

Ultra-Reliable Low Pass Filter

50Ω DC to 1350 MHz

VLP-16

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	15W max. at 25°C

* Passband rating, derate linearly to 0.4xPmax at 100°C ambient. Permanent damage may occur if any of these limits are exceeded.

Features

- rugged unibody construction
- low insertion loss passband, less than 1 dB typ.
- excellent power handling, 15W
- low cost

Applications

- harmonic rejection
- transmitters/receivers
- lab use

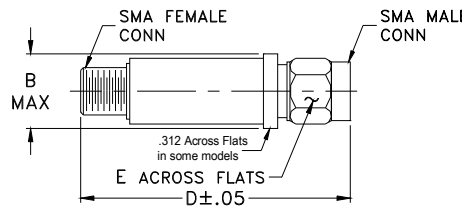


Generic photo used for illustration purposes only

CASE STYLE: FF704

Connectors	Model
SMA	VLP-16

Outline Drawing



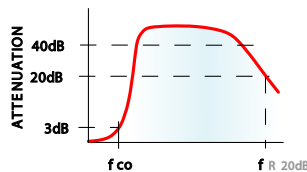
Outline Dimensions (inch/mm)

B	D	E	wt
.410	1.43	.312	grams
10.41	36.32	7.92	10.0

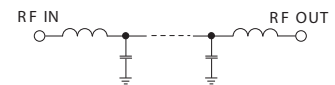
Electrical Specifications (T_{AMB}=25°C)

PASSBAND (MHz) (loss < 1 dB)	f _{co} , MHz Nom. (loss 3 dB)	STOP BAND (MHz)			VSWR (:1) Passband Typ.
		(loss > 20 dB)	(loss > 30 dB)	fr20 dB Typ.	
DC-1350	1550	2100	2700-4500	7000	1.1

typical frequency response

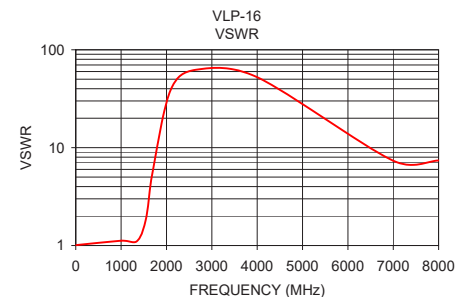
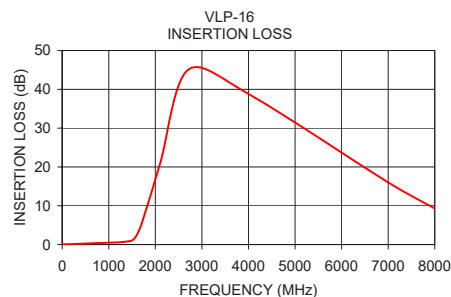


electrical schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10.00	0.05	1.01
1000.00	0.49	1.12
1350.00	0.72	1.11
1550.00	1.53	1.89
1700.00	5.16	5.81
2100.00	20.75	39.56
2700.00	45.01	62.90
4000.00	38.83	52.45
7000.00	16.02	7.35
8000.00	9.31	7.38



Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp



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REV. C
M151107
VLP-16
ED-10545B/1
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200522

Typical Performance Curves

FREQ. (MHz)	INSERTION LOSS (dB)	INPUT RETURN LOSS (dB)	OUTPUT RETURN LOSS (dB)
	@ +25° C	@ +25° C	@ +25° C
10	0.05	43.66	43.72
25	0.06	39.62	39.52
50	0.08	35.87	35.79
100	0.11	31.87	31.81
200	0.15	28.26	28.19
300	0.19	27.27	27.20
400	0.23	28.26	28.22
500	0.26	32.29	32.04
600	0.30	51.84	42.18
700	0.34	32.83	32.38
800	0.39	26.82	26.80
900	0.44	24.61	24.78
1000	0.49	24.96	25.32
1100	0.54	28.07	28.24
1200	0.60	29.33	28.71
1300	0.68	26.23	27.04
1350	0.72	25.93	28.59
1400	0.78	24.75	29.69
1500	1.09	14.67	15.50
1550	1.53	10.25	10.62
1700	5.16	3.02	3.05
1800	9.07	1.46	1.45
2000	17.07	0.57	0.58
2100	20.75	0.44	0.45
2200	24.27	0.38	0.38
2400	31.28	0.35	0.32
2500	35.09	0.32	0.30
2700	45.01	0.28	0.29
2800	54.38	0.29	0.28
3000	49.95	0.40	0.28
3200	44.43	0.42	0.27
3400	42.04	0.34	0.29
3500	41.27	0.32	0.31
3800	39.64	0.35	0.31
4000	38.83	0.33	0.30
4200	38.00	0.30	0.32
4400	37.05	0.28	0.33
4500	36.52	0.26	0.32
4800	34.93	0.24	0.30
5000	33.71	0.26	0.32
5200	32.34	0.22	0.30
5400	30.89	0.22	0.26
5500	30.18	0.26	0.26
5800	27.94	0.34	0.25
6000	26.32	0.29	0.26
6200	24.41	0.41	0.30
6400	21.74	0.70	0.40
6500	19.72	0.97	0.54
6800	8.95	17.68	6.87
7000	16.02	2.38	2.18
7400	21.28	0.68	0.63
7500	21.04	0.70	0.77
7800	21.37	1.08	6.87
8000	9.31	2.37	4.30

