

Plug-In Directional Coupler

50Ω 5 to 1000 MHz

Maximum Ratings

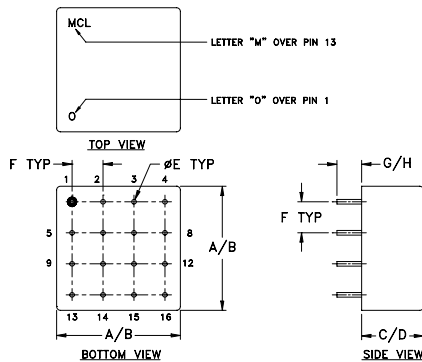
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

INPUT	8
OUTPUT	12
COUPLED	2,1,13,14*
CASE GROUND	all other pins

*4-coupled ports #1,#2,#3,#4 consecutively

Outline Drawing



Outline Dimensions (inch mm)

A	B	C	D	E	F	G	H	wt
.770	.810	.380	.410	.030	.200	.20	.14	grams
19.56	20.57	9.65	10.41	0.76	5.08	5.08	3.56	11.0

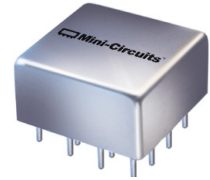
Features

- wideband, 5 to 1000 MHz
- 4 coupled ports
- low mainline loss, 0.7 dB typ.
- rugged welded construction

Applications

- cellular
- power levelling
- instrumentation
- military defense communications

P4DC-30A-2+
P4DC-30A-2



CASE STYLE: C07

+RoHS Compliant

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

Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W	
	f _L -f _U		L		M		U		L		M		U			L	
	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	MU Max.
5-1000	30.5±0.5	±1.0	0.7	1.2	0.7	1.2	0.8	1.5	30	15	32	20	20	10	1.15	1.0	2.0

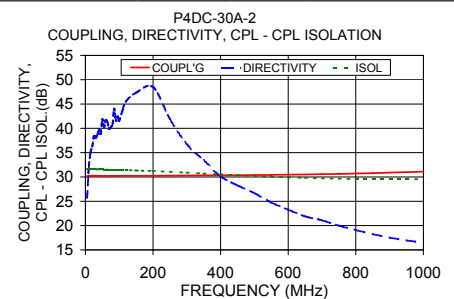
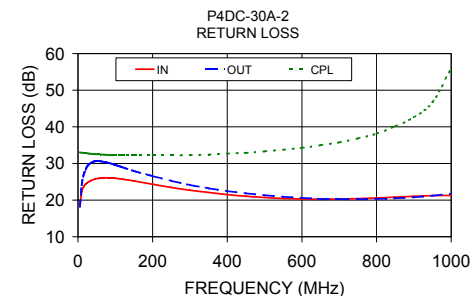
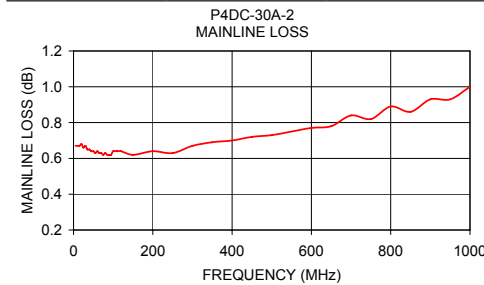
L = low range [f_L to 10 f_L] M = mid range [10 f_L to f_U/2] U = upper range [f_U/2 to f_U]

1. Mainline loss includes theoretical power loss at coupled port.

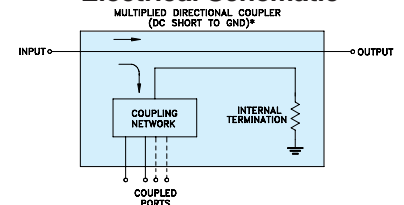
4-coupled ports, isolation between coupled ports, 25 dB min.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Isolation (dB) Cpl-Cpl	Return Loss (dB) In	Return Loss (dB) Out	Cpl
5.00	0.67	30.20	25.73	31.63	18.19	18.21	33.04
10.00	0.67	30.22	32.07	31.60	22.26	24.15	32.96
20.00	0.68	30.26	36.24	31.59	24.30	28.27	32.83
50.00	0.64	30.23	41.81	31.54	25.83	30.62	32.54
100.00	0.64	30.23	41.63	31.47	25.95	29.62	32.25
200.00	0.64	30.25	48.50	31.23	24.32	26.57	32.21
500.00	0.73	30.39	26.67	30.21	20.72	21.35	33.32
700.00	0.84	30.57	21.10	29.73	20.29	20.29	35.77
900.00	0.93	30.89	17.53	29.55	21.02	20.78	42.62
1000.00	1.00	31.11	16.48	29.58	21.28	21.76	56.05



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR MULTIPLIED COUPLING PORTS OF DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMERS THAT ROUTES DC FROM RF PORTS TO GROUND.

Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
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