

ELECTRICAL SPECIFICATIONS

Model Number	FXA-42	FXA-28	FXA-22	FXA-19	FXA-15	FXA-12	FXA-10	FXA-08	FXA-06
General Purpose Fixed Attenuators									
Frequency band and range (GHz)	K 18-26.5	Ka 26.5-40	Q 33-50	U 40-60	V 50-75	E 60-90	W 75-110	F 90-140	D 110-170
Attenuation at center frequency range (dB) ^{*1}	3, 6, 10, 20, 30, 40								
VSWR (max)	1.15:1	1.15:1	1.15:1	1.15:1	1.15:1	1.15:1	1.15:1	1.20:1	1.5:1
Power rating (W) (max) ^{*2}	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.3
Precision Fixed Attenuators									
Attenuation across waveguide band	---	3, 6, 10, 20, 30, 40						---	---
Accuracy (\pm dB/%) ^{*3}	---	0.7/4.0	0.7/4.0	0.7/4.0	0.7/4.0	0.7/4.0	0.7/4.0	---	---
Flatness (\pm dB) (max) ^{*4}	---	0.7	0.7	0.7	0.7	0.7	0.7	---	---
VSWR (max)	---	1.05:1	1.05:1	1.06:1	1.08:1	1.08:1	1.08:1	---	---
Power rating (W) (max)	---	1.0	1.0	1.0	1.0	0.5	0.5	---	---

*1 – ± 0.3 dB at center frequency. Please contact Millitech for attenuation values over full bandwidth.

*2 – Higher power versions are available in all frequency bands. Please contact Millitech for details.

*3 – Whichever is greater throughout the waveguide band.

*4 – Flatness within the entire waveguide band.

Model Number	LSA-42	LSA-28	LSA-22	LSA-19	LSA-15	LSA-12	LSA-10	LSA-08	LSA-06
Level Set Attenuators									
Frequency band and range (GHz)	K 18-26.5	Ka 26.5-40	Q 33-50	U 40-60	V 50-75	E 60-90	W 75-110	F 90-140	D 110-170
Attenuation (dB) ^{*1}	0-25	0-25	0-25	0-25	0-25	0-25	0-25	0-25	0-25
Insertion loss (dB) (max)	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2
VSWR (max)	1.3:1	1.3:1	1.3:1	1.3:1	1.3:1	1.3:1	1.3:1	1.3:1	1.5:1
Power rating (W) (max) ^{*2}	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.3
Model Number	VPS-42	VPS-28	VPS-22	VPS-19	VPS-15	VPS-12	VPS-10	VPS-08	VPS-06
Variable Phase Shifters									
Insertion loss (dB) (max)	---	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2
Phase shift range (degrees) ^{*3}	---	0-180	0-180	0-180	0-180	0-180	0-180	0-180	0-180
VSWR (max)	---	1.3:1	1.3:1	1.3:1	1.3:1	1.3:1	1.3:1	1.3:1	1.5:1
Power rating (W) (max)	---	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

*1 – Micrometer reading vs. attenuation value available upon request.

*2 – Higher power versions are available in all frequency bands. Please contact Millitech for details.

*3 – Measurements are made at the lowest frequency of the waveband guide.

MECHANICAL SPECIFICATIONS

Model Number	FXA-42	FXA-28	FXA-22	FXA-19	FXA-15	FXA-12	FXA-10	FXA-08	FXA-06
General Purpose Fixed Attenuators									
A (in/mm)	2.0/51	2.0/51	2.0/51	2.0/51	1.6/41	1.6/41	1.6/41	1.6/41	1.6/41
Precision Fixed Attenuators									
A (in/mm)	*1	7.26/184	6.08/154	5.32/135	3.98/101	3.31/84	3.12/79	---	---
B (in/mm)	*1	0.93/24	1.30/33	1.30/33	0.86/22	0.86/22	0.86/22	---	---
C (in/mm)	*1	1.33/34	1.33/34	1.33/34	1.20/30	1.20/30	1.20/30	---	---
Model Number	LSA-42	LSA-28	LSA-22	LSA-19	LSA-15	LSA-12	LSA-10	LSA-08	LSA-06
Model Number	VPS-42	VPS-28	VPS-22	VPS-19	VPS-15	VPS-12	VPS-10	VPS-08	VPS-06
Level Set Attenuators/Variable Phase Shifters									
A (in/mm)	*1	3.45/88	3.40/86	3.40/86	3.25/83	3.25/83	3.25/83	3.17/81	3.17/81
Flange MIL.F-3922	/54-001 ^{*2}	/54-003 ^{*2}	/67B-006	/67B-007	/67B-008	/67B-009	/67B-010	/67B-M08	/67B-M06

*1 – Please contact Millitech for dimensions.

*2 – With #4-40 threaded holes.

HOW TO ORDER

Specify Model Number LSA-XX-A0000 VPS-XX-A0000 FXA-XX-ABBC0
XX = Waveguide Band WR – number
A = Flange Type R – round (not available in WR-42) S – square (WR-42 and WR-28 only) N – nonstandard (not available for precision fixed attenuators)
BB = Attenuation Values* 03 – 3 dB 06 – 6 dB 10 – 10 dB 20 – 20 dB 30 – 30 dB 40 – 40 dB
C = Attenuator Type G – general purpose fixed version P – precision fixed version (WR-28 through WR-10 only)
*Custom attenuation values available upon request for general purpose fixed attenuators.