

Surface Mount

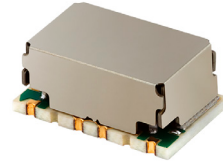
# Bandpass Filter

**BPF-AS1600-75+**

75Ω 950 to 2250 MHz

## The Big Deal

- Wide bandwidth
- Low insertion loss
- Miniature shielded package



*Generic photo used for illustration purposes only*

CASE STYLE: TK2678

## Product Overview

The BPF-AS1600-75+ is a 75Ω band pass filter fabricated using SMT technology centered at 1600 MHz. The band-pass filter is designed in a very small (0.433" x 0.276" x 0.197") shielded package that covers 1600 MHz ± 650 MHz bandwidth. They use high Q capacitors and inductors for low insertion loss and has consistent performance across temperature & repeatable performance across lots.

## Key Features

Feature	Advantages
Low insertion loss	Can be used in high performance applications like L-band satellite communication systems.
Small form factor	This filter can be used in dense layout applications.
Shielded case	Reduced interference with and from the surrounding components.

### Notes

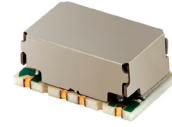
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## BPF-AS1600-75+

75Ω 950 to 2250 MHz



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CASE STYLE:TK2678

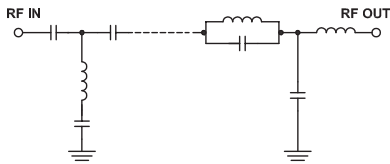
### Features

- Wide bandwidth
- Low passband IL
- Miniature shielded package

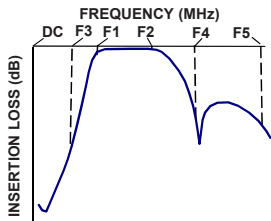
### Applications

- L-Band satellite applications
- Telecommunication & broadband wireless system
- Base station controllers
- Weather instruments / Radar networks

### Functional Schematic



### Typical Frequency Response



### Electrical Specifications at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Center Frequency	—	—	1600	—	MHz	
	Insertion Loss	F1-F2	950-2250	—	1.0	1.6	dB
	VSWR	F1-F2	950-2250	—	1.6	2.0	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-480	20	30	—	dB
	VSWR	DC-F3	DC-480	—	30	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	3000-3500	16	20	—	dB
	VSWR	F4-F5	3000-3500	—	10	—	:1

### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	1 W

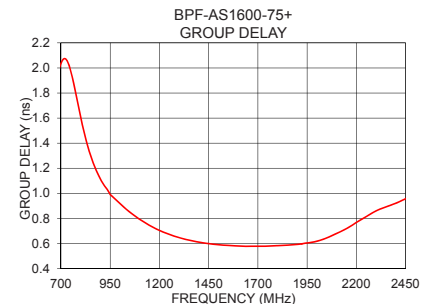
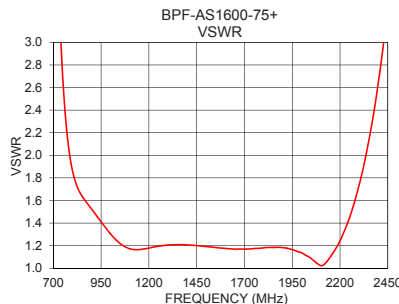
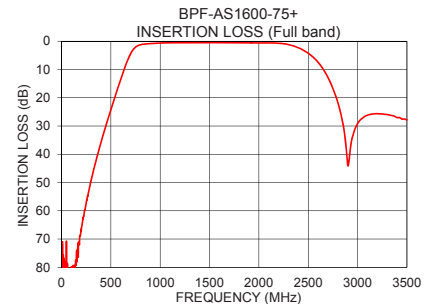
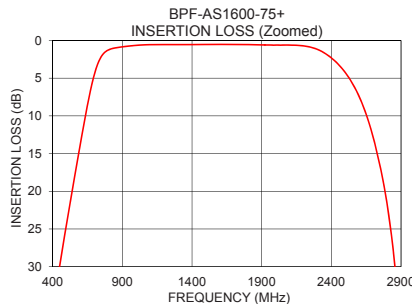
Permanent damage may occur if any of these limits are exceeded.

### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
10	70.96	354.40	950	0.99
250	57.52	356.60	1000	0.92
448	30.12	83.21	1050	0.85
480	26.49	66.98	1100	0.79
538	20.14	44.08	1150	0.74
650	8.53	12.06	1200	0.70
724	3.07	3.69	1250	0.67
950	0.74	1.41	1300	0.65
1600	0.53	1.18	1350	0.63
2250	0.89	1.45	1450	0.60
2445	3.07	3.25	1450	0.60
2650	9.81	8.71	1500	0.59
2700	12.85	9.80	1550	0.58
2790	20.57	10.75	1600	0.58
2840	27.14	10.94	1700	0.58
2860	30.80	11.14	1800	0.58
3000	29.14	14.13	1900	0.59
3200	25.64	23.45	2000	0.62
3400	27.04	27.90	2100	0.68
3500	27.85	26.90	2250	0.81

### +RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications



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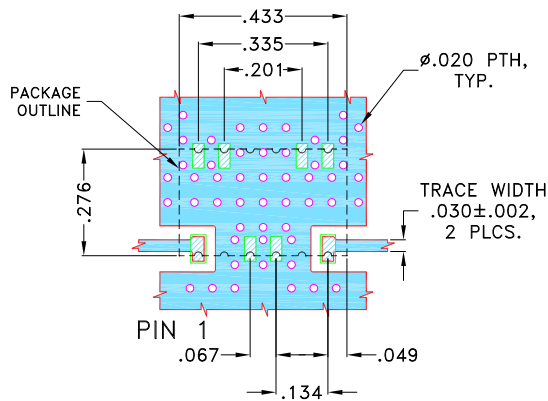


## Pad Connections

RF IN	1
RF OUT	6
GROUND	3,4,7,8,11,12
NOT CONNECTED	2,5,9,10



**Demo Board MCL P/N: TB-1072+**  
**Suggested PCB Layout (PL-599)**

SUGGESTED MOUNTING CONFIGURATION FOR  
TK2678 CASE STYLE "12FL04" PIN CODE

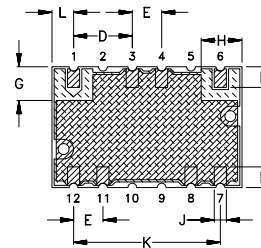
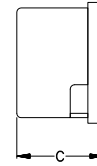
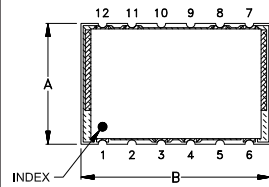


### NOTES:

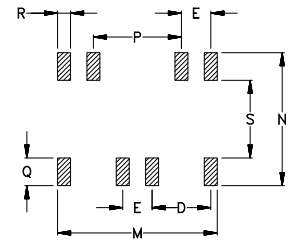
- TRACE WIDTH IS SHOWN FOR ROGERS(R04350B) WITH DIELECTRIC THICKNESS  $.030 \pm .002$ ". COPPER: 1/2 Oz EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
- BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.



-  DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
-  DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

## Outline Drawing



## PCB LAND PATTERN



-  METALLIZATION
-  SOLDER RESIST

## Outline Dimensions ( inch mm )

A	B	C	D	E	F	G	H	J	K
.276	.433	.197	.134	.067	.047	.077	.093	.028	.335
7.01	11.00	5.00	3.40	1.70	1.19	1.96	2.36	0.71	8.51
L	M	N	P	Q	R	S	Wt.		
.049	.364	.303	.201	.063	.030	.177	grams		
1.24	9.25	7.67	5.11	1.60	0.76	4.50	0.6		

*Note: Please refer to case style drawing for details*

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