

Low Pass Filter

Features

- high rejection
- sharp insertion loss roll off
- excellent VSWR, 1.1:1 typ. @ passband
- aqueous washable

Applications

- wireless communications
- receivers / transmitters

HT-RLP-83+



50Ω DC to 83 MHz

Low Pass Filter Electrical Specifications

PASSBAND (MHz) (loss < 2 dB)	f _{co} (MHz) Nom. (loss 3 dB)	STOPBAND (MHz)		VSWR (:1)	
		(loss > 20 dB)	(loss > 40 dB)	Passband Typ.	Stopband Typ.
DC-83	93	118-135	135-850	1.1	20

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input*	0.5W max.
*Permanent damage may occur if any of these limits are exceeded.	

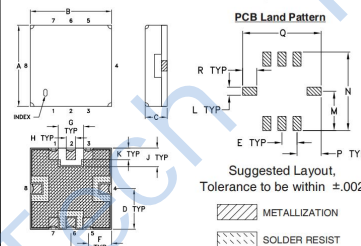
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	\bar{x}	σ			
0.5	0.25	0.01	30.72	2.0	7.55
40.0	0.47	0.01	29.97	5.0	7.35
60.0	0.72	0.01	23.36	10.0	7.32
83.0	1.32	0.03	27.35	15.0	7.39
90.0	2.02	0.10	16.65	20.0	7.48
93.0	2.86	0.20	10.79	25.0	7.58
94.0	3.29	0.25	9.20	30.0	7.77
100.0	7.87	0.50	3.32	35.0	7.93
102.0	10.02	0.55	2.45	40.0	8.17
110.0	19.47	0.58	1.12	45.0	8.44
115.0	25.43	0.59	0.88	50.0	8.77
118.0	28.99	0.60	0.79	55.0	9.12
135.0	52.69	1.14	0.55	60.0	9.69
200.0	79.43	6.12	0.29	65.0	10.33
300.0	81.71	4.23	0.18	70.0	11.26
500.0	79.32	3.65	0.11	75.0	12.41
800.0	82.01	5.38	0.13	83.0	15.12
850.0	82.92	5.63	0.12	85.0	16.55

Pin Connections

RF IN	2
RF OUT	6
GROUND	1, 3, 4, 5, 7, 8

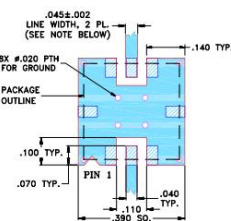
Outline Drawing



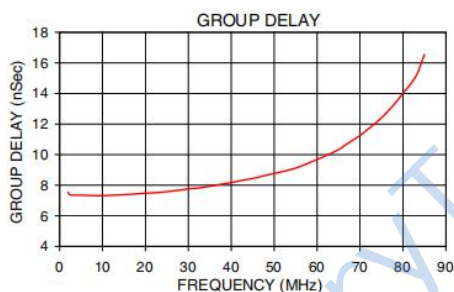
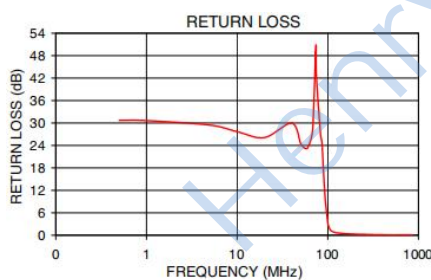
Outline Dimensions (inch)

A	B	C	D	E	F	G	H	J
.350	.350	.100	.175	.075	.100	.110	.040	.080
8.89	8.89	2.54	4.45	1.91	2.54	2.79	1.02	2.03
K	L	M	N	P	Q	R		wt.
.050	.040	.195	.390	.120	.390	.070		grams
1.27	1.02	4.95	9.91	3.05	9.91	1.78		0.25

Suggested PCB Layout



- NOTES:
1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025" ± .002", COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK



Functional Schematic