REV. X1

VLP-16

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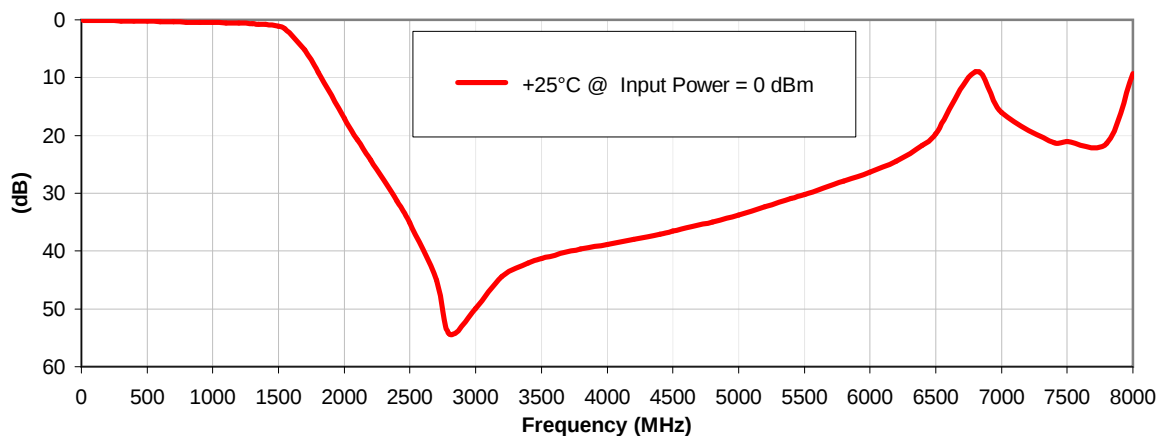


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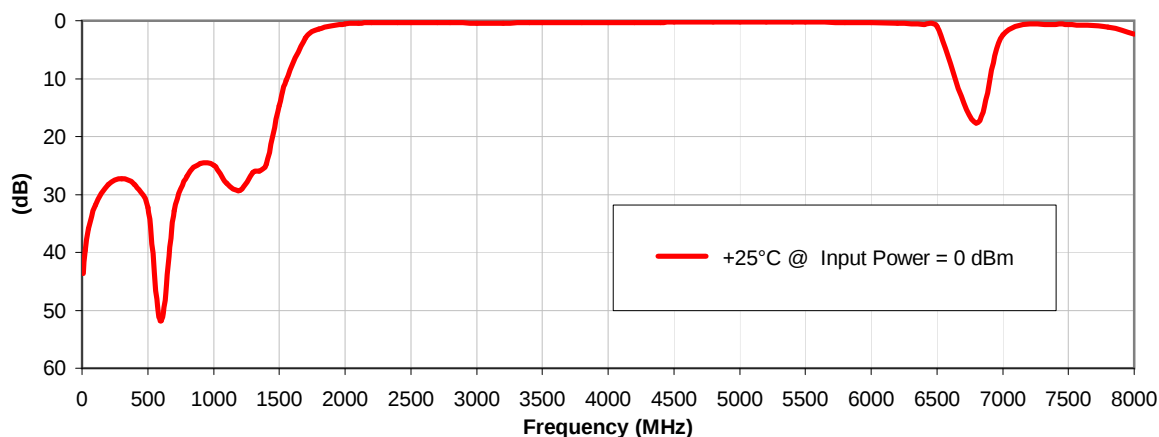


