MICROLAB / FXR Signal Samplers

HM series

Resistive Design
DC - 5 GHz

- **5 to 15 Watt Average Power Rating**
- **Minimal RF Insertion Loss**
- **High Reliability**
- **N, BNC, TNC, or SMA Standard**
- **Custom miniaturized versions to special order**

Microlab/FXR Model HM series resistive samplers consist of a resistive attenuator coupled to a short length of 50Ω transmission line. A small portion of the RF energy in the main line is coupled through the attenuator to the auxiliary output, the balance being transmitted to the output with negligible reflection or loss. The coupling is fixed, non-directional and independent of frequency over an extremely broad bandwidth.

The unit consists of a low-loss main line with both terminals available, and a coupling arm incorporating an L-type fixed attenuator. The series resistor reduces the power flow into the coupled arm and minimizes the discontinuity effect on the main line. The shunt resistor then optimizes the output VSWR of the sampled signal output.

Standard units are generally available from stock. Options for non-standard coupling levels, custom housings, different polarity or alternate connectors are available on request. (5/98)

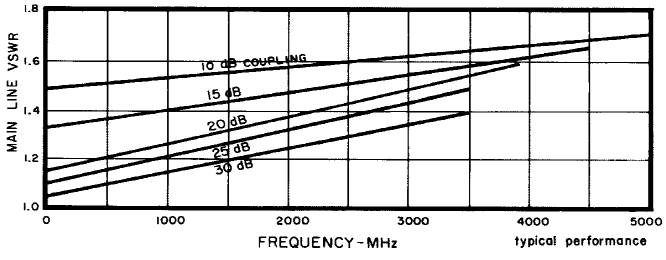
Specifications Model HM series

Coupling Levels, dB:	10,15,20,25 or 30
Coupling accuracy:	± 1 dB
Impedance:	50Ω nominal
Standard Connectors:	
Main Line	male to female
Sample Port:	female standard
Temperature Range:	-55°C to +125°C
Finish:	Silverplate per QQ-S-365

Basic Unit Specifications with N-connectors (N suffix)

Model Number	Coupling nom.	Frequency Range, MHz	Main Line VSWR	Main Line Loss dB	Power Avg. Max.
HM-10N	10 dB	DC – 5000	< 1.8:1	< 2.5	5 W
HM-15N	15 dB	DC – 4500	< 1.7:1	< 2.0	6 W
HM-20N	20 dB	DC – 4000	< 1.6:1	< 1.5	8 W
HM-25N	25 dB	DC – 3500	< 1.5:1	< 1.0	10 W
HM-30N	30 dB	DC – 3000	< 1.4:1	< 0.8	15 W

Typical Main Line VSWR Performance



Connector Variations

Connector and suffix		Length in. (mm)	Height In. (mm)	Weight Oz. (g)
N	N	2.7 (69)	1.9 (48)	3.8 (106)
BNC	B	2.5 (64)	1.7 (43)	1.5 (42)
TNC	T	2.5 (64)	1.7 (43)	1.5 (42)
SMA	F	2.5 (64)	1.7 (43)	1.5 (42)

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