MIL-STD-39012 (refer to Weinschel PLANAR CROWN® data sheet for more details).

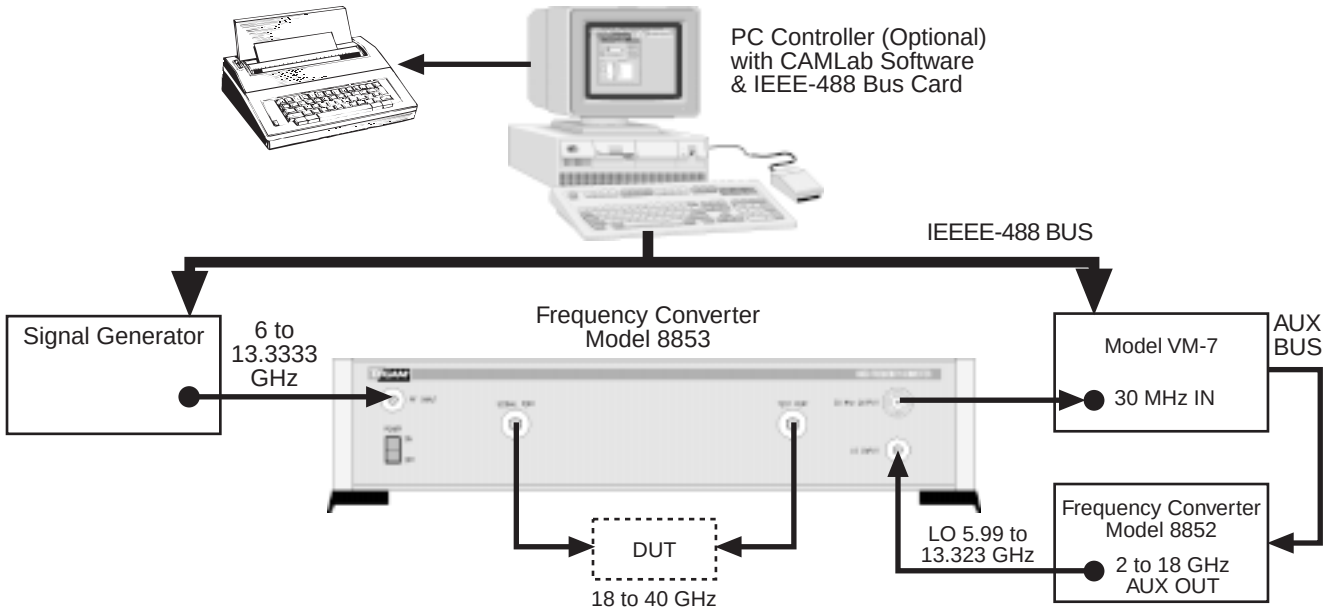

Figure 1. 8850/8853 (18-40 GHz) Measurement System

SPECIFICATIONS

SPECIFICATION	DESCRIPTION
FREQUENCY RANGE	SIGNAL PORT: 18 to 40 GHz RF IN: 6 to 13.333 GHz LO IN: 5.99 to 13.323 GHz IF OUT: 30 ± 2 MHz
RF SIGNAL LEVELS	RF INPUT: +5 dBm nominal/+10 dBm maximum LO INPUT: +7 ± 2 dBm/+10 dBm maximum SIGNAL PORT: -2 dBm maximum/-10 minimum
NOMINAL IMPEDANCE	50 Ω
INPUT LOAD SWR	<1.6
CONNECTORS	RF INPUT: SMA Female LO INPUT: SMA Female 30 MHz OUTPUT Type-N Female TEST PORT: PLANAR CROWN 2.92 mm Female SIGNAL PORT: PLANAR CROWN 2.92 mm Female
SUBHARMONICS	-55 dBm
WARM-UP PERIOD	3 hours minimum
INPUT POWER REQUIREMENTS	100, 120, 220, 240 Vac ± 10% @ 50 to 60 Hz
POWER CONSUMPTION	180 Watts
DESIGN AND CONSTRUCTION	Designed to meet requirements of MIL-STD-28800D TYPE III, CLASS 5, STYLE E
TEMPERATURE	Operating: 0 to 40°C Storage: -40 to +75°C
HUMIDITY	95 %
DIMENSIONS	Height: 88.9 mm (3.5 in) Width: 425 mm (16.75 in) standard rack width Depth: 520.7 (20 in) Weight: NET: 10.66 kg (23.5 lbs)