Typical Performance Curves

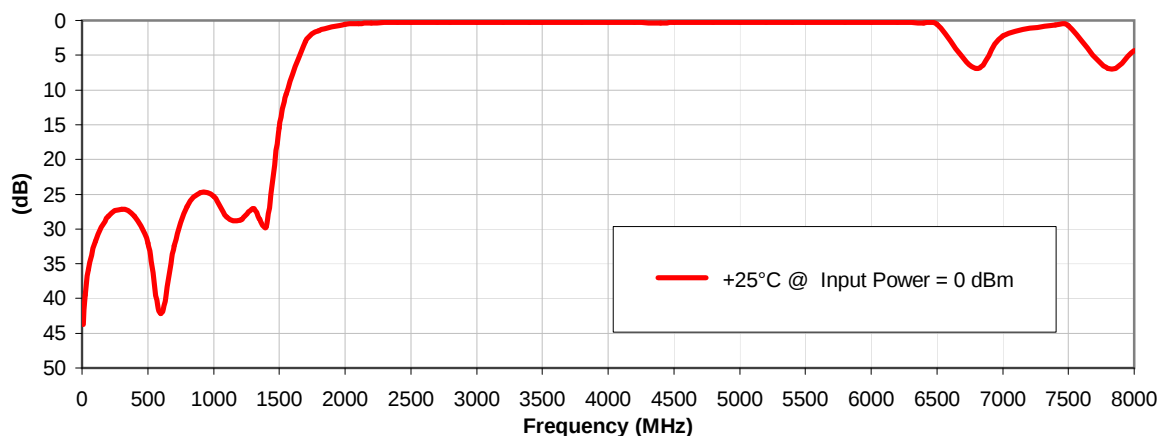
INSERTION LOSS vs. TEMPERATURE



INPUT RETURN LOSS vs. TEMPERATURE



OUTPUT RETURN LOSS vs. TEMPERATURE



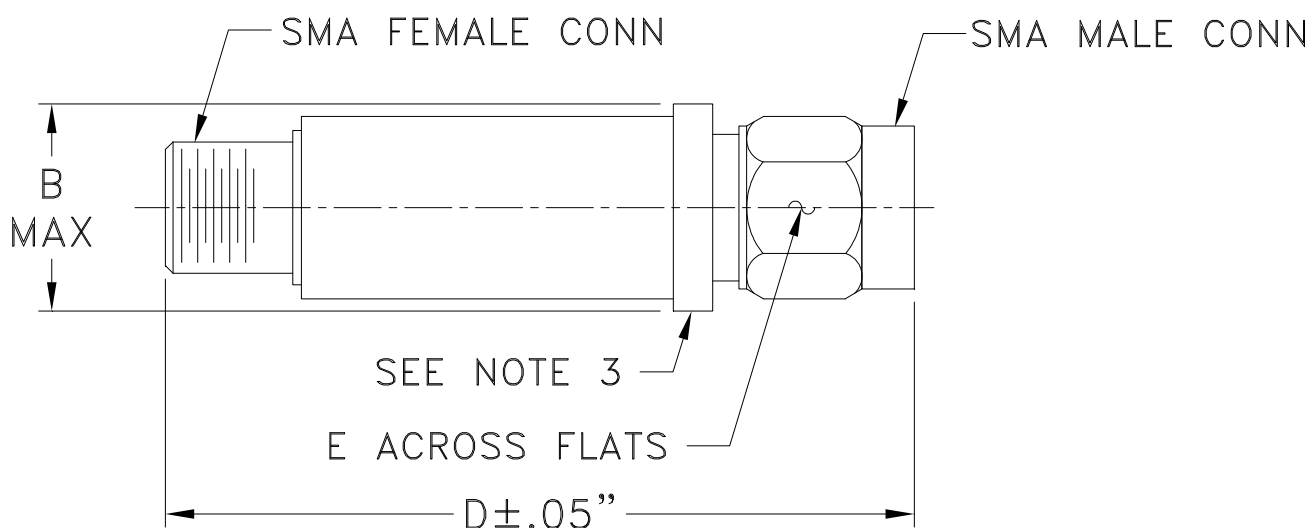
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Outline Dimensions



CASE #.	A	B	C	D	E	WT GRAMS
FF704	--	.410 (10.41)	--	1.43 (36.32)	.312 (7.92)	10.0

Dimensions are in inches (mm). Tolerances: 2Pl. ± .04; 3Pl. ± .030

Notes:

1. Case material: Stainless steel.
2. Case finish: Gold plated.
3. Round Flange may have .312 Across Flats in some models.



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RF/IF MICROWAVE COMPONENTS



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 100°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I