

# Surface Mount Diplexer

75Ω, 5 to 1000 MHz (5-42, 88-1000 MHz)

## Maximum Ratings

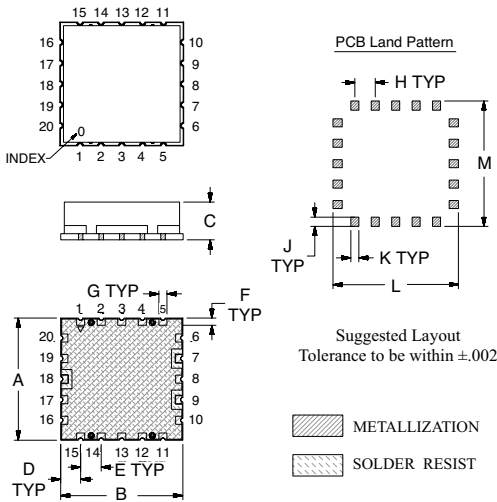
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	250mW at 25°C

**Note:** 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	1,2,3,4,5,6,8,10,11,12,13,14,15,16,17,19,20

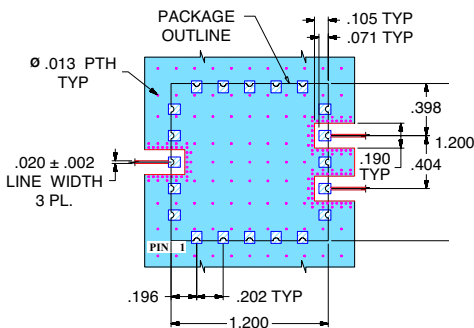
## Outline Drawing



## Outline Dimensions (inch/mm)

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

## Demo Board MCL P/N: TB-366+ Suggested PCB Layout (PL-228)



### NOTE:

- TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030±.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

## Features

- Low Insertion Loss 0.5dB typ.
- High Isolation 60dB typ.
- 75 Ω Impedance

## Applications

- CATV
- MMDS
- Set-Top Box

# DPLX-4288-75+



CASE STYLE: HR1176  
PRICE: \$9.95 ea. QTY (10-24)

**+ 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.

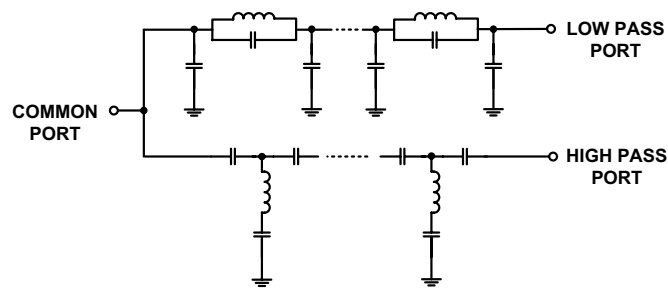
## Electrical Specifications (T<sub>AMB</sub> = 25°C)

Insertion Loss, dB PASSBAND MHz		Isolation, dB STOPBAND MHz				Cross Over Isolation (dB)		Return Loss (dB)									
5-42		88-1000		88-1000		5-42		Low Pass Port 5-42 MHz		High Pass Port 88-1000 MHz		Common Port 5-42 MHz 88-1000 MHz					
Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.				
0.5	1	0.5	1	60	38	60	50	60	45	25	17	20	13	25	17	20	13

## Typical Performance Data (T<sub>AMB</sub> = 25°C)

FREQUENCY (MHz)	INSERTION LOSS (dB)		CROSS OVER ISOLATION (dB) (between LPF and HPF)	RETURN LOSS (dB)		
	Low Pass Port	High Pass Port		Common Port	Low Pass Port	High Pass Port
5	0.12	63.06	64.43	30.46	31.21	0.02
20	0.23	57.91	56.51	28.74	36.81	0.02
36	0.48	61.55	73.35	23.62	22.42	0.09
40	0.64	72.06	78.01	31.32	30.16	0.12
42	0.77	62.35	63.33	30.11	38.02	0.15
46	2.26	54.06	55.35	7.73	9.52	0.18
50	12.15	62.88	54.58	1.10	1.71	0.26
60	46.10	63.48	63.36	0.54	0.37	0.51
70	50.47	17.56	72.98	1.07	0.22	1.26
80	59.51	1.25	58.05	19.96	0.18	21.25
86	63.50	0.77	63.99	22.32	0.16	23.80
88	65.42	0.71	67.51	21.45	0.16	22.59
90	68.36	0.66	67.56	21.18	0.15	22.13
100	67.01	0.48	68.09	22.21	0.15	22.41
200	68.13	0.24	68.73	21.81	0.19	20.89
400	62.57	0.30	62.20	16.53	0.23	16.59
600	56.95	0.44	52.89	15.46	0.25	15.63
800	50.16	0.45	49.20	16.73	0.31	17.10
900	60.23	0.36	57.46	18.50	0.34	19.05
1000	68.06	0.33	56.10	21.22	1.17	21.84

## Functional Schematic



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