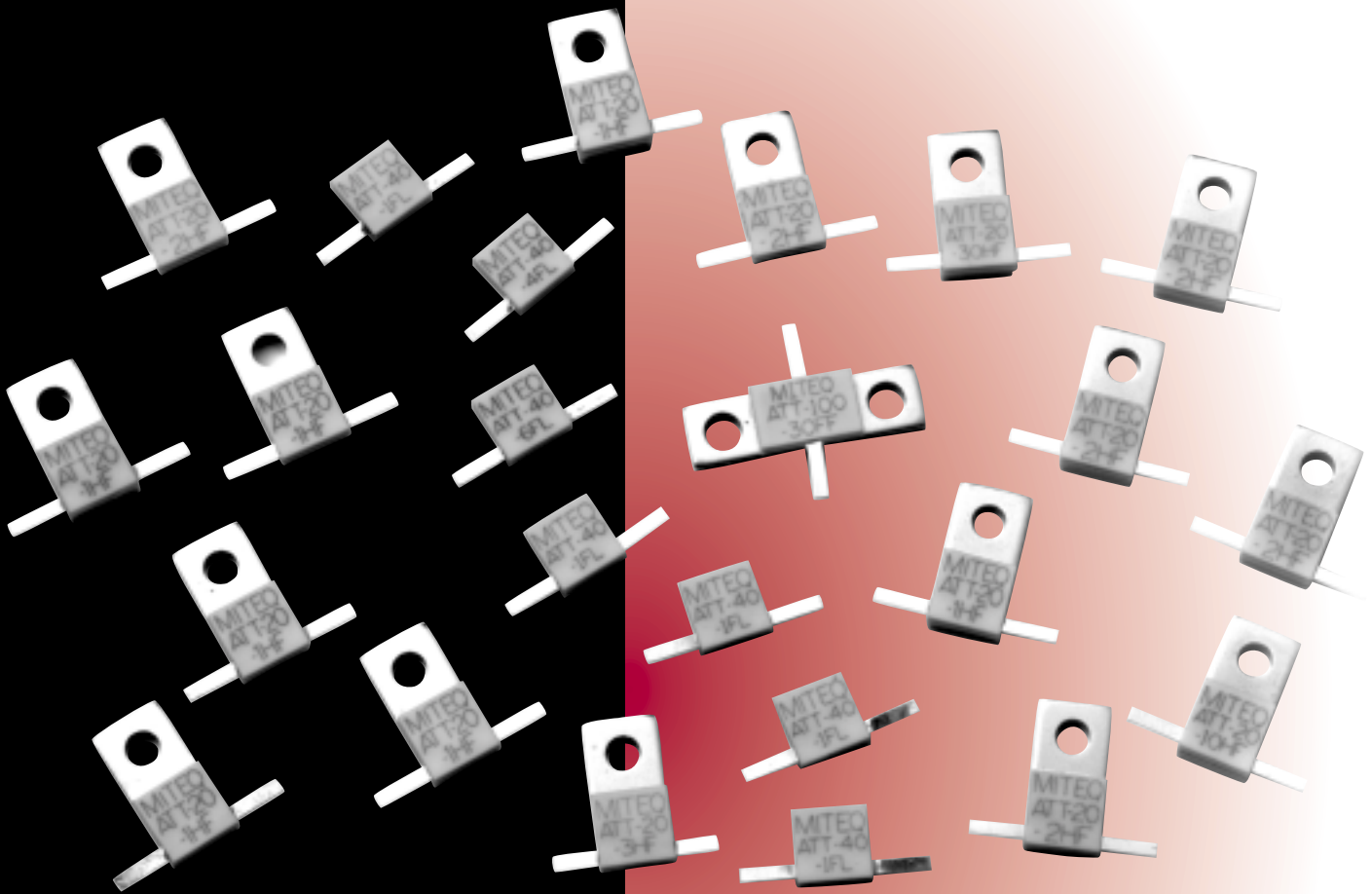


ATTENUATORS



FEATURES

- Power to 100 watts CW
- Frequency ranges from DC to 2.5 GHz
- Values from 0 – 30 dB in 1 dB steps
- Excellent broadband VSWR
- Flat attenuation across full bandwidth
- Aluminum Nitride (AlN) and Beryllium Oxide (BeO)
- Thin-film/thick-film (thick-film standard)
- Copper and copper/tungsten mounting flanges (copper standard)
- Nickel, silver and gold plating (nickel standard)
- High temperature attachment
- Welded leads
- Custom designs

APPLICATIONS

- Accurate high power attenuation for microstrip designs
- Antenna matching
- High power digital attenuators

