

LTCC Diplexer

DPNK-252-492R+

50Ω 2400 to 2500 MHz (5150 to 5850 MHz)



Generic photo used for illustration purposes only
CASE STYLE: NK0402C

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

Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500, 1000, 4000

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature*	-40°C to 85°C
RF Power Input**	3W

*Refer to product storage temperature after installation.
Suggestion for T&R unused product storage condition: +5~+35°C, Humidity 45~75%RH, 12 Month max.
Permanent damage may occur if any of these limits are exceeded.
**Derate linearly to 1.5W at 85°C

Pad Connections

Low Pass Port	4
Band Pass Port	3
Common Port	1
Ground	2

Features

- low insertion loss
- miniature size 0402
- low cost
- aqueous washable

Applications

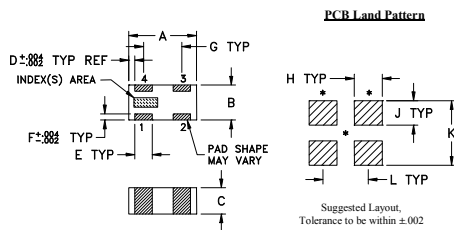
- ISM Band
- WLAN
- Bluetooth
- Zigbee

Electrical Specifications¹ at 25°C

Parameter	Port	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	Low Pass	2400 - 2500	—	0.4	0.5	dB
		Band Pass	5150 - 5850	—	1.2	2	
	Return Loss	Low Pass	2400 - 2500	9.5	31	—	dB
		Band Pass	5150 - 5850	9.5	23	—	
		Common	2400 - 2500	9.5	31	—	
			5150 - 5850	9.5	27	—	
Stop Band Rejection	Band Pass	700 - 2025	27	30	—	dB	
		2400 - 2690	28	40	—		
		3500 - 3700	10	15	—		
	Low Pass	7250 - 7800	11	24	—		
		10300 - 11700	20	30	—		
		4800 - 6000	16	26	—		
		7200 - 7500	14	22	—		

¹ Tested on Evaluation Board TB-1040+

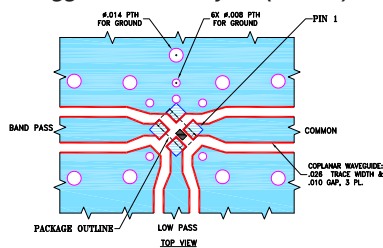
Outline Drawing



Outline Dimensions (inch mm)

A	B	C	D	E	F	G	H
.039	.020	.015	.004	.010	.004	.022	.016
1.0	0.51	0.38	0.10	0.25	0.10	0.56	0.41
J	K	L					wt
.014	.037	.026					grams
0.36	0.94	0.66					.0007

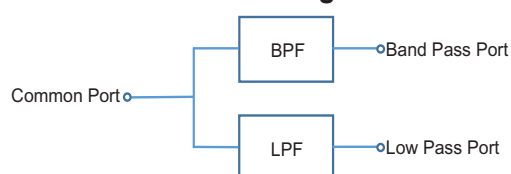
Evaluation Board MCL P/N: TB-1040+ Suggested PCB Layout (PL-571)



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)			Return Loss (dB)	
	Low Pass Port	Band Pass Port	Common Port	Low Pass Port	Band Pass Port
500	0.11	35.41	26.09	26.14	0.03
700	0.14	32.78	23.44	23.57	0.03
1500	0.26	28.83	19.97	20.73	0.08
2025	0.31	29.63	21.72	23.06	0.06
2400	0.36	33.34	25.53	27.92	0.13
2450	0.36	34.36	26.33	28.90	0.17
2500	0.37	35.58	27.11	30.07	0.16
2690	0.40	46.92	30.97	36.54	0.23
3000	0.49	31.63	29.21	28.99	0.37
3500	0.89	17.49	19.25	17.35	0.79
3700	1.33	13.27	16.49	13.49	1.25
4000	2.99	7.53	13.12	7.74	2.83
4800	19.92	1.58	14.70	1.29	11.98
5150	33.11	1.21	20.20	1.06	16.01
5500	22.91	1.11	31.25	1.08	22.76
5850	19.85	1.20	34.56	1.15	24.82
6500	18.91	2.36	13.24	1.22	10.82
7200	15.88	11.70	2.16	1.27	1.75
7250	16.08	12.85	1.92	1.26	1.56
7500	17.70	19.74	1.15	1.24	1.02
7800	20.87	29.08	0.72	1.24	0.71
9000	30.25	20.83	0.12	1.32	0.18
10300	25.48	22.86	0.18	0.62	0.35
11700	38.18	29.16	0.12	0.09	0.50

