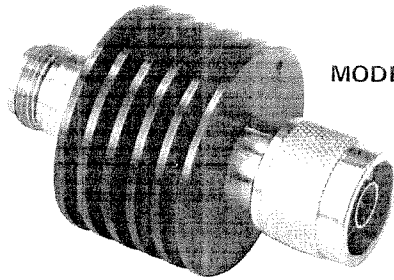


MEDIUM POWER FIXED COAXIAL ATTENUATORS



MODEL 22
DC TO 12.4 GHz

MODEL 23
DC TO 18.0 GHz



MODEL 22

FEATURES

- **POWER CAPABILITY** — Average Input power ratings range from 10 to 20 watts; maximum peak power ratings are 1 kW and 2 kW, depending upon nominal attenuation value.

- **HIGH TEMPERATURE ENVIRONMENT** — 0 to 125°C. Full rated power to 25°C. Both models derated linearly to 0 watts at 125°C.
- **UNIFORM PHASE CHARACTERISTICS** — Excellent unit-to-unit tracking and phase linearity with frequency.
- **HIGH REPEATABILITY CONNECTORS** — Repeatable insertion loss and low VSWR are the result of using captivated inner contacts in the connectors. A mated pair of Weinschel Type N connectors has repeatability of better than 0.02 dB to 8.0 GHz and better than 0.03 dB to 18.0 GHz. (These are 2.7σ, 99.3% probability values.)
- **RUGGED CONSTRUCTION** — Designed to meet all environmental requirements of MIL-A-3933.
- **STABILITY** — Low temperature and power coefficients. Weinschel film resistors are artificially aged to provide high stability under normal as well as extreme operating conditions.

SPECIFICATIONS (All Models, except as noted)

NOMINAL IMPEDANCE: 50 ohms.

FREQUENCY RANGE: Model 22: DC to 12.4 GHz.
Model 23: DC to 18.0 GHz.

STANDARD NOMINAL VALUES AND MAXIMUM DEVIATION FROM NOMINAL (including frequency sensitivity):

Standard Nominal Values (dB)	Maximum Deviation (dB)	
	Model 22	Model 23
3	+0.3	+0.3
6	+0.3	+0.3
10	+0.5	+0.5
20	+0.5	+0.5
30	+0.75	+1.0
40	+0.75	+1.0
50	+0.75	+1.25
60	+1.0	+1.50

CALIBRATION FREQUENCIES:

Model 22: DC, 4.0, 8.0 and 12.0 GHz.

Model 23: DC, 4.0, 8.0, 12.0 and 18.0 GHz.

(Additional calibration frequencies can be supplied upon special request.)

CALIBRATION DATA SUPPLIED:

Nameplate.

CONNECTORS:

Weinschel semi-precision Type N stainless steel connectors, standard with one male and one female. Units with both male connectors or both female connectors are available. When ordering, prefix M before model number for male and F for female. (For example, M22-10 is a Model 22, 10 dB unit with two male connectors.)

CONSTRUCTION:

Black, finned aluminum body.

WEIGHT:

Net, 4 oz. (0.11 kg.); Shipping, 1 lb. (0.45 kg.)

FEDERAL STOCK NO.:

22-10: 9059-00-850-7207 (FAA)

22-20: 5985-008-1237 (FAA)

PRICE: 22 - 3 thru 22 - 20 \$100

22 - 30 125

22 - 40 thru 22 - 60 150

23 - 3 thru 23 - 20 115

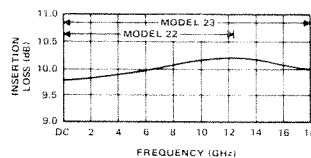
23 - 30 140

23 - 40 thru 23 - 60 165

MAXIMUM VSWR:

Frequency Range (GHz)	VSWR	
	Model 22	Model 23
DC - 4.0	1.15	1.15
4.0 - 8.0	1.20	1.20
8.0 - 12.4	1.25	1.25
12.4 - 18.0	-	1.40

Typical Frequency Sensitivity of Insertion Loss



POWER RATING:

3 dB: 20 watts average; 1.0 kW peak.

6 dB: 10 watts average; 1.0 kW peak.

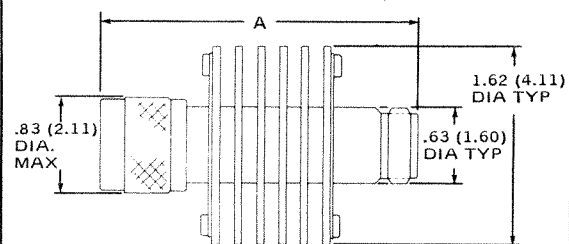
10 thru 60 dB: 10 watts average; 2.0 kW peak.

(Maximum rated average power for all models to 25°C ambient temperature. The 3 dB units derate linearly to 12 watts at 65°C, the 6 dB thru 60 dB units derate linearly to 6 watts at 65°C. All units derate to 0 watts at 125°C.)

POWER COEFFICIENTS: $< 0.001 \frac{\text{dB}}{\text{dB} \times \text{W}}$

TEMPERATURE COEFFICIENTS: $< 0.0001 \frac{\text{dB}}{\text{dB} \times ^\circ\text{C}}$

NOTE: Dimensions are given in inches (cm) and are maximum, unless otherwise specified.



Model No.	Dim. A.
22 & 23	2.72 (6.91)
F22 & F23	2.52 (6.40)
M22 & M23	2.32 (5.89)