

Surface Mount

Diplexer

TDP-142-75+

75Ω 550 to 1400 MHz
(550-630, 1280-1400 MHz)



CASE STYLE: HR1176

The Big Deal

- Low insertion loss
- High rejection
- 75Ω Impedance
- Miniature shielded package

Product Overview

TDP-142-75+ is a band-pass in low frequency + band-pass in high frequency combination device. Low frequency port is designed for 550 to 630 MHz and high frequency port is designed for 1280 to 1400 MHz. This diplexer can be used in satellite systems, communication test sets and other multiband radio systems.

Key Features

Feature	Advantages
Low passband insertion loss	Suitable for high performance application
Excellent stopband rejection	Spurious rejection and avoids using additional filters
Miniature shielded package	Reduced interference with the surrounding components.

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IF/RF MICROWAVE COMPONENTS

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Surface Mount Diplexer

TDP-142-75+

75Ω 550 to 1400 MHz (550-630, 1280-1400 MHz)



CASE STYLE: HR1176
PRICE: \$14.95 ea. QTY (10)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Maximum Ratings

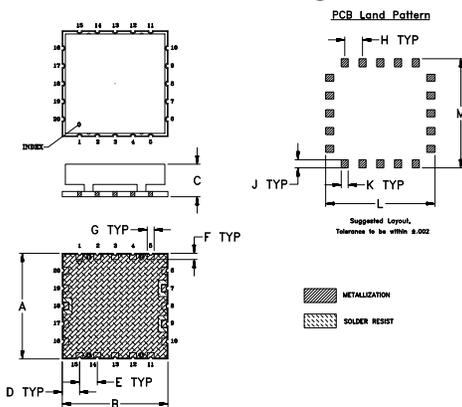
Operating Temperature	-40° to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	1W at 25°C

Permanent damage may occur if any of these limits are exceeded. These ratings are not intended for continuous normal operation

Pin Connections

HIGH PASS PORT	7
LOW PASS PORT	9
COMMON PORT	18
GROUND	1-6,8,10-17,19,20

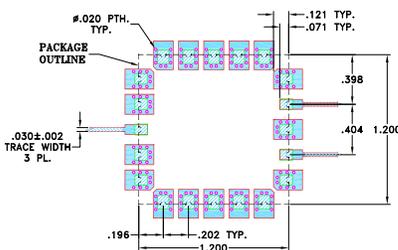
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	
1.200 (30.48)	1.200 (30.48)	.370 (9.40)	.196 (4.98)	.202 (5.13)	.071 (1.80)	
G	H	J	K	L	M	wt grams
.079 (2.01)	.202 (5.13)	.091 (2.31)	.079 (2.01)	1.240 (31.50)	1.240 (31.50)	8.5

Demo Board MCL P/N: TB-563+ Suggested PCB Layout (PL-228)



Features

- Low insertion loss
- 75Ω Impedance
- Aqueous washable
- Miniature shielded package

Applications

- Satellite systems
- Communication systems
- Multiband systems

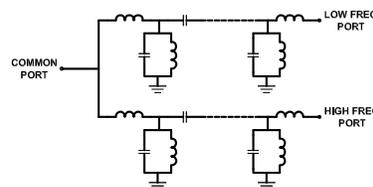
Electrical Specifications at 25°C

Parameter	Port	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	Low Frequency	550-630	-	0.6	1.5	dB
		High Frequency	1280-1400	-	1.4	2.5	
	Return Loss	Low Frequency	550-630	12	19	-	dB
		High Frequency	1280-1400	10	14	--	
Common		550-630	12	19	-		
Stop Band Isolation	Low Frequency	DC-200	20	32	-	dB	
		1280-1400	20	34	-		
	High Frequency	DC-800	20	31	-	dB	
		2100-2500	20	30	-		
		550-630	-	34	-		

Typical Performance Data at 25°C

FREQUENCY (MHz)	INSERTION LOSS (dB)			RETURN LOSS (dB)	
	Low Freq. Port	High Freq. Port	Common Port	Low Freq. Port	High Freq. Port
1	73.26	75.52	0.10	0.10	0.12
200	32.92	63.21	0.24	0.25	0.28
300	20.84	61.71	0.33	0.18	0.26
400	9.79	46.31	0.87	0.68	0.26
475	2.41	40.64	4.80	4.93	0.23
550	0.52	38.39	20.23	23.29	0.07
590	0.53	36.65	18.83	19.84	0.04
630	0.54	35.23	24.28	28.75	0.03
750	3.57	38.59	3.83	3.60	0.15
800	6.31	32.90	1.90	1.49	0.23
850	9.19	27.92	1.06	0.60	0.11
1000	16.84	17.60	0.30	0.05	0.20
1200	27.99	4.40	3.56	0.12	3.88
1250	33.03	1.75	9.14	0.20	9.30
1280	35.44	1.11	16.53	0.25	17.73
1340	36.46	1.06	16.10	0.36	16.13
1400	38.50	1.31	16.87	0.51	14.72
1500	43.48	2.97	6.70	0.74	5.91
1600	41.49	8.96	1.02	0.87	1.38
1700	44.30	14.64	0.51	0.95	0.92
2100	57.75	31.35	1.03	1.05	0.93
2500	43.57	47.24	0.99	0.00	0.26