ATTENUATORS

ALUMINUM NITRIDE MODEL NUMBER	BERYLLIUM OXIDE MODEL NUMBER	ATTENUATION VALUE (dB)	POWER (Watts, CW)	TOLERANCE (±dB)	FREQUENCY (GHz)	VSWR (Max.)
HF20 SERIES (HALF FLANGE)						
ATT-20-1HF	BTT-20-1HF	1	20	0.2	2.5	1.2:1
ATT-20-2HF	BTT-20-2HF	2	20	0.2	2.5	1.2:1
ATT-20-3HF	BTT-20-3HF	3	20	0.2	2.5	1.2:1
ATT-20-4HF	BTT-20-4HF	4	20	0.2	2.5	1.2:1
ATT-20-5HF	BTT-20-5HF	5	20	0.2	2.5	1.2:1
ATT-20-6HF	BTT-20-6HF	6	20	0.2	2.5	1.2:1
ATT-20-7HF	BTT-20-7HF	7	20	0.2	2.5	1.2:1
ATT-20-8HF	BTT-20-8HF	8	20	0.2	2.5	1.2:1
ATT-20-9HF	BTT-20-9HF	9	20	0.2	2.5	1.2:1
ATT-20-10HF	BTT-20-10HF	10	20	0.5	2.5	1.15:1
ATT-20-15HF	BTT-20-15HF	15	20	0.5	2.5	1.15:1
ATT-20-20HF	BTT-20-20HF	20	20	1	2.5	1.15:1
ATT-20-30HF	BTT-20-30HF	30	20	1	2.5	1.15:1
FL40 SERIES (FLANGELESS)						
ATT-40-1FL	BTT-40-1FL	1	40	0.2	2.5	1.2:1
ATT-40-2FL	BTT-40-2FL	2	40	0.2	2.5	1.2:1
ATT-40-3FL	BTT-40-3FL	3	40	0.2	2.5	1.2:1
ATT-40-4FL	BTT-40-4FL	4	40	0.2	2.5	1.2:1
ATT-40-5FL	BTT-40-5FL	5	40	0.2	2.5	1.2:1
ATT-40-6FL	BTT-40-6FL	6	40	0.2	2.5	1.2:1
ATT-40-7FL	BTT-40-7FL	7	40	0.2	2.5	1.2:1
ATT-40-8FL	BTT-40-8FL	8	40	0.2	2.5	1.2:1
ATT-40-9FL	BTT-40-9FL	9	40	0.2	2.5	1.2:1
ATT-40-10FL	BTT-40-10FL	10	40	0.5	2.5	1.15:1
ATT-40-15FL	BTT-40-15FL	15	40	0.5	2.5	1.15:1
ATT-40-20FL	BTT-40-20FL	20	40	1	2.5	1.15:1
ATT-40-30FL	BTT-40-30FL	30	40	1	2.5	1.15:1
FF50 SERIES (FULL FLANGE)						
ATT-50-1FF	BTT-50-1FF	1	50	0.2	2.3	1.25:1
ATT-50-2FF	BTT-50-2FF	2	50	0.2	2.3	1.25:1
ATT-50-3FF	BTT-50-3FF	3	50	0.2	2.3	1.25:1
ATT-50-4FF	BTT-50-4FF	4	50	0.2	2.3	1.25:1
ATT-50-5FF	BTT-50-5FF	5	50	0.2	2.3	1.25:1
ATT-50-6FF	BTT-50-6FF	6	50	0.3	2.3	1.2:1
ATT-50-7FF	BTT-50-7FF	7	50	0.3	2.3	1.2:1
ATT-50-8FF	BTT-50-8FF	8	50	0.3	2.3	1.2:1
ATT-50-9FF	BTT-50-9FF	9	50	0.4	2.3	1.2:1
ATT-50-10FF	BTT-50-10FF	10	50	0.5	2.3	1.2:1
ATT-50-15FF	BTT-50-15FF	15	50	1	2.3	1.2:1
ATT-50-20FF	BTT-50-20FF	20	50	1	3	1.2:1
ATT-50-30FF	BTT-50-30FF	30	50	1	3	1.2:1

See outline drawings on page 29.

ENVIRONMENTAL CONDITIONS

Operating temperature.....	-55 to +75°C (base plate)
Storage temperature.....	-55 to +100°C
Humidity.....	95% relative humidity, noncondensing
Vibration.....	7 g's rms, 50–5000 CPS per MIL-STD-810B, Method 514, Procedure 5

ATTENUATORS (CONT.)