Block Diagram



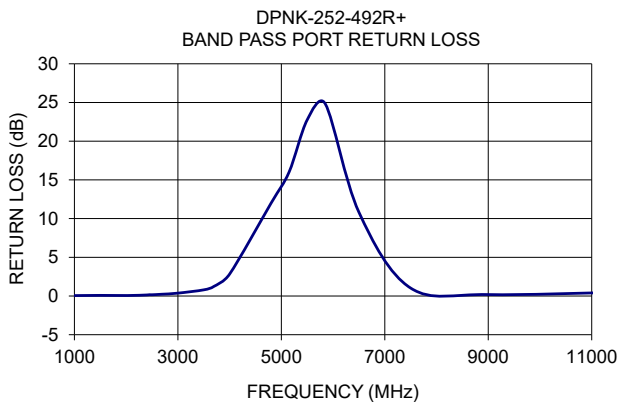
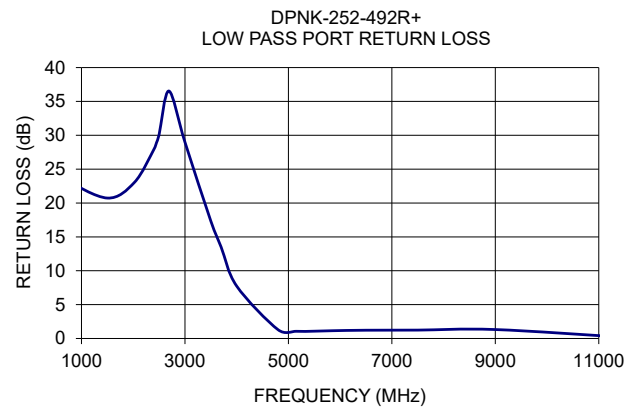
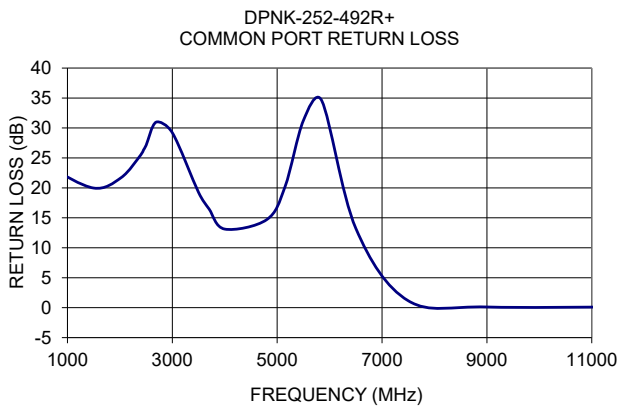
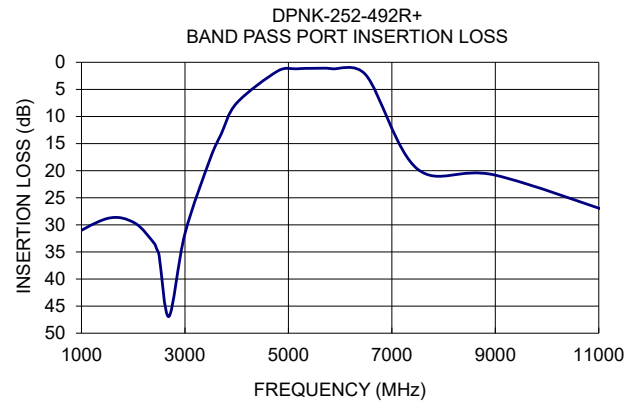
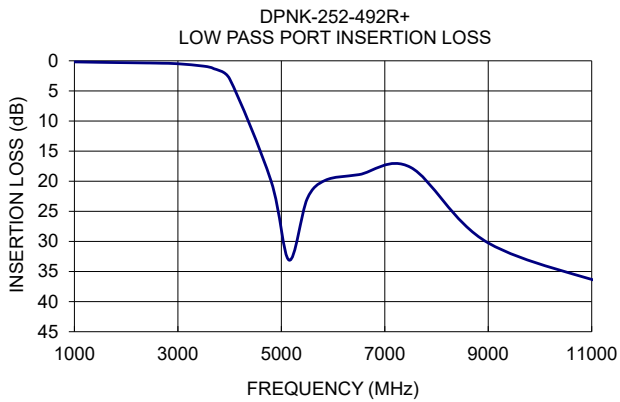
Notes

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Page 1 of 2



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