Functional Schematic



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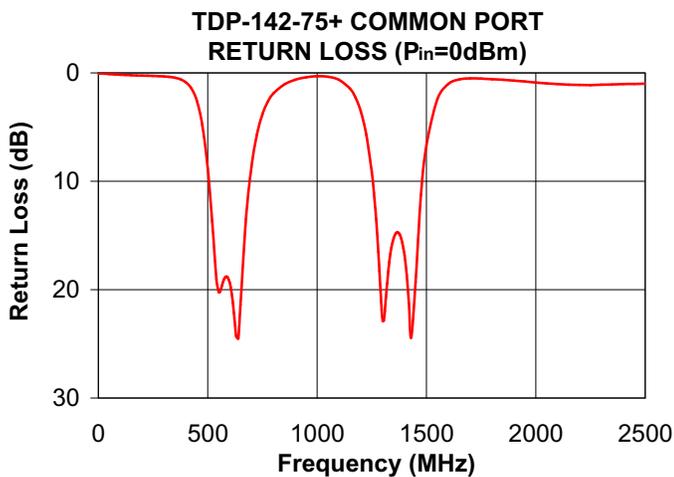
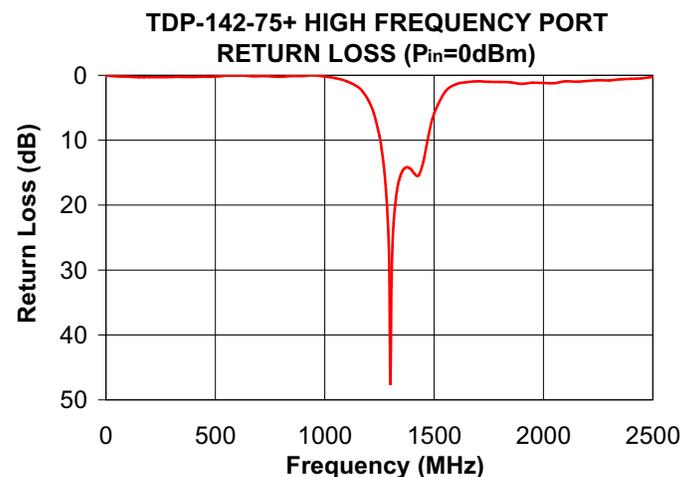
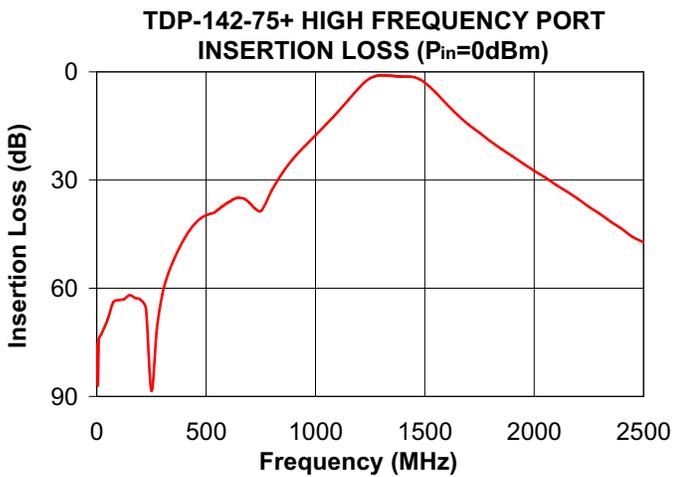
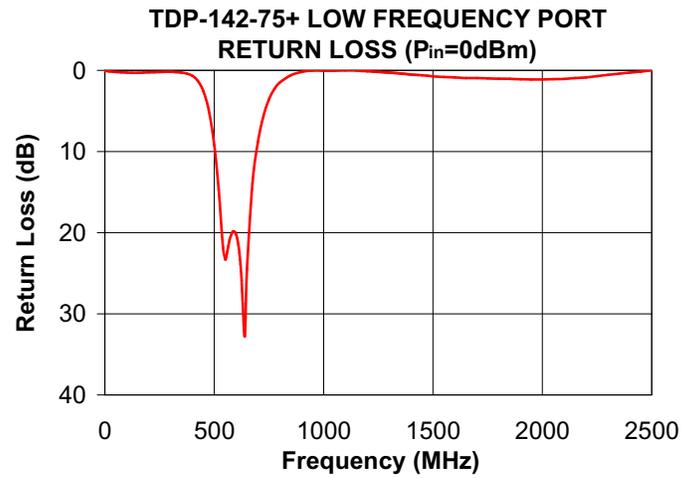
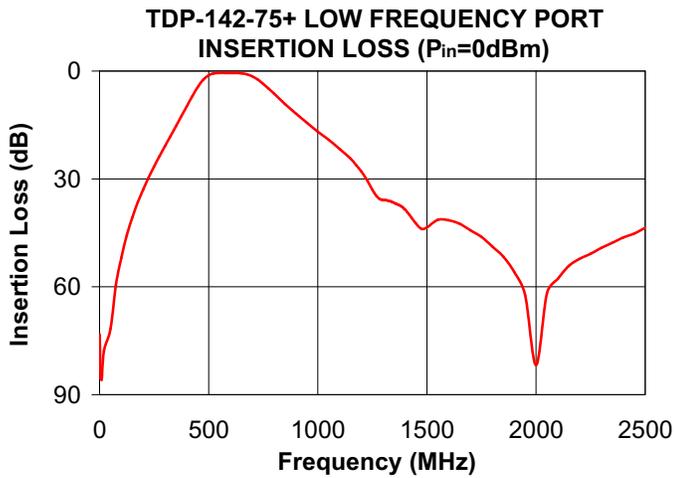
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