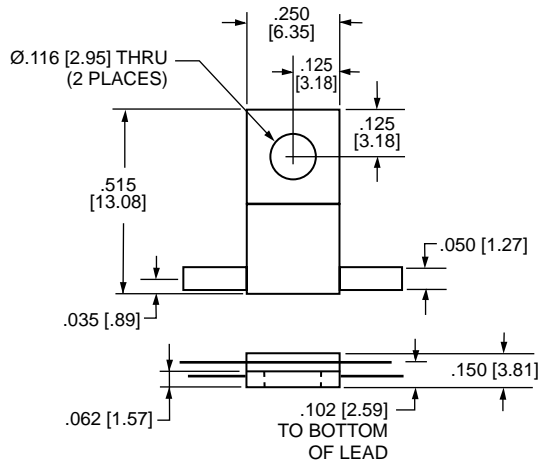
ALUMINUM NITRIDE MODEL NUMBER	BERYLLIUM OXIDE MODEL NUMBER	ATTENUATION VALUE (dB)	POWER (Watts, CW)	TOLERANCE (±dB)	FREQUENCY (GHz)	VSWR (Max.)
HF75 SERIES (HALF FLANGE)						
ATT-75-1HF	BTT-75-1HF	1	75	0.2	2.3	1.25:1
ATT-75-2HF	BTT-75-2HF	2	75	0.2	2.3	1.25:1
ATT-75-3HF	BTT-75-3HF	3	75	0.2	2.3	1.25:1
ATT-75-4HF	BTT-75-4HF	4	75	0.2	2.3	1.25:1
ATT-75-5HF	BTT-75-5HF	5	75	0.2	2.3	1.25:1
ATT-75-6HF	BTT-75-6HF	6	75	0.2	2.3	1.25:1
ATT-75-7HF	BTT-75-7HF	7	75	0.2	2.3	1.25:1
ATT-75-8HF	BTT-75-8HF	8	75	0.2	2.3	1.25:1
ATT-75-9HF	BTT-75-9HF	9	75	0.2	2.3	1.25:1
ATT-75-10HF	BTT-75-10HF	10	75	0.5	2.3	1.2:1
ATT-75-15HF	BTT-75-15HF	15	75	0.5	2.3	1.2:1
ATT-75-20HF	BTT-75-20HF	20	75	1	3	1.2:1
ATT-75-30HF	BTT-75-30HF	30	75	1	3	1.2:1
FF100 SERIES (FULL FLANGE)						
ATT-100-1FF	BTT-100-1FF	1	100	0.2	2.3	1.25:1
ATT-100-2FF	BTT-100-2FF	2	100	0.2	2.3	1.25:1
ATT-100-3FF	BTT-100-3FF	3	100	0.2	2.3	1.25:1
ATT-100-4FF	BTT-100-4FF	4	100	0.2	2.3	1.25:1
ATT-100-5FF	BTT-100-5FF	5	100	0.2	2.3	1.25:1
ATT-100-6FF	BTT-100-6FF	6	100	0.3	2.3	1.2:1
ATT-100-7FF	BTT-100-7FF	7	100	0.2	2.3	1.2:1
ATT-100-8FF	BTT-100-8FF	8	100	0.3	2.3	1.2:1
ATT-100-9FF	BTT-100-9FF	9	100	0.4	2.3	1.2:1
ATT-100-10FF	BTT-100-10FF	10	100	0.5	2.3	1.2:1
ATT-100-15FF	BTT-100-15FF	15	100	0.5	2.3	1.2:1
ATT-100-20FF	BTT-100-20FF	20	100	1	3	1.2:1
ATT-100-30FF	BTT-100-30FF	30	100	1	3	1.2:1
FL100 SERIES (FLANGELESS)						
ATT-100-1FL	BTT-100-1FL	1	100	0.2	2.3	1.25:1
ATT-100-2FL	BTT-100-2FL	2	100	0.2	2.3	1.25:1
ATT-100-3FL	BTT-100-3FL	3	100	0.2	2.3	1.25:1
ATT-100-4FL	BTT-100-4FL	4	100	0.2	2.3	1.25:1
ATT-100-5FL	BTT-100-5FL	5	100	0.2	2.3	1.25:1
ATT-100-6FL	BTT-100-6FL	6	100	0.3	2.3	1.2:1
ATT-100-7FL	BTT-100-7FL	7	100	0.2	2.3	1.2:1
ATT-100-8FL	BTT-100-8FL	8	100	0.3	2.3	1.2:1
ATT-100-9FL	BTT-100-9FL	9	100	0.4	2.3	1.2:1
ATT-100-10FL	BTT-100-10FL	10	100	0.5	2.3	1.2:1
ATT-100-15FL	BTT-100-15FL	15	100	0.5	2.3	1.2:1
ATT-100-20FL	BTT-100-20FL	20	100	1	3	1.2:1
ATT-100-30FL	BTT-100-30FL	30	100	1	3	1.2:1

See outline drawings on page 29.

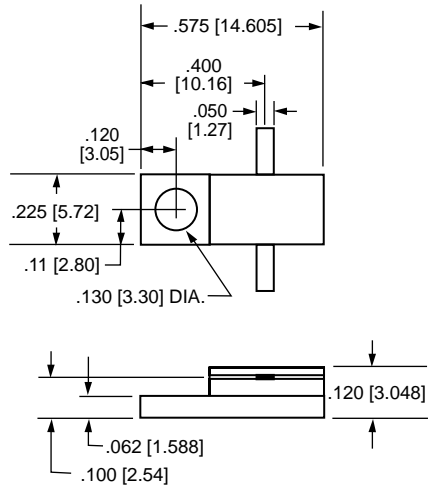
ATTENUATOR OUTLINE DRAWINGS

HALF FLANGE/FULL FLANGE/FLANGE/FLANGELESS

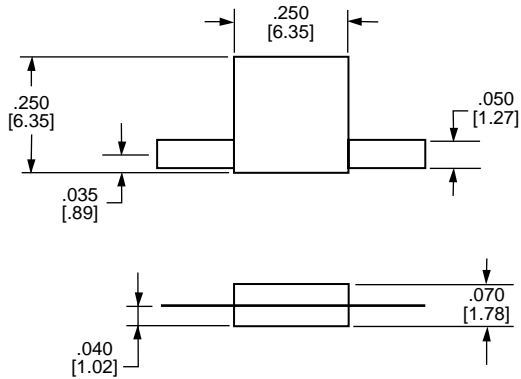
HF20 SERIES



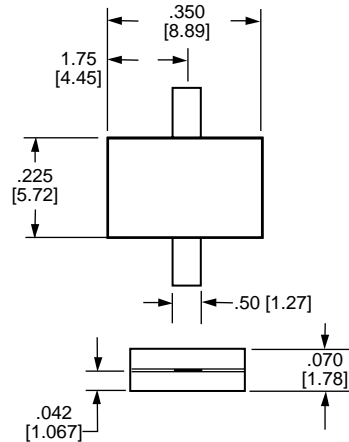
HF75 SERIES



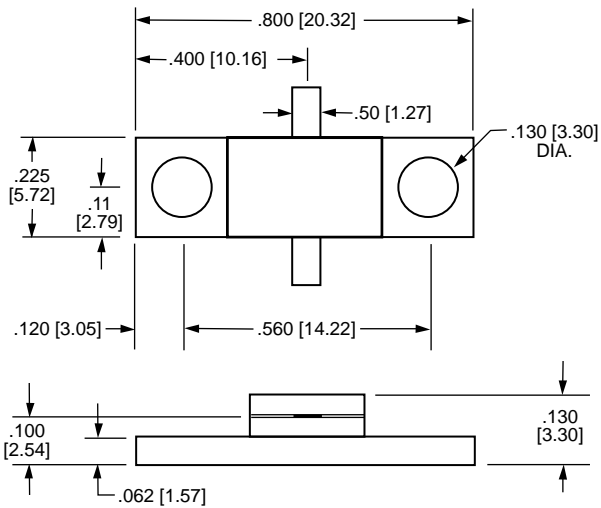
FL40 SERIES



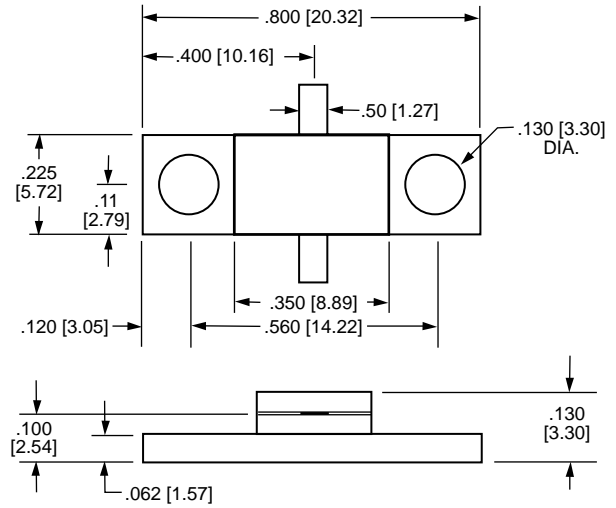
FL100 SERIES



FF50 SERIES



FF100 SERIES



NOTE: DIMENSIONS SHOWN IN BRACKETS [] ARE IN MILLIMETERS. MINIMUM LEAD LENGTH IS $.150$ " [3